

## Group InnovaSoft

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# Siemens EC Human Resources Management System

Detailed Design Report

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## 1. Introduction

This document describes the detail design strategies and structural properties of the Human Resource Management System which will be developed by InnovaSoft group. It mainly covers the design of the required classes for the HRMS, basic tables of database, basic view design and functionality of HRMS interface.

### 1.1. Problem Definition

The aim of the Human Resource Management System is to ease to manage the data of employees, to follow and evaluate their performance in other words accomplish the task of managing and controlling the large number of workers in a company.

The HRMS we are going to implement will enable the company to achieve the goal of management of the employees of it in a more efficient and neat way.

The HRMS is going to provide three major services to manage some basic information required and entered in recruitment of an employee. This three major service is Authorization/Authentication Mechanism, Information Edition and Performance Evaluation.

#### 1.1.1. Authorization/Authentication Mechanism

Login/Logout Mechanism

HRMS is going to be a web-based-system, meaning it is accessible for anyone who has Internet connection. However, from the view of security issues in managing the database of the company every user will be welcomed with a login page, which asks the username and a password to enter the system. After being authenticated each user will be able to see the related tabs to their role type/s.

HRMS also provide a user to exit the system securely, by clicking the log out button.

#### 1.1.2. Information Edition

Editing Personal Information

The HRMS is going to enable to enter and edit the employee's data. As an example, name, surname, birth date etc.

**Editing Education Information**

The HRMS is going to enable entering and editing the education information of each employee. As an example, the name of the university and the entrance year information etc.

#### **Editing Work Experience Information**

The HRMS is going to enable entering and editing the work experience of each employee. For example, duration of the experience and the company name information etc.

#### **Editing Languages**

The HRMS is going to enable entering and editing languages of each employee. As an example, German language is in advanced level in writing etc.

#### **Editing Projects Information**

The HRMS is going to enable entering and editing the projects of each employee is working on currently.

#### **Editing Certificates Information**

The HRMS is going to enable entering and editing the Certificate information of each employee. As an example, date and institute name information of the certificates etc.

#### **Editing Technical Skills**

The HRMS is going to enable entering and editing the technical skills of each employee. For example, eclipse in advanced level etc.

#### **Editing Trainings Information**

The HRMS is going to enable entering and editing the trainings information of each employee. For example, VectorCAST[1] training, and start and end time of the training etc.

#### **Editing Cost Center Information**

The HRMS is going to enable entering and editing the costs of the employee in project. In other words, to specify how much an employee costs in accomplishing a project.

#### **Editing Attachments Information**

The HRMS is going to enable to attach some files to the account of each employee. For example, their resumes will be attached.

## **Editing Emergency Call Information**

Siemens EC expects a phone number of a relative of each employee, in case of an emergency situation. HRMS will enable the user to enter that contact information needed.

### **1.1.3. Performance Evaluation**

HRMS is going to enable each role type namely manager to evaluate his/her employees performance. Employees are going to be able to evaluate performance of his/herself. Since HR is also an employee they are also going to be evaluated by their managers.

Performance Evaluation will be accomplished in five major steps. These five steps are, determining the responsibilities and competences of an employee to be evaluated, determining the targets and whether they are achieved or not, performance evaluation and improvement as free text, and finally the self evaluation of employees and evaluation of employees and managers by their managers (both employees and managers have managers).

### **1.2. Purpose**

This document constitutes a very comprehensive design of an HRMS system, which can be understood by any developer of HRMS. The purpose is to serve a reliable base to develop an HRMS. With the help of this document, basic steps that must be followed by the developer to upgrade and develop the HRMS can be clearly inferred and implemented.

### **1.3. Scope**

This document briefly covers the definition of the problem, description of our solution we proposed with the structural behavior of our design, the structure of our classes, the table of database and architecture of the HRMS in a detailed way.

To be more specific, we described our behavior of the system with the basic fields of our classes required to develop the HRMS.

In order to obtain an help to constitute a relation between our solution and the database, the tables of database are analyzed in a detailed way and created when needed. This document briefly covers this analyze of the tables of the database.

In addition to, the database tables, we described and visualized the fundamental interface tabs. To be more comprehensive we briefly included the structure of each component and relations of them which are required to describe our design of HRMS.

## 1.4. Overview

The rest of the document identifies the system overview, describing the main features of the system, design considerations such as design constraints, goals, dependencies, data design with classes and table structures, HRMS user interface design, system architecture with data components.

## 1.5. Definitions, Acronyms and Abbreviations

You can see the Definitions, Acronyms and Abbreviations in the following table (Table 1.5.1)

<b>Siemens EC</b>	Our sponsor company; Siemens Enterprise Communication
<b>HRMS</b>	Human Resources Management System
<b>PEM</b>	Performance Evaluation Module
<b>PEM</b>	Performance Evaluation System
<b>SRS</b>	Software Requirement Specification
<b>Sec.</b>	Section
<b>Admin</b>	Administrator
<b>HR</b>	Human Resources Personnel
<b>A&amp;A</b>	Authentication and Authorization

Table 1.5.1 Table of Definitions, Acronyms and Abbreviations

## 1.6. References

- [1] <http://www.vectorcost.com/> referred in sec. 1.1.B
- [2] <http://www.oracle.com/technetwork/java/javaee/overview/index.html> Sec.8.2
- [3] <http://www.landofcode.com/ajax-tutorials/> Sec. 8.3
- [4] <http://en.wikipedia.org/wiki/GlassFish> Sec.8.4
- [5] [http://en.wikipedia.org/wiki/Eclipse\\_\(software\)](http://en.wikipedia.org/wiki/Eclipse_(software)) Sec. 8.5
- [6] [http://en.wikipedia.org/wiki/Microsoft\\_SQL\\_Server](http://en.wikipedia.org/wiki/Microsoft_SQL_Server) Sec. 8.7
- [7] [http://en.wikipedia.org/wiki/Hibernate\\_\(Java\)](http://en.wikipedia.org/wiki/Hibernate_(Java)) Sec. 8.8
- [8] [http://en.wikipedia.org/wiki/Apache\\_Tomcat](http://en.wikipedia.org/wiki/Apache_Tomcat) Sec. 8.10
- [9] [http://en.wikipedia.org/wiki/Spring\\_Framework](http://en.wikipedia.org/wiki/Spring_Framework) Sec. 8.11

## 2. System Overview

Our system is to be organized and implemented in a way that the problem is divided into four fundamental modules. These modules can be stated as:

- Authentication/Authorization
- Performance Evaluation

- Process Data
- Recruitment

## 2.1. Authentication/Authorization

Authentication and Authorization mechanism includes two subcomponents namely authentication and authorization. Authentication mechanism steps in when a user attempts to enter the system. In order to be authenticated user must be enter a valid username and a password. Authorization mechanism, on the other hand, steps in when there is the issue of recruitment. Basically, authorization is giving a role type to the user account which is new to the system. After authorization phase, the user will have a valid account and ready to enter the system with his/her username and password any time.

## 2.2. Performance Evaluation

Performance Evaluation mechanism is one of the newly added feature which is designed to determine the performance of the employees, managers and the HR. This determination and evaluation is handled basically in five main parts each having subparts.

Firstly, every user has a role type and each role type has some responsibilities and competences defined. In first part of evaluation, the specified employees' responsibilities and competences are seen.

In the second part, the system let the user to specify the aims/goals for whichever category desired. For example, financial, customer/market etc. Each aim/goal will be described as free text. After being described, the date of termination of each aim/goal will be determined. And at the finalize time of aim/goal property, there is a part to be filled by both manager and the employee the results of the aims/goals.

In the third part, the manager and the employee will commend according to the results of the goals/aims specified above. There will be separate fields which are to be filled as free text.

In the fourth part, whom name can be translated as improvement, users will be able to indicate which improvement strategies must be taken to accomplish the aims/goals specified above after the termination date. By the way, these improvements can be both self performance or team performance. Only manager will fill these part as free text.

In the fifth and the last part of the evaluation, there is a list of opinions both for manager and the employee. These lists are constituted of the opinions which are going to be evaluated by

three different scalars: open to improvement, satisfy the expectation, above and beyond the expectation.

### **2.3. Process Data**

Processing the data can be analyzed in three basic functions which can be stated as: Edit, Search, Report.

Edit is specified according to their role type. Edit function will use the UPDATE query of SQL.

Search function which is needed to search the employees who have specific properties. Search function will use the SELECT query of SQL.

Lastly report function which selects the specific values of employee/s database by using SELECT query of SQL. Also providing a printable version of the result is in the scope of the report function.

### **2.4. Recruitment**

Recruitment of a new person can be analyzed in two separate phase.

Firstly, HR may add a new employee by entering his/her personal data when she/he is recruited. In this phase the added employee has no access to the system. In order to be able to access the system, the account must be authorized by administrator which is described in Authorization/Authentication part.

Secondly, administrator may add a user who is not added by HR. This situation can be confronted when there is a need for hiring a person who must reach the system but not as an employee.

## **3. Design Considerations**

### **3.1. Design Assumptions, Dependencies, and Constraints**

Most of the companies that use HRMS application expect the system to be capable of handling more than the number of employees they have. The current HRMS application of Siemens EC operates on about 100 employees. Apparently, Siemens EC like other reputed companies is on the path of developing. Day by day, the number of employees and projects are increasing. This increase in the number of employees and projects brings some new features and requirements such as new positions, skills, responsibilities, trainings, educational

levels, user role types, and many more. As the current HRMS is insufficient to provide those functionalities due to its lack of being flexible, useable and portable to new technologies and open-to-develop design strategies; thus, current HRMS will not be able to handle the needs of the company by now and in the future.

Our HRMS application will serve more than 200 employees with all the required features mentioned above. Since it will cover the personal data information of the staff and company owners safety and security constraints are the main issues of the system. By using MD5 technologies the data transaction between actor and server will be encrypted and all the passwords will be stored in an encrypted form.

For performance constraints the system will response in a reasonable short time. A user would be able to login and should be able to get response in 2-3 seconds. If the entered data is correct he/she will be authenticated to the system and will be able to see the corresponding interface.

Apart from these constraints the system should satisfy some assumptions and dependencies like a working internet connection and any operation system supporting JVM.

### **3.2. Design Goals and Guidelines**

Safety constraint is a main issue as we mentioned in above section (section 3.1). Since the system will work on web services, it must prevent all attacks from the outside and only authorized people must access the database through the HRMS interface. It must prevent the manipulation of the personal data from unauthorized users.

Also another major principle that the system must provide is reliability. People must rely on the system and they must use the system in confidence. The system must share information according to the role of users. For instance the admin will be able to see and edit all the information of the users but an employee will be able to only see and edit his/her information and personal data . The main function of the system must be correct and fast enough and must provide the correct and expected data.

For interface designs we have different interfaces for each user according to their role types after they have been authenticated and authorized. As a user with any defined role types could be new and unfamiliar with the system so the interfaces must be clear enough to each role types.

## 4. Data Design

Relation between modules are shown in the Diagram 4.1.

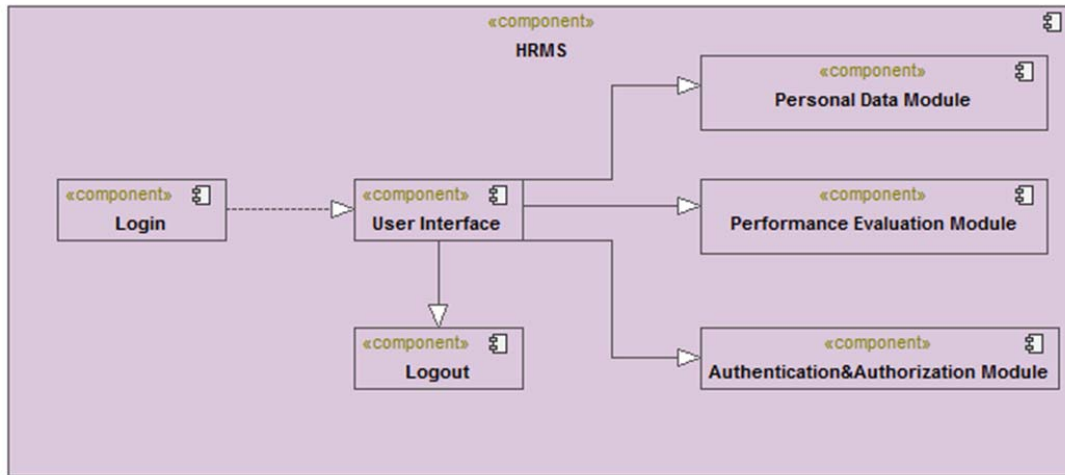


Diagram 4.1: Entity Relation Diagram

### 4.1. Data Description

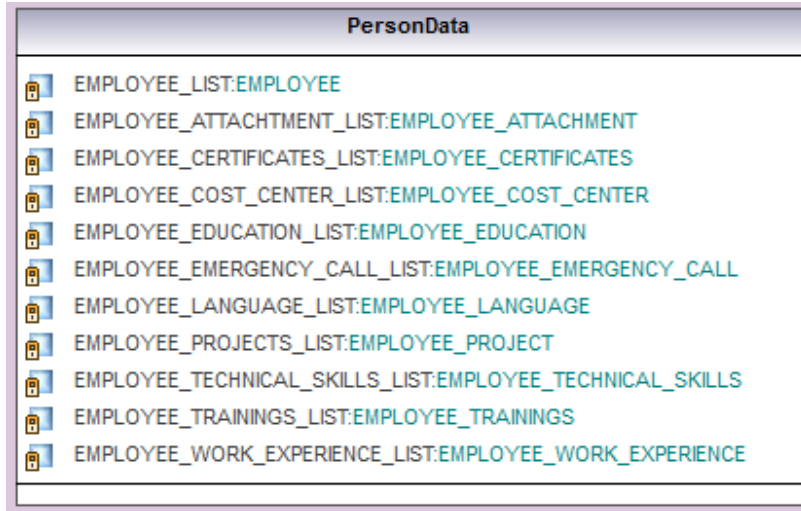
This section describes main modules and the data components they have briefly. These modules constitute the fundamental structure of the HRMS. The components are analyzed in a way that all the main fields and methods are visualized with the help of a table including detailed information related to these fields and methods.

Since HRMS is going to use extensive use of relational data, in addition to the modules described above main database tables are included to this section.

#### 4.1.1. Description of Data Modules

##### 4.1.1.1. Personal Data Module

Personal Data Module is designed to accomplish the operations related to Personal Information. Personal Data Module includes the classes related to each subfield. In addition to the field names specified below, each entity performs edit, display and confirms functions. Main class of the PersonalDataModule is shown in Figure 4.1.1.1.1.



**Figure 4.1.1.1.1: Class Diagram of PersonalData**

#### 4.1.1.1.1. Employee Entity

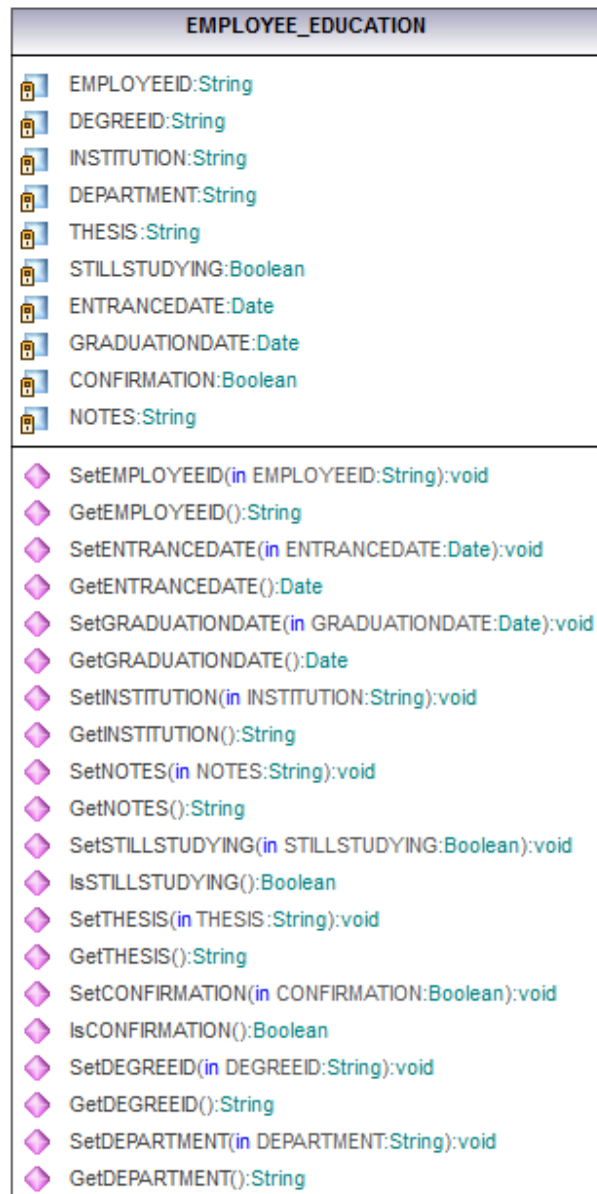
This entity stores basic information of an employee. Class diagram of Employee entity is shown on Table 4.1.1.1.1 (This entity is too big so whole class diagram couldn't be fit on a page, so we cropped it.).

Employee	
EMPLOYEEID:String	
NAME:String	
SURNAME:String	
GENDERID:String	
NATIONALITY:String	
BLOODTYPEID:String	
BIRTHDATE:Date	
MARITALSTATUSID:String	
DRIVINGLICENCEID:String	
EMAIL:String	
PHONE:String	
POSITIONID:String	
DEPARTMENTID:String	
CELLPHONE:String	
HOUSEPHONE:String	
SUPERVISORID:String	
IDENTITYNO:String	
TAXNO:String	
SSKNO:String	
CONTRACTTYPE:String	
SIEMENSENTRANCE:Date	
STARTDATE:Date	
MILITARYSERVICEID:String	
MILITARYSERVICEDATE:Date	
CHAMBERMEMBERSHIPDATE:Date	
LOCATION:String	
OFFICESEAT:String	
ARBISRECORD:Boolean	
CONFIRMATION:String	
CREATEDDATE:Date	
CREATEDBY:String	
MODIFYDATE:Date	
MODIFIEDBY:String	
SetBLOODTYPEID(in BLOODTYPEID:String):void	
GetBLOODTYPEID():String	
SetCELLPHONE(in CELLPHONE:String):void	

**Table 4.1.1.1.1 : Table of Employee Entity**

#### 4.1.1.1.2. Education Entity

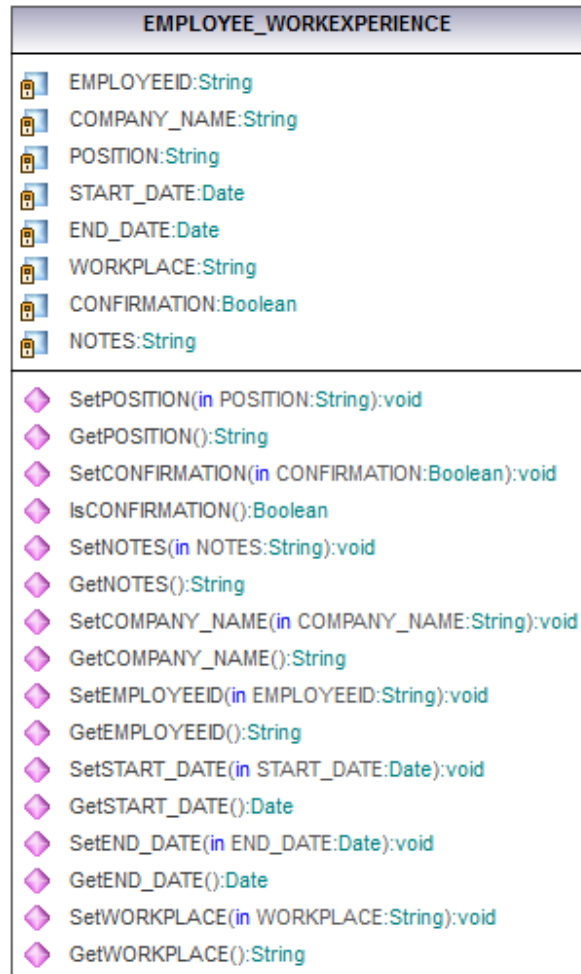
This entity stores education information of an employee. Class diagram of Education Entity is shown in the figure below (Figure 4.1.1.1.2.1)



**Figure 4.1.1.1.2.1: Class Diagram of Education Entity**

#### 4.1.1.1.3. Work Experience Entity

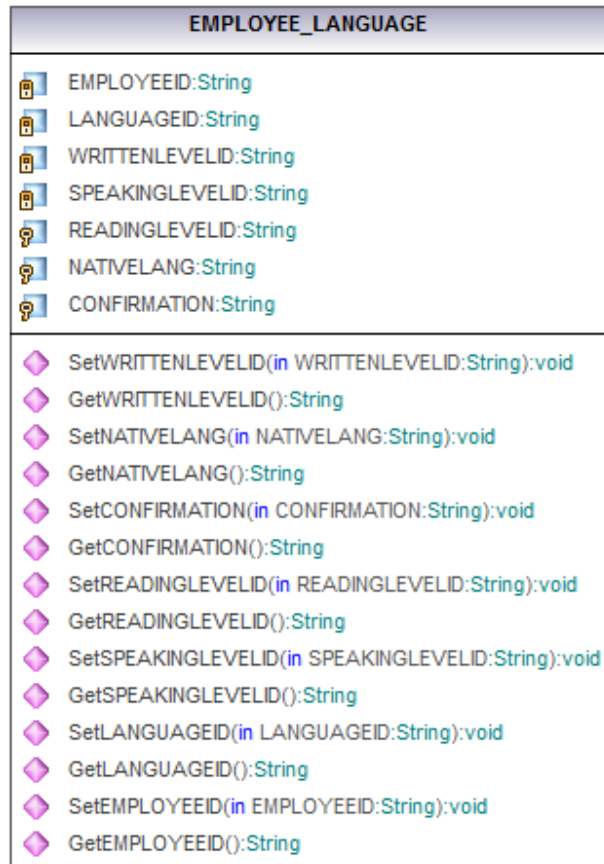
This entity stores work experience information of an employee. Class diagram of Work Experience Entity is shown in the figure below (Figure 4.1.1.1.3.1)



**Figure 4.1.1.1.3.1 : Class Diagram of Work Experience Entity**

#### 4.1.1.1.4. Languages Entity

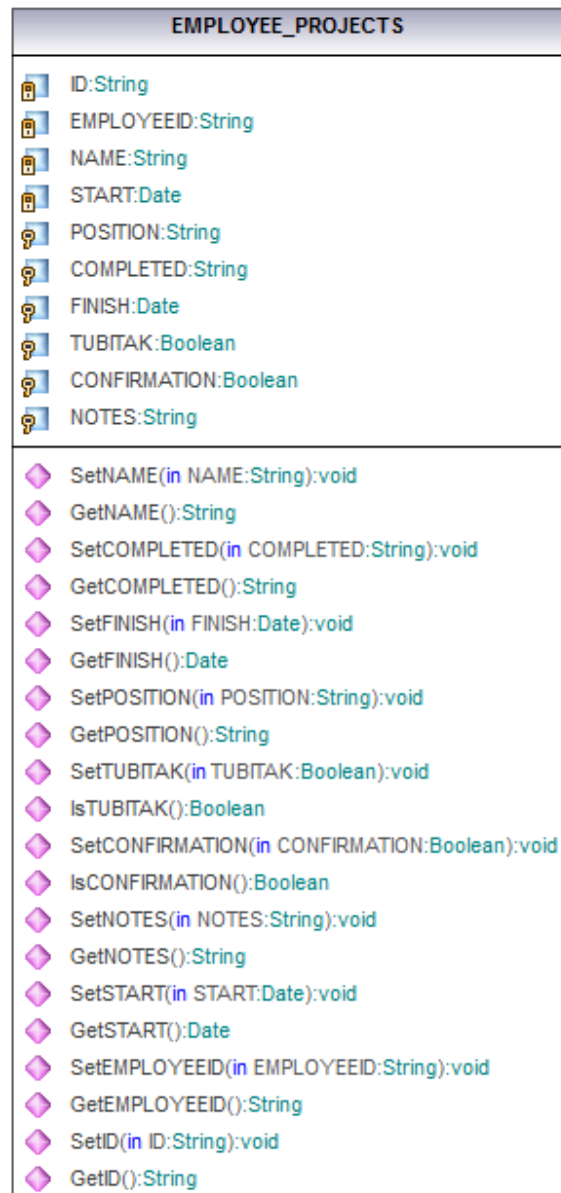
This entity stores languages that an employee knows. Class diagram of Languages Entity is shown in the figure below (Figure 4.1.1.1.4.1)



**Figure 4.1.1.1.4.1: Class Diagram of Languages Entity**

#### 4.1.1.1.5. Projects Entity

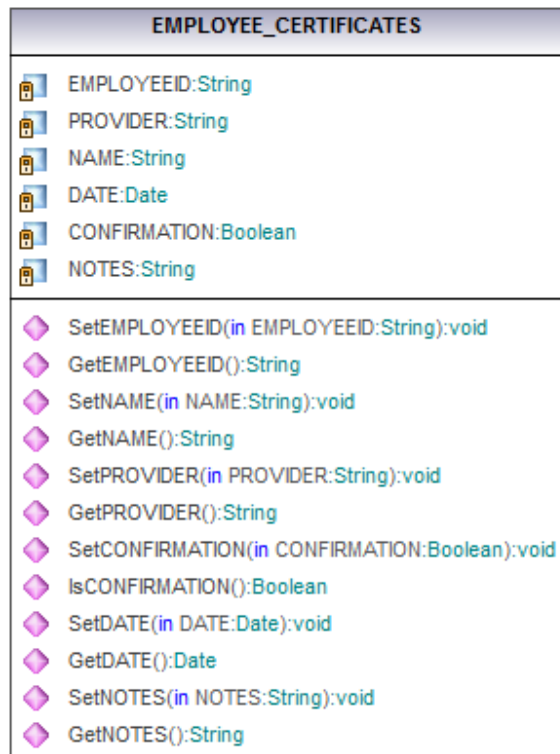
This entity stores project information that employee is part of. Class diagram of Projects Entity is shown in the figure below (Figure 4.1.1.1.5.1)



**Figure 4.1.1.1.5.1: Class Diagram of Projects Entity**

#### 4.1.1.1.6. Certificates Entity

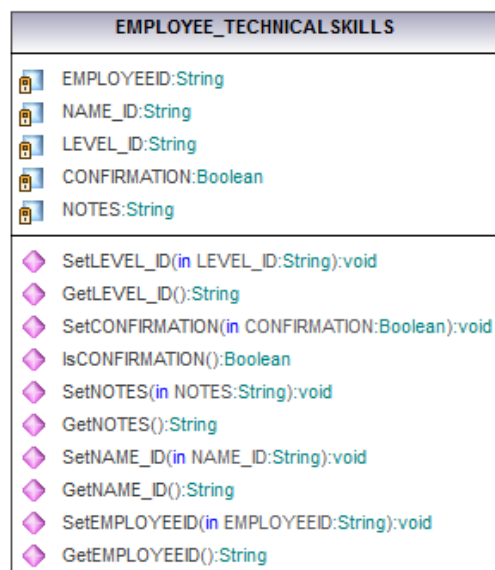
This entity stores information about certificates that employees have. Class diagram of Certificates Entity is shown in the figure below (Figure 4.1.1.1.6.1)



**Figure 4.1.1.1.6.1 : Class Diagram of Certificates Entity**

#### 4.1.1.1.7. Technical Skills Entity

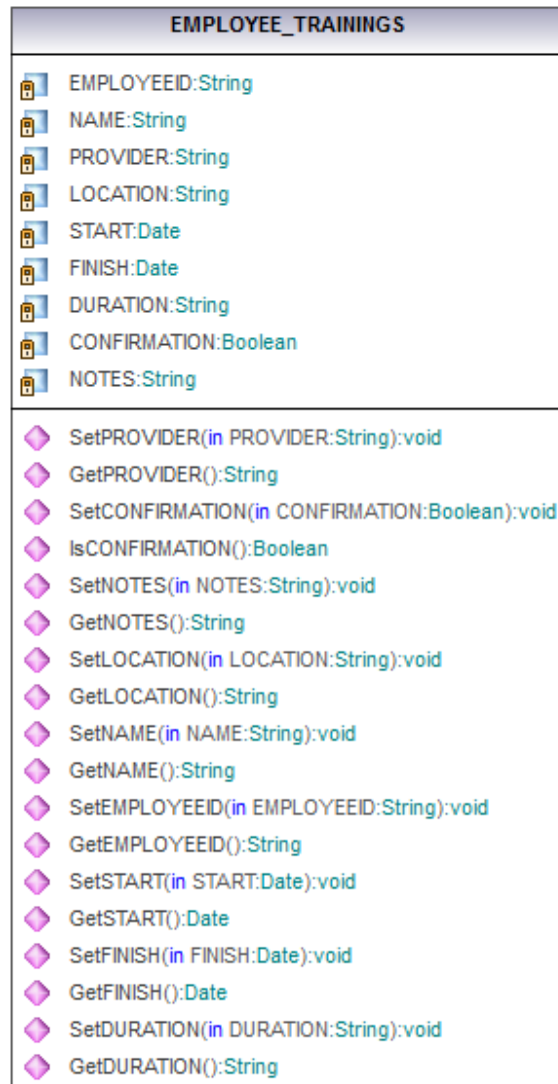
This entity stores information about employee’s technical skills. Class diagram of Technical Skills Entity is shown in the figure below (Figure 4.1.1.1.7.1)



**Figure 4.1.1.1.4.1: Class Diagram of Technical Entity**

#### 4.1.1.1.8. Trainings Entity

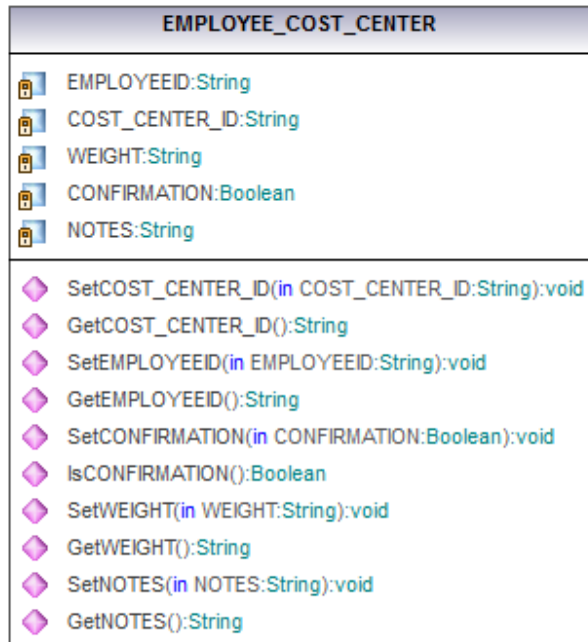
This entity stores trainings information that an employee participated. Class diagram of Trainings Entity is shown in the figure below (Figure 4.1.1.1.8.1)



**Figure 4.1.1.1.8.1: Class Diagram of Trainings Entity**

#### 4.1.1.1.9. Cost Center Entity

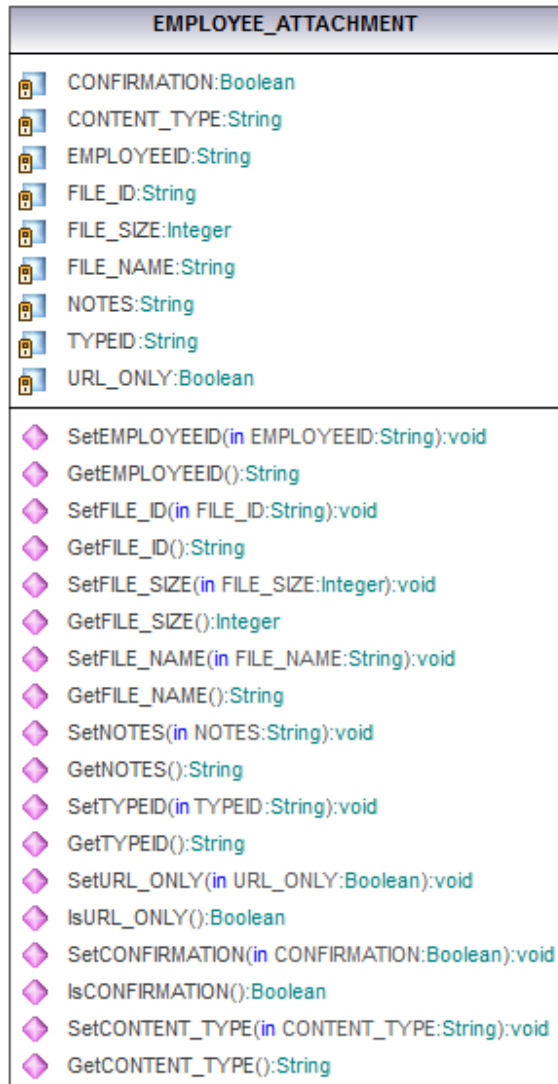
This entity stores costs of an employee. Class diagram of Cost Center Entity is shown in the figure below(Figure 4.1.1.1.9.1)



**Figure 4.1.1.1.4.1: Class Diagram of Cost Center Entity**

#### 4.1.1.1.10. Attachments Entity

This entity stores attachments (like photograph or resume) of the employee. Class diagram of Attachments Entity is shown in the figure below (Figure 4.1.1.1.10.1)



**Figure 4.1.1.1.10.1 : Class Diagram of Attachments Entity**

#### 4.1.1.1.11. Emergency Call Entity

This class indicates the contact information of a relative, to call in case of an emergency situation, of an employee. Class diagram of Emergency Call Entity is shown in the figure below (Figure 4.1.1.1.11.1)

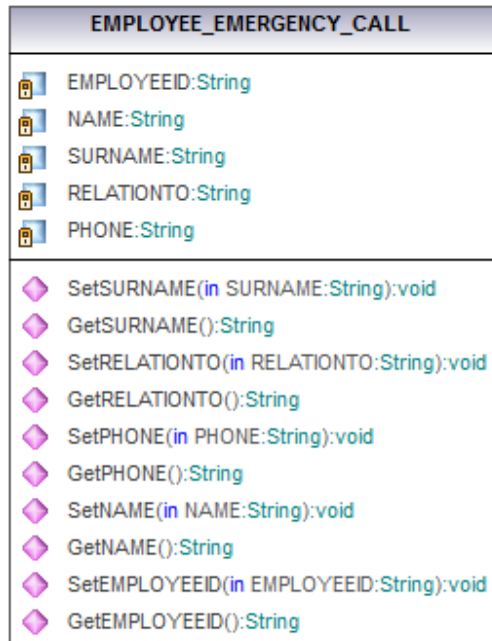


Figure 4.1.1.1.11.1 : Class Diagram of Emergency Call entity

#### 4.1.1.2. Performance Evaluation Module

Performance evaluation module is designed to perform the evaluation of the employees in four main steps. These steps each uses the classes related to them. Class diagram of the main class of Performance Evaluation Module is shown in Figure 4.1.1.2.1. Class diagram of PES which contains a performance evaluation report is shown in Figure 4.1.1.2.2.

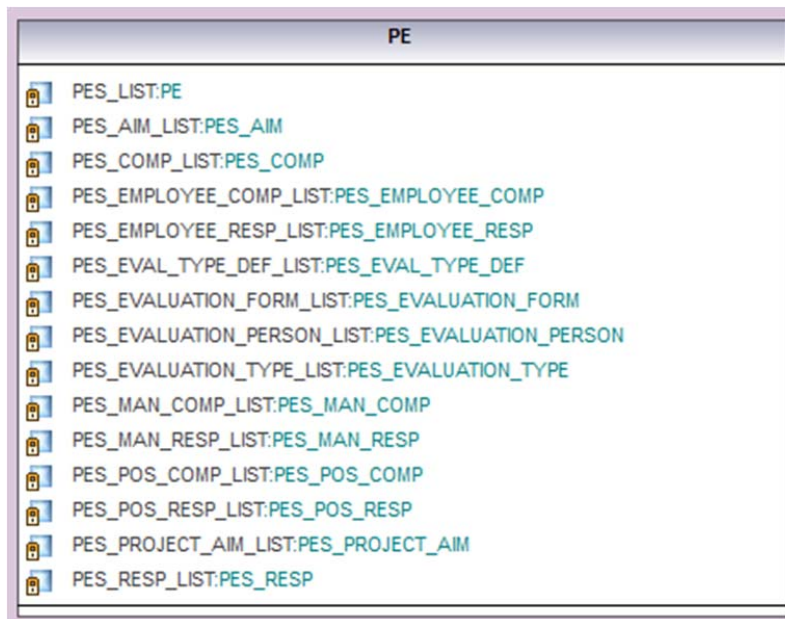
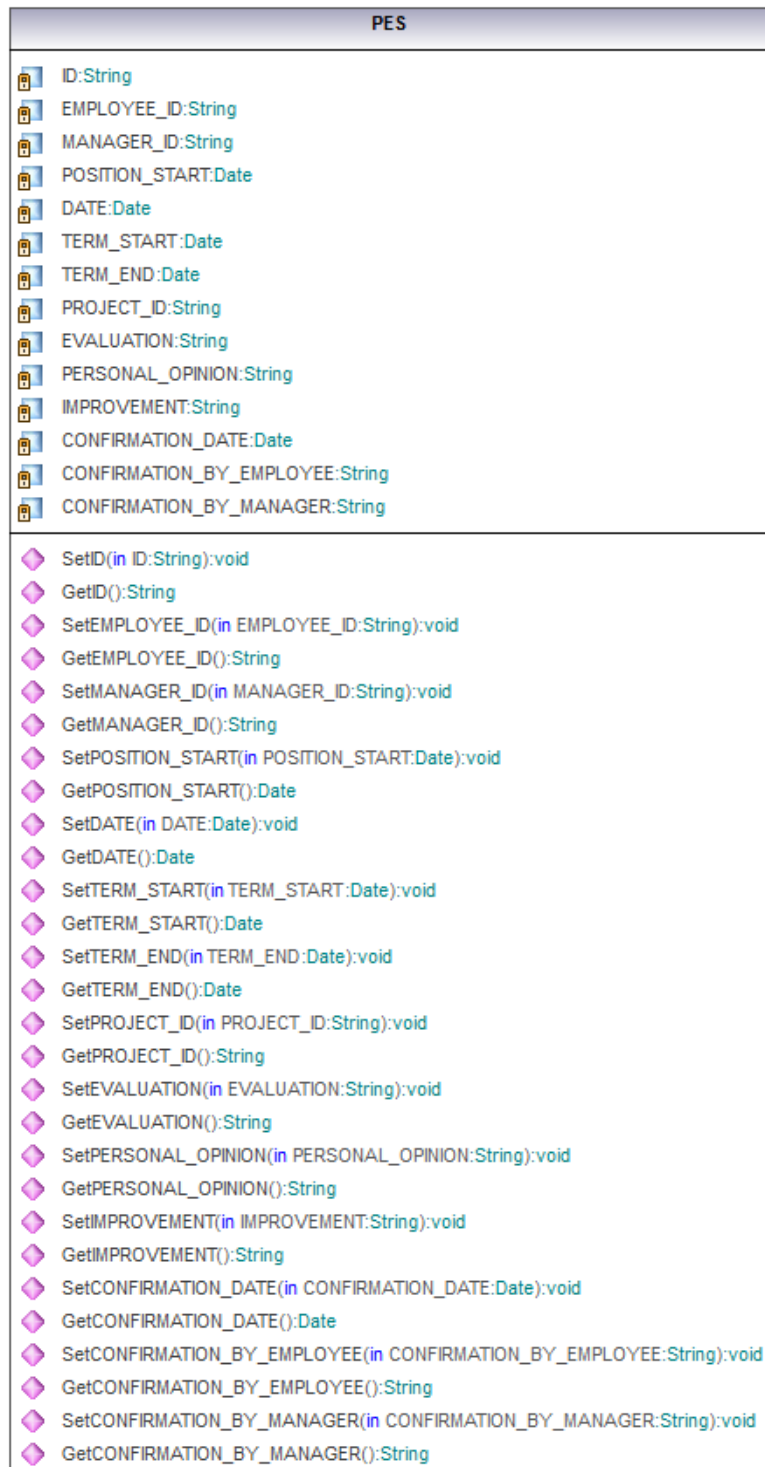


Figure 4.1.1.2.1: Class Diagram of PersonalEvaluation Class



**Figure 4.1.1.2.2: Class Diagram of PES Class**

#### 4.1.1.2.1. Responsibilities/Competences Entity

This entity constitutes the first step of the performance evaluation. This entity includes the basic information about the employee whose performance is going to be evaluated and the basic information about the manager of that employee. In addition to this information, this entity includes the required Responsibilities and Competencies of the employee.

Classes which determine responsibilities and competences entities of a performance evaluation report is described below.

##### 4.1.1.2.1.1. PES\_COMP Class

This class contains id and name of a competence. Class diagram is shown in Figure 4.1.1.2.1.1.1.

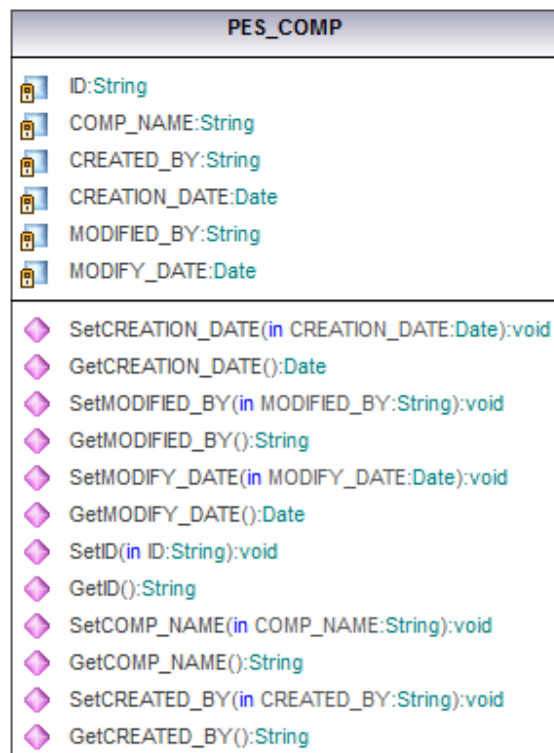
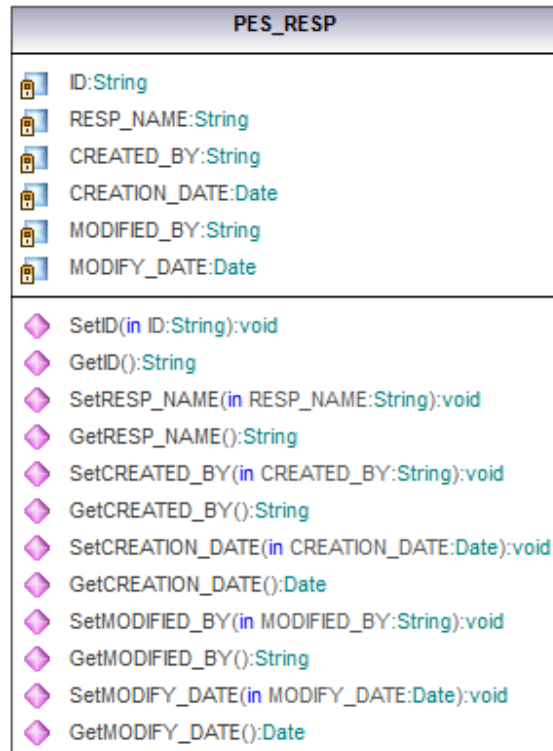


Figure 4.1.1.2.1.1.1: Class Diagram of PES\_COMP

##### 4.1.1.2.1.2. PES\_RESP Class

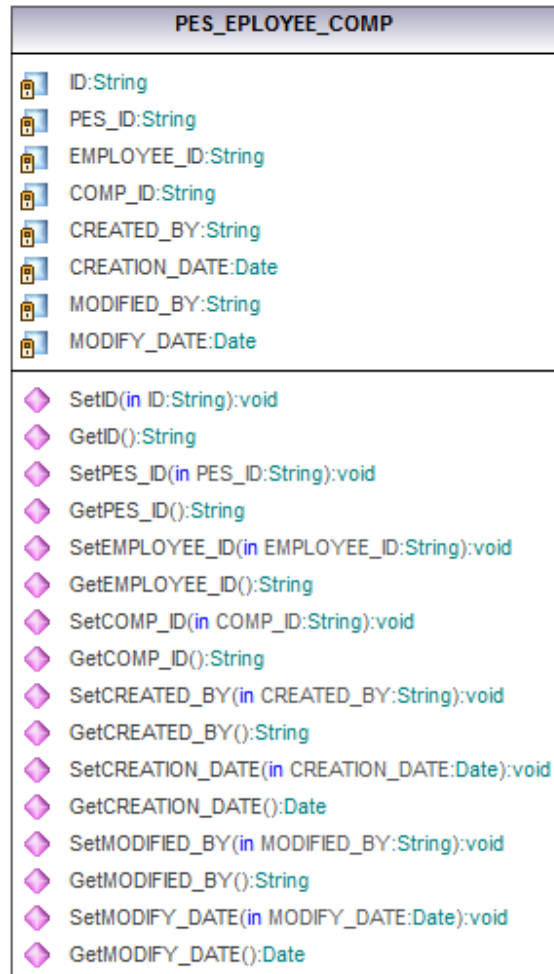
This class contains id and name of a responsibility. Class diagram is shown in Figure 4.1.1.2.1.2.1.



**Figure 4.1.1.2.1.2.1: Class Diagram of PES\_RESP**

#### 4.1.1.2.1.3. PES\_EMPLOYEE\_COMP Class

This class contains competence of an employee which is indicated in a performance evaluation report. Class diagram is shown in Figure 4.1.1.2.1.3.1.



**Figure 4.1.1.2.1.3.1: Class Diagram of PES\_EMPLOYEE\_COMP**

#### 4.1.1.2.1.4. PES\_EMPLOYEE\_RESP Class

This class contains responsibility of an employee which is indicated in a performance evaluation report. Class diagram is shown in Figure 4.1.1.2.1.4.1.

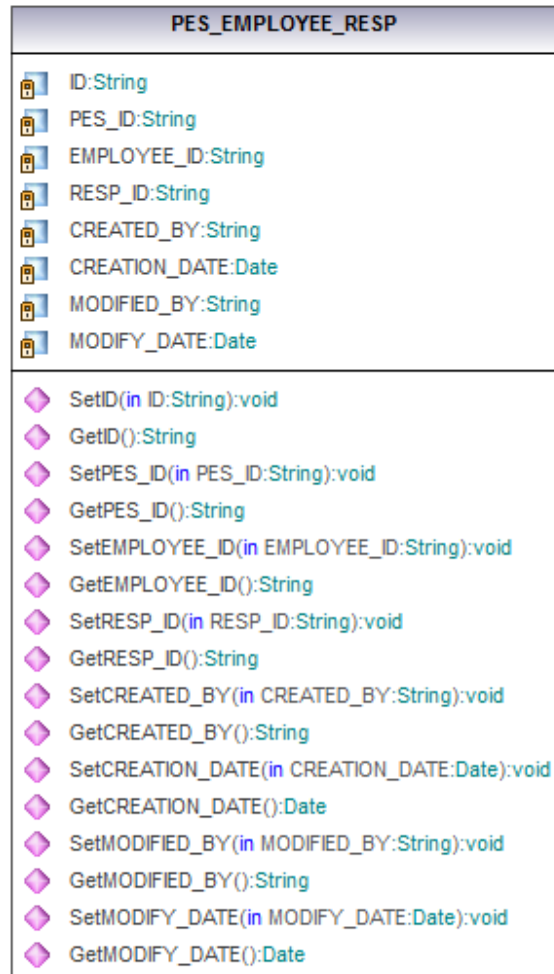
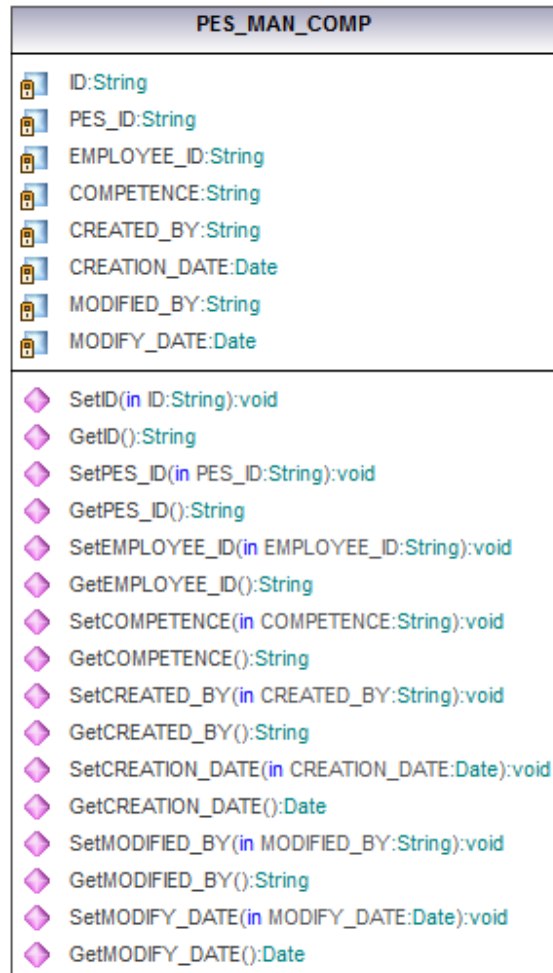


Figure 4.1.1.2.1.4.1: Class Diagram of PES\_EMPLOYEE\_RESP

#### 4.1.1.2.1.5. PES\_MAN\_COMP Class

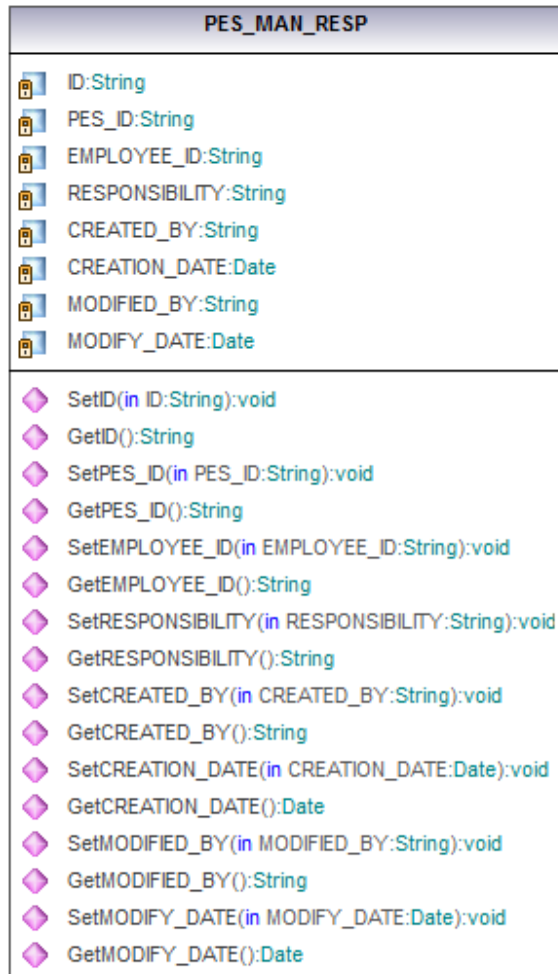
This class contains a manually entered competence of an employee which is indicated in a performance evaluation report by the manager of that employee. Class diagram is shown in Figure 4.1.1.2.1.5.1.



**Figure 4.1.1.2.1.5.1: Class Diagram of PES\_MAN\_COMP**

#### 4.1.1.2.1.6. PES\_MAN\_RESP Class

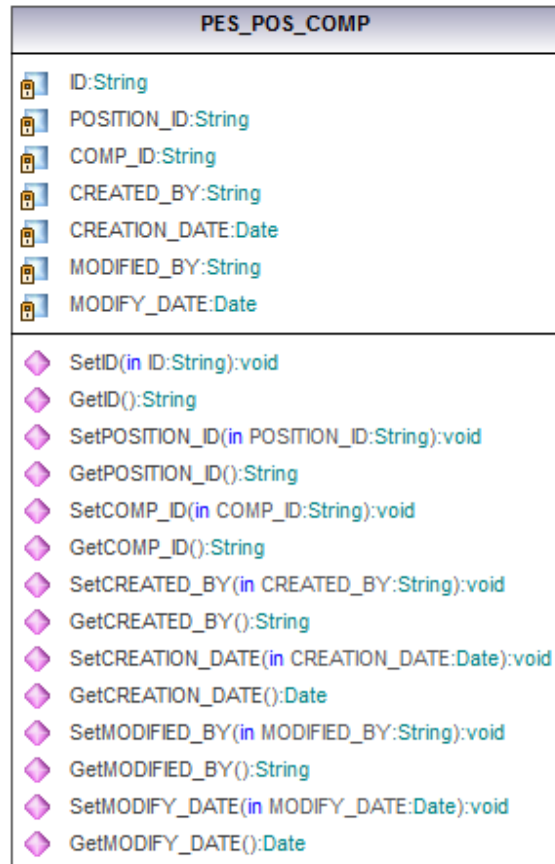
This class contains a manually entered responsibility of an employee which is indicated in a performance evaluation report by the manager of that employee. Class diagram is shown in Figure 4.1.1.2.1.6.1.



**Figure 4.1.1.2.1.6.1: Class Diagram of PES\_MAN\_RESP**

#### 4.1.1.2.1.7. PES\_POS\_COMP Class

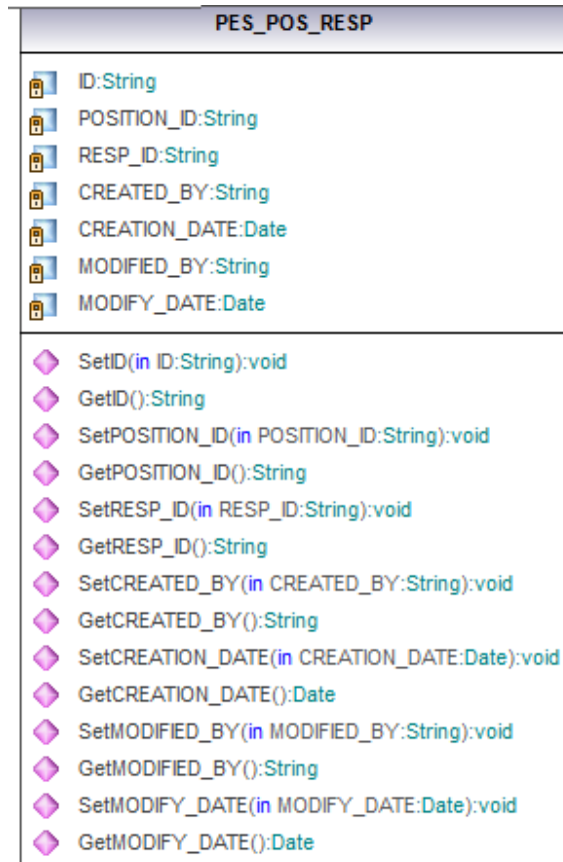
This class contains a predefined competence for a position. Class diagram is shown in Figure 4.1.1.2.1.7.1.



**Figure 4.1.1.2.1.7.1: Class Diagram of PES\_POS\_COMP**

#### 4.1.1.2.1.8. PES\_POS\_RESP Class

This class contains a predefined responsibility for a position. Class diagram is shown in Figure 4.1.1.2.1.8.1.



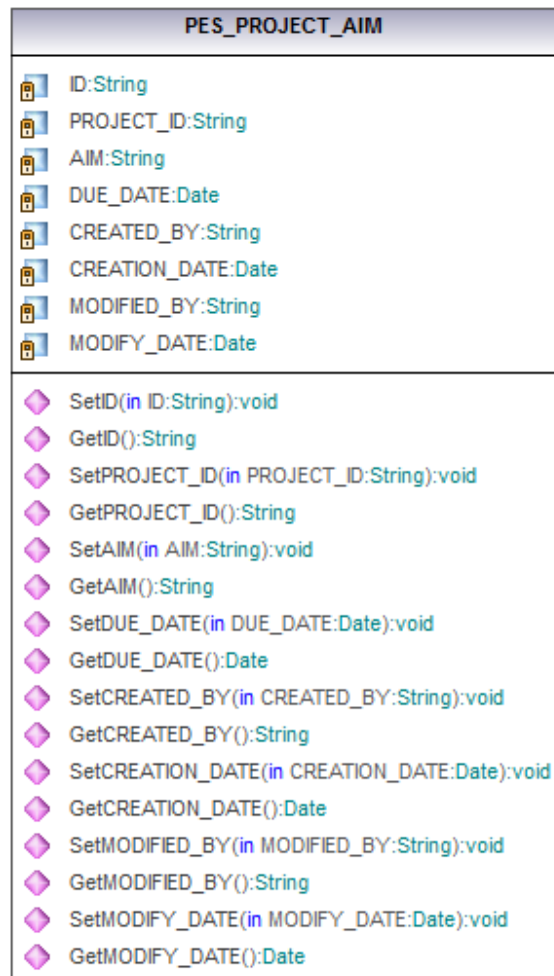
**Figure 4.1.1.2.1.8.1: Class Diagram of PES\_POS\_RESP**

#### 4.1.1.2.2. Aim Entity

Aims constitute the second step of the performance evaluation. This entity is to specify the goal, for example Financial Goals, also the start and expected end date of that goal. To do this, this entity contains two lists; first one is a list of PES\_PROJECT\_AIM to list the aims of project that employee works in, second one is a list of PES\_AIM to list the aims of the employee.

##### 4.1.1.2.2.1. PES\_PROJECT\_AIM

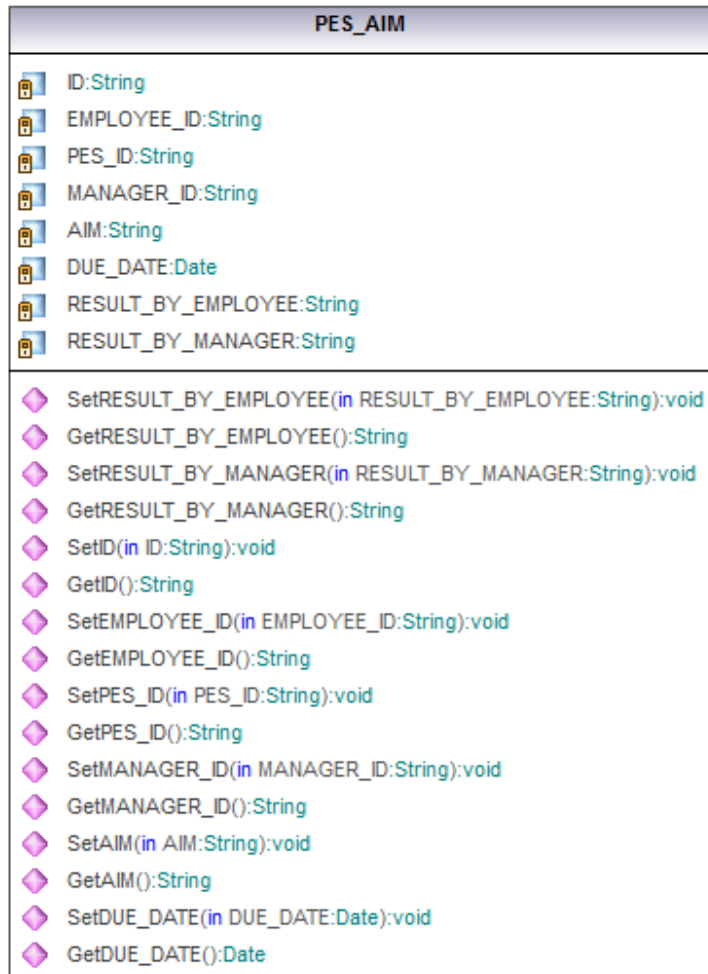
This class contains an aim of a project. Class diagram is shown in Figure 4.1.1.2.2.1.1.



**Figure 4.1.1.2.2.1.1: Class diagram of PES\_PROJECT\_AIM Class**

#### 4.1.1.2.2.2. PES\_AIM

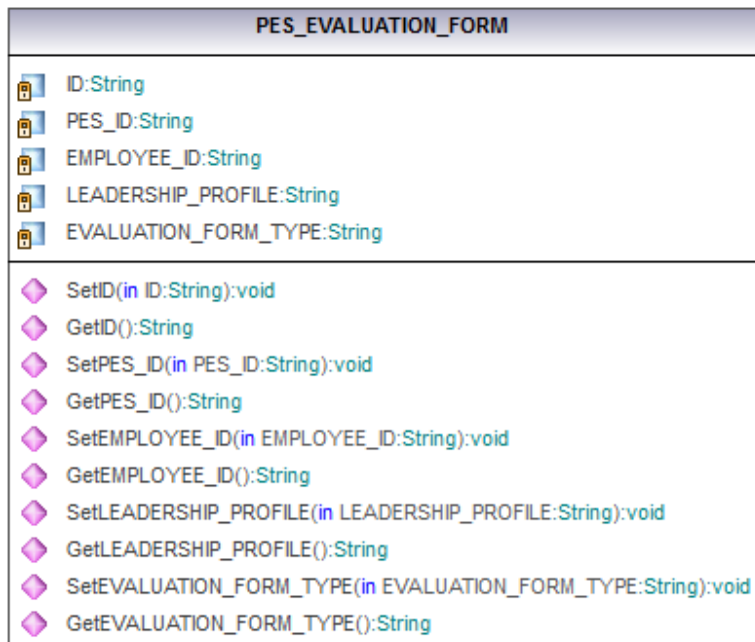
This class contains an aim of an employee. Class diagram is shown in Figure 4.1.1.2.2.2.1.



**Figure 4.1.1.2.2.1: Class diagram of PES\_AIM Class**

#### 4.1.1.2.3. Evaluation Form Entity

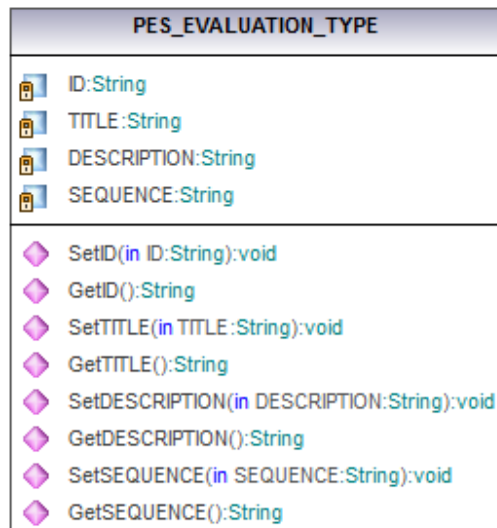
This entity constitutes the step four of the evaluation. This entity includes the evaluation of an employee. Both employee and his/her manager will be able to evaluate the employee. The Class Diagram of Evaluation Form Entity is shown in the Figure 4.1.1.2.3.1



**Figure 4.1.1.2.3.1: Class Diagram of Evaluation Form Entity**

#### 4.1.1.2.3.1. Evaluation Type Entity

This class contains a topic of evaluation criterias for an evaluation form. Class Diagram of Evaluation Type Entity is shown in the Figure 4.1.1.2.3.1.1.



**Figure 4.1.1.2.3.1.1: Class Diagram of Evaluation Type Entity**

#### 4.1.1.2.3.2. Evaluation Type Definition Entity

This class contains an evaluation criterion for an evaluation form. Class Diagram of Evaluation Type Definition Entity is shown in the Figure 4.1.1.2.3.2.1.

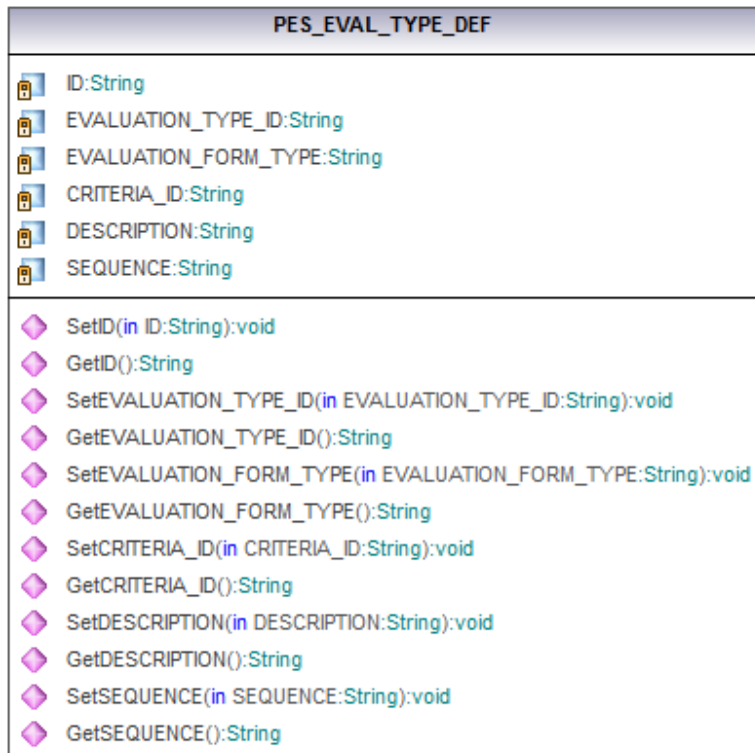
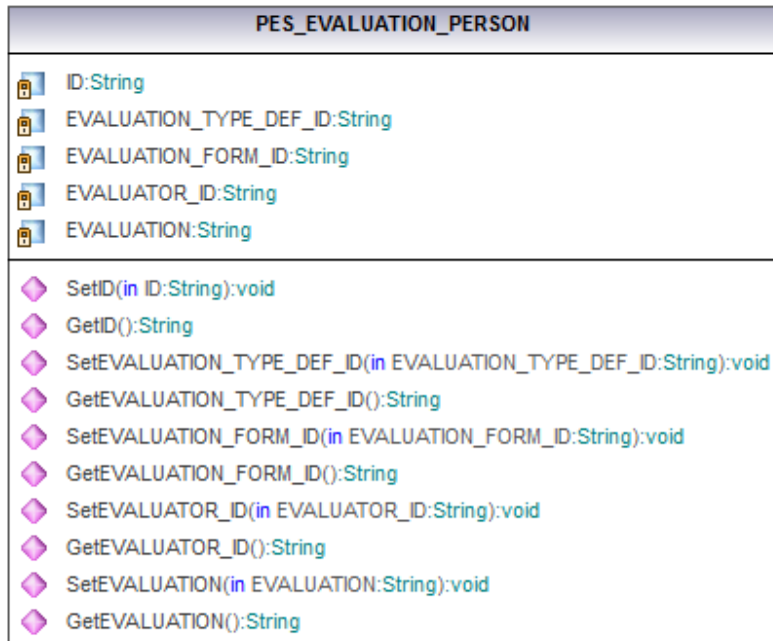


Figure 4.1.1.2.3.2.1: Class Diagram of Evaluation Type Definition Entity

#### 4.1.1.2.3.3. Evaluation Person Entity

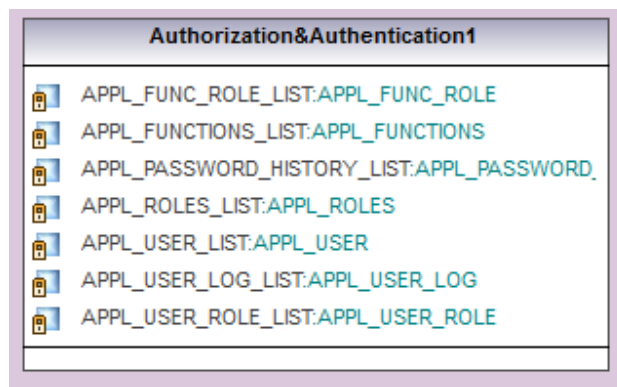
This class contains evaluation of an evaluation criterion for an evaluation form. Evaluation can be done by either the employee or his/her manager. Class Diagram of Evaluation Person Entity is shown in the Figure 4.1.1.2.3.3.1.



**Figure 4.1.1.2.3.3.1: Class Diagram of Evaluation Person Entity**

#### 4.1.1.3. Authentication/Authorization Module

This Module determines the information of users and authentication and authorization information. Class diagram of this module is shown in the Figure 4.1.1.3.1.



**Figure 4.1.1.3.1: Class Diagram of Authorization&Authentication Module**

##### 4.1.1.3.1. APPL\_USER Class

Main class of this module is APPL\_USER class which contains information of a user. Class diagram of APPL\_USER is shown in the Figure 4.1.1.3.1.1.

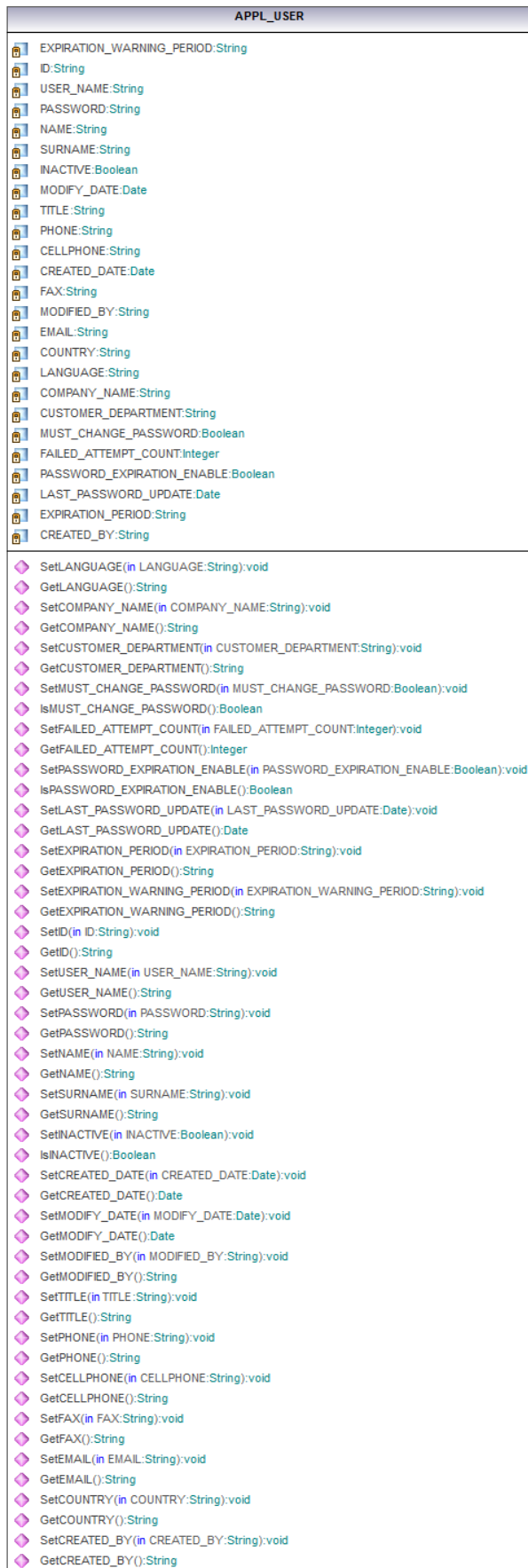


Figure 4.1.1.3.1.1: Class Diagram of APPL\_USER Class

#### 4.1.1.3.2. APPL\_FUNCTIONS Class

This class contains a function which defined for the system (HRMS). Class diagram of APPL\_FUNCTIONS is shown in the Figure 4.1.1.3.2.1.

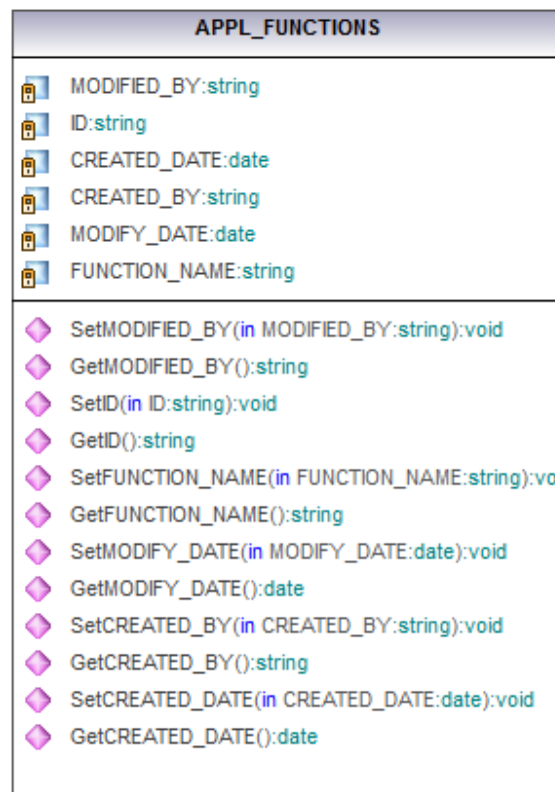
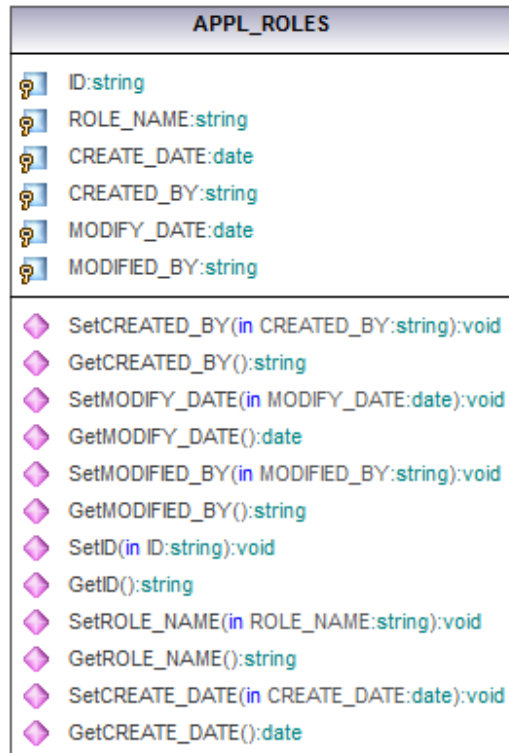


Figure 4.1.1.3.2.1: Class Diagram of APPL\_FUNCTIONS Class

#### 4.1.1.3.3. APPL\_ROLES Class

This class contains a role which defined for the system. Class diagram of APPL\_ROLES is shown in the Figure 4.1.1.3.3.1.



**Figure 4.1.1.3.3.1: Class Diagram of APPL\_ROLES Class**

#### 4.1.1.3.4. APPL\_FUNC\_ROLE Class

This class contains a function and a role which is authorized for that function. Class diagram of APPL\_FUNC\_ROLE is shown in the Figure 4.1.1.3.4.1.

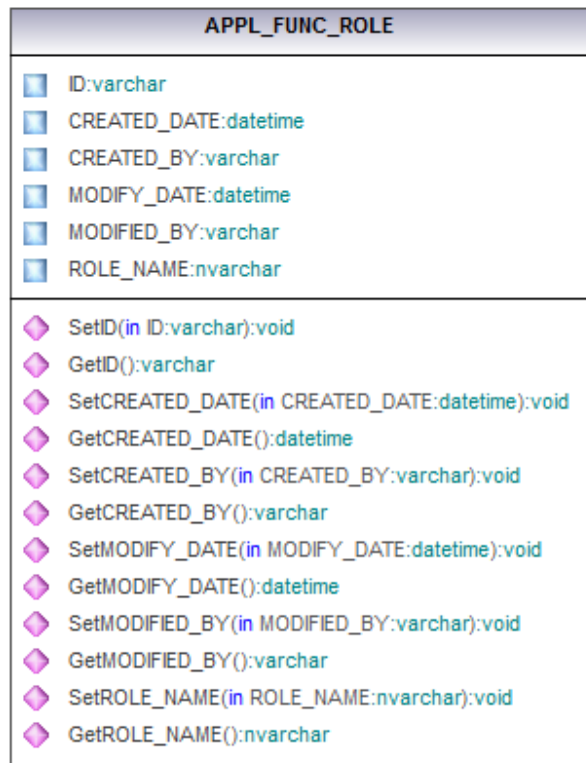


Figure 4.1.1.3.4.1: Class Diagram of APPL\_FUNC\_ROLE Class

#### 4.1.1.3.5. APPL\_USER\_ROLE Class

This class contains a user and a role which is defined for that user. Class diagram of APPL\_USER\_ROLE is shown in the Figure 4.1.1.3.5.1.

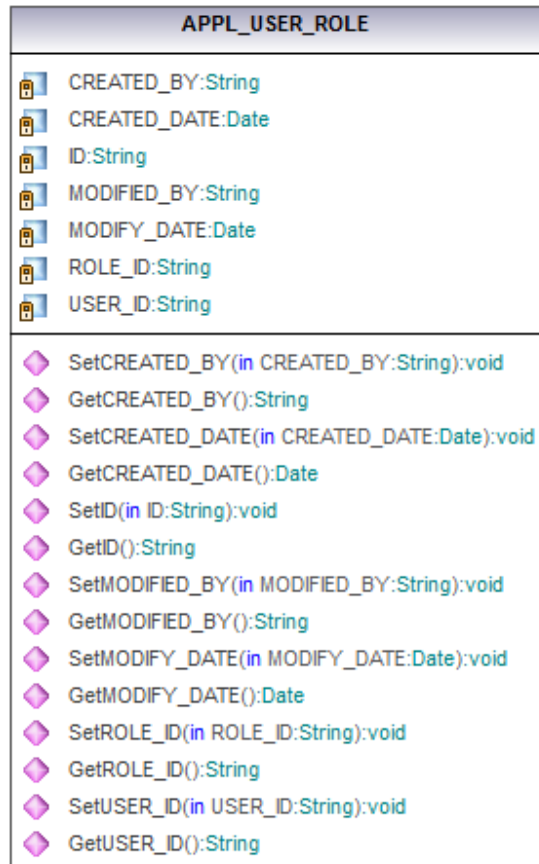


Figure 4.1.1.3.5.1: Class Diagram of APPL\_USER\_ROLE Class

#### 4.1.1.3.6. APPL\_USER\_LOG Class

This class contains a user log. Class diagram of APPL\_USER\_ROLE is shown in the Figure 4.1.1.3.6.1.

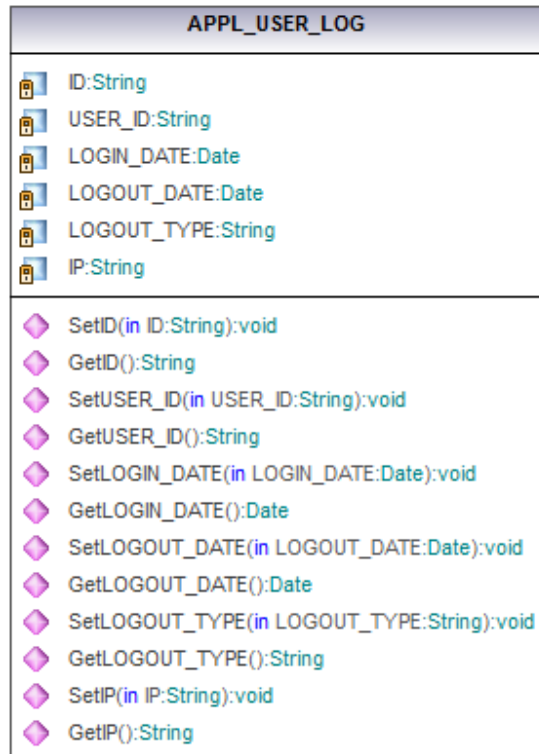


Figure 4.1.1.3.6.1: Class Diagram of APPL\_USER\_LOG Class

#### 4.1.1.4. Database Module

##### 4.1.1.4.1. TBL\_EMPLOYEE

This table is the main table of the database. In this database table, basic information about employees are kept. Columns, Datatypes and other properties are shown in Table 4.1.1.4.1.1.

Field	Type	Null	Primary Key	Foreign Key	References
EMPLOYEEID	Varchar(16)	Not-Null	Yes	No	
NAME	Nvarchar(32)	Not-Null	No	No	
SURNAME	Nvarchar(32)	Not-Null	No	No	
GENDERID	Varchar(1)	Not-Null	No	No	
NATIONALITY	Nvarchar(20)	Not-Null	No	No	
BLOODTYPEID	Varchar(1)	Not-Null	No	No	
BIRTHDATE	Datetime	Not-Null	No	No	
MARITALSTATUSID	Varchar(1)	Not-Null	No	No	
DRIVINGLICENCEID	Varchar(1)	Null	No	No	
EMAIL	Varchar(50)	Not-Null	No	No	
PHONE	Varchar(16)	Null	No	No	
CELLPHONE	Varchar(16)	Null	No	No	
HOUSEPHONE	Varchar(16)	Null	No	No	
POSITIONID	Varchar(1)	Not-Null	No	No	
DEPARTMENTID	Varchar(1)	Not-Null	No	No	
SUPERVISORID	Varchar(16)	No	No	No	
IDENTITYNO	Varchar(11)	Not-Null	No	No	
TAXNO	Varchar(20)	Null	No	No	
SSKNO	Varchar(13)	Not-Null	No	No	
CONTRACTTYPE	Varchar(1)	Null	No	No	

SIEMENSGIRIS	Datetime	Null	No	No	
STARTDATE	Datetime	Null	No	No	
MILITARYSERVICEID	Char(1)	Null	No	No	
MILITARYSERVICEDATE	Datetime	Null	No	No	
CHAMBERMEMBERSHIPDATE	Datetime	Null	No	No	
LOCATION	Nvarchar(50)	Null	No	No	
OFFICESEAT	Varchar(10)	Null	No	No	
ARBISRECORD	Boolean	Not-Null	No	No	
CONFIRMATION	Boolean	Not-Null	No	No	
CREATEDDATE	Datetime	Not-Null	No	No	
CREATEDBY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
MODIFYDATE	Datetime	Not-Null	No	No	
MODIFIEDBY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID

**Table 4.1.1.4.1.1 : Table of Employee**

#### 4.1.1.4.2. TBL\_EMPLOYEE\_EDUCATION

This database table keeps the information about education of employees. Columns, Datatypes and other properties are shown in Table 4.1.1.4.2.1.

Field	Type	Null	Primary Key	Foreign Key	References
EMPLOYEEID	Varchar(16)	Not-Null	Yes	Yes	TBL_EMPLOYEE.EMPLOYEEID
DEGREEID	Varchar(1)	Not-Null	Yes	No	
INSTITUTION	Nvarchar(32)	Not-Null	Yes	No	
DEPARTMENT	Nvarchar(32)	Not-Null	Yes	No	
THESIS	Nvarchar(128)	Null	No	No	
STILLSTUDYING	Boolean	Not-Null	No	No	
ENTERANCEDATE	Datetime	Null	No	No	
GRADUATIONDATE	Datetime	Null	No	No	
CONFIRMATION	Boolean	Not-Null	No	No	
NOTES	Nvarchar(256)	Null	No	No	

**Table 4.1.1.4.2.1 : Table of Employee Education**

#### 4.1.1.4.3. TBL\_EMPLOYEE\_WORKEXPERIENCE

Previous work experiences of employees are stored in this database table. Columns, Datatypes and other properties are shown in Table 4.1.1.4.3.1.

Field	Type	Null	Primary Key	Foreign Key	References
EMPLOYEEID	Varchar(16)	Not-Null	Yes	Yes	TBL_EMPLOYEE.EMPLOYEEID
COMPANY_NAME	Nvarchar(32)	Not-Null	Yes	No	
POSITION	Nvarchar(32)	Not-Null	Yes	No	
START_DATE	Datetime	Not-Null	Yes	No	
END_DATE	Datetime	Not-Null	Yes	No	
WORKPLACE	Nvarchar(32)	Not-Null	No	No	
CONFIRMATION	Boolean	Not-Null	No	No	
NOTES	Nvarchar(256)	Null	No	No	

**TABLE 4.1.1.4.3.1: TABLE THAT SHOWS THE WORK EXPERIENCE OF EMPLOYEES**

#### 4.1.1.4.4. TBL\_EMPLOYEE\_LANGUAGE

This database table stores what language that employees know and how much they know those languages. Columns, Datatypes and other properties are shown in Table 4.1.1.4.4.1.

Field	Type	Null	Primary Key	Foreign Key	References
EMPLOYEEID	Varchar(16)	Not-Null	Yes	Yes	TBL_EMPLOYEE.EMPLOYEEID
LANGUAGEID	Varchar(10)	Not-Null	Yes	No	
WRITTENLEVELID	Varchar(1)	Not-Null	No	No	
SPEAKINGLEVELID	Varchar(1)	Not-Null	No	No	
READINGLEVELID	Varchar(1)	Not-Null	No	No	
NATIVELANG	Boolean	Not-Null	No	No	
CONFIRMATION	Boolean	Not-Null	No	No	

**Table 4.1.1.4.4.1 : Table of the languages that employees know with their ratings**

#### 4.1.1.4.5. TBL\_EMPLOYEE\_CERTIFICATES

In this database table, information about certificates, that employees have, are stored. Columns, Datatypes and other properties are shown in Table 4.1.1.4.5.1.

Field	Type	Null	Primary Key	Foreign Key	References
EMPLOYEEID	Varchar(16)	Not-Null	Yes	Yes	TBL_EMPLOYEE.EMPLOYEEID
PROVIDER	Nvarchar(32)	Not-Null	Yes	No	
NAME	Datetime	Not-Null	Yes	No	
DATE	Nvarchar(32)	Not-Null	No	No	
CONFIRMATION	Nvarchar(3)	Null	No	No	
NOTES	Datetime	Null	No	No	
TUBITAK	Boolean	Not-Null	No	No	
CONFIRMATION	Boolean	Not-Null	No	No	
NOTES	Nvarchar(256)	Null	No	No	

**Table 4.1.1.4.5.1 : Table of Certificates of Employees**

#### 4.1.1.4.6. TBL\_EMPLOYEE\_PROJECTS

Projects that employees involved in are kept in this database table. Columns, Datatypes and other properties are shown in Table 4.1.1.4.6.1.

Field	Type	Null	Primary Key	Foreign Key	References
ID	Varchar(16)	Not-Null	Yes	No	
EMPLOYEEID	Varchar(16)	Not-Null	Yes	Yes	TBL_EMPLOYEE.EMPLOYEEID
NAME	Nvarchar(32)	Not-Null	Yes	No	
START	Datetime	Not-Null	Yes	No	
POSITION	Nvarchar(32)	Not-Null	No	No	
COMPLETED	Nvarchar(3)	Null	No	No	
FINISH	Datetime	Null	No	No	
TUBITAK	Boolean	Not-Null	No	No	
CONFIRMATION	Boolean	Not-Null	No	No	
NOTES	Nvarchar(256)	Null	No	No	

**Table 4.1.1.4.6.1 : Table of Projects an employee involved**

#### 4.1.1.4.7. TBL\_EMPLOYEE\_TECHNICALSKILLS

Technical knowledge information of employees are kept in this database table. Columns, Datatypes and other properties are shown in Table 4.1.1.4.7.1.

Field	Type	Null	Primary Key	Foreign Key	References
EMPLOYEEID	Varchar(16)	Not-Null	Yes	Yes	TBL_EMPLOYEE.EMPLOYEEID
NAMEID	Varchar(8)	Not-Null	Yes	No	
LEVELID	Varchar(2)	Not-Null	Yes	No	
CONFIRMATION	Boolean	Not-Null	No	No	
NOTES	Nvarchar(256)	Null	No	No	

**Table 4.1.1.4.7.1 : Table of Employee`s Technical Skills**

#### 4.1.1.4.8. TBL\_EMPLOYEE\_TRAININGS

Information about trainings that employees participated are kept in this database table. Columns, Datatypes and other properties are shown in Table 4.1.1.4.8.1.

Field	Type	Null	Primary Key	Foreign Key	References
EMPLOYEEID	Varchar(16)	Not-Null	Yes	Yes	TBL_EMPLOYEE.EMPLOYEEID
NAME	Nvarchar(128)	Not-Null	Yes	No	
PROVIDER	Nvarchar(64)	Null	No	No	
LOCATION	Nvarchar(32)	Null	No	No	
START	Datetime	Null	No	No	
FINISH	Datetime	Null	No	No	
DURATION	Varchar(16)	Null	No	No	
CONFIRMATION	Boolean	Not-Null	No	No	
NOTES	Nvarchar(256)	Null	No	No	

**Table 4.1.1.4.8.1 : Table of Trainings that employees are Participated**

#### 4.1.1.4.9. TBL\_EMPLOYEE\_COST\_CENTER

This table keeps costs of employees in projects. Columns, Datatypes and other properties are shown in Table 4.1.1.4.9.1.

Field	Type	Null	Primary Key	Foreign Key	References
EMPLOYEEID	Varchar(16)	Not-Null	Yes	Yes	TBL_EMPLOYEE.EMPLOYEEID
COST_CENTER_ID	Varchar(8)	Not-Null	Yes	No	
WEIGHT	Varchar(2)	Null	No	No	
CONFIRMATION	Boolean	Not-Null	No	No	
NOTES	Nvarchar(256)	Null	No	No	

**Table 4.1.1.4.9.1 : Table of Cost Records of an Employee in projects**

#### 4.1.1.4.10. TBL\_EMPLOYEE\_ATTACHMENT

Information of files that employees attached (such as photo or cv) are kept in this table. Columns, Datatypes and other properties are shown in Table 4.1.1.4.10.1.

Field	Type	Null	Primary Key	Foreign Key	References
EMPLOYEEID	Varchar(16)	Not-Null	Yes	Yes	TBL_EMPLOYEE.EMPLOYEEID
FILE_NAME	Nvarchar(256)	Not-Null	Yes	No	
FILE_ID	Varchar(32)	Not-Null	No	No	
URL_ONLY	Boolean	Not-Null	No	No	
FILE_SIZE	Numeric	Not-Null	No	No	
TYPEID	Varchar(50)	Not-Null	No	No	
CONTENT_TYPE	Varchar(64)	Not-Null	No	No	
CONFIRMATION	Boolean	Not-Null	No	No	
NOTES	Nvarchar(256)	Null	No	No	

**Table 4.1.1.4.10.1 : Table of information of attachments belonging to employees**

#### 4.1.1.4.11. TBL\_EMPLOYEE\_EMERGENCY\_CALL

In this database table contact information of people is stored that can be called in emergency cases. Columns, Datatypes and other properties are shown in Table 4.1.1.4.11.1.

Field	Type	Null	Primary Key	Foreign Key	References
EMPLOYEEID	Varchar(16)	Not-Null	Yes	Yes	TBL_EMPLOYEE.EMPLOYEEID
NAME	Nvarchar(32)	Not-Null	Yes	No	
SURNAME	Nvarchar(32)	Not-Null	Yes	No	
RELATIONTO	Nvarchar(16)	Null	No	No	
PHONE	Varchar(16)	Not-Null	No	No	

**Table 4.1.1.4.11.1 : A Table that stores contact information of people related to employees to be called in emergency cases**

#### 4.1.1.4.12. TBL\_PES

This database table is the main table of “Performance Evaluation System”. It keeps “Performance Evaluation Reports” of employees. Columns, Datatypes and other properties are shown in Table 4.1.1.4.12.1.

Field	Type	Null	Primary Key	Foreign Key	References
ID	Varchar(16)	Not-Null	Yes	No	
EMPLOYEEID	Varchar(16)	Not-Null	Yes	Yes	TBL_EMPLOYEE.EMPLOYEEID
MANAGERID	Varchar(16)	Not-Null	No	Yes	TBL_EMPLOYEE.EMPLOYEEID
POSITION_START_DATE	Datetime	Null	No	No	
TERM_START	Datetime	Null	No	No	
TERM_END	Datetime	Null	No	No	
PROJECT_ID	Varchar(16)	Null	No	Yes	TBL_EMPLOYEE_PROJECTS.ID
EVALUATION	Varchar(512)	Null	No	No	
PERSONAL_OPINION	Varchar(512)	Null	No	No	
IMPROVEMENT	Varchar(512)	Null	No	No	
CONFIRMATION_DATE	Datetime	Null	No	No	
CONFIRMATION_BY_EMPLOYEE	Boolean	Not-Null	No	No	
CONFIRMATION_BY_MANAGER	Boolean	Not-Null	No	No	

**Table 4.1.1.4.12.1 : Table of Performance Evaluation System**

#### 4.1.1.4.13. TBL\_PES\_RESP

In this database table list of predefined responsibilities that can be added to “Performance Evaluation Report” of employees is kept. Columns, Datatypes and other properties are shown in Table 4.1.1.4.13.1.

Field	Type	Null	Primary Key	Foreign Key	References
ID	Varchar(16)	Not-Null	Yes	No	
RESP_NAME	Nvarchar(64)	Not-Null	No	No	
CREATED_BY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER.ID
CREATION_DATE	Datetime	Not-Null	No	No	
MODIFIED_BY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER.ID
MODIFY_DATE	Datetime	Not-Null	No	No	

**Table 4.1.1.4.13.1 : Table of Predefined responsibilities**

#### 4.1.1.4.14. TBL\_PES\_EMPLOYEE\_RESP

Responsibility and employee relations for “Performance Evaluation System” is kept in this database table. Columns, Datatypes and other properties are shown in Table 4.1.1.4.14.1.

Field	Type	Null	Primary Key	Foreign Key	References
ID	Varchar(16)	Not-Null	Yes	No	
PES_ID	Varchar(16)	Not-Null	No	Yes	TBL_PES.ID
EMPLOYEE_ID	Varchar(16)	Not-Null	No	Yes	TBL_EMPLOYEE.EMPLOYEEID
RESP_ID	Varchar(16)	Not-Null	No	Yes	TBL_PES_RESP.ID
CREATED_BY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
CREATION_DATE	Datetime	Not-Null	No	No	
MODIFIED_BY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
MODIFY_DATE	Datetime	Not-Null	No	No	

**Table 4.1.1.4.14.1 : Table of Responsibility and Employee relations**

#### 4.1.1.4.15. TBL\_PES\_POS\_RESP

In this database table keeps information about which responsibilities can be assigned for which positions. Columns, Datatypes and other properties are shown in Table 4.1.1.4.15.1.

Field	Type	Null	Primary Key	Foreign Key	References
ID	Varchar(16)	Not-Null	Yes	No	
POSITIONID	Varchar(16)	Not-Null	No	Yes	TBL_EMPLOYEE.POSITIONID
RESP_ID	Varchar(16)	Not-Null	No	Yes	TBL_PES_RESP.ID
CREATED_BY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
CREATION_DATE	Datetime	Not-Null	No	No	
MODIFIED_BY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
MODIFY_DATE	Datetime	Not-Null	No	No	

**Table 4.1.1.4.15.1 : Table of Responsibilities and corresponding positions**

#### 4.1.1.4.16. TBL\_PES\_MAN\_RESP

In this database table responsibilities which are assigned for employees by his/her manager except from the responsibilities which are specified for his/her position are stored. Columns, Datatypes and other properties are shown in Table 4.1.1.4.16.1.

Field	Type	Null	Primary Key	Foreign Key	References
ID	Varchar(16)	Not-Null	Yes	No	
PES_ID	Varchar(16)	Not-Null	No	Yes	TBL_PES.ID
EMPLOYEE_ID	Varchar(16)	Not-Null	No	Yes	TBL_EMPLOYEE.EMPLOYEEID
RESPONSIBILITY	Nvarchar(64)	Not-Null	No	No	
CREATED_BY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
CREATION_DATE	Datetime	Not-Null	No	No	
MODIFIED_BY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
MODIFY_DATE	Datetime	Not-Null	No	No	

**Table 4.1.1.4.16.1 : Table of Responsibilities assigned to Employees by Manager**

#### 4.1.1.4.17. TBL\_PES\_COMP

this database table keeps list of predefined competences that can be added to “Performance Evaluation Report”. Columns, Datatypes and other properties are shown in Table 4.1.1.4.17.1.

Field	Type	Null	Primary Key	Foreign Key	References
ID	Varchar(16)	Not-Null	Yes	No	
COMP_NAME	Varchar(16)	Not-Null	No	No	
CREATED_BY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
CREATION_DATE	Datetime	Not-Null	No	No	
MODIFIED_BY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
MODIFY_DATE	Datetime	Not-Null	No	No	

**Table 4.1.1.4.17.1 : Table of Predefined Competences**

#### 4.1.1.4.18. TBL\_PES\_EMPLOYEE\_COMP

This database table determines employee, competence relation. Columns, Datatypes and other properties are shown in Table 4.1.1.4.18.1.

Field	Type	Null	Primary Key	Foreign Key	References
ID	Varchar(16)	Not-Null	Yes	No	
PES_ID	Varchar(16)	Not-Null	No	Yes	TBL_PES.ID
EMPLOYEE_ID	Varchar(16)	Not-Null	No	Yes	TBL_EMPLOYEE.EMPLOYEEID
COMP_ID	Varchar(16)	Not-Null	No	Yes	TBL_PES_COMP.ID
CREATED_BY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
CREATION_DATE	Datetime	Not-Null	No	No	
MODIFIED_BY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
MODIFY_DATE	Datetime	Not-Null	No	No	

**Table 4.1.1.4.18.1 : Table of Employee, Competence relation**

#### 4.1.1.4.19. TBL\_PES\_POS\_COMP

Competences that can be assigned for positions defined in this database table. Columns, Datatypes and other properties are shown in Table 4.1.1.4.19.1.

Field	Type	Null	Primary Key	Foreign Key	References
ID	Varchar(16)	Not-Null	Yes	No	
POSITIONID	Varchar(16)	Not-Null	No	Yes	TBL_EMPLOYEE.POSITIONID
COMP_ID	Varchar(16)	Not-Null	No	Yes	TBL_PES_COMP.ID
CREATED_BY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
CREATION_DATE	Datetime	Not-Null	No	No	
MODIFIED_BY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
MODIFY_DATE	Datetime	Not-Null	No	No	

**Table 4.1.1.4.19.1 : Table of Competences assigned to positions**

#### 4.1.1.4.20. TBL\_PES\_MAN\_COMP

In this database table competences which are assigned for employees by his/her manager except from the responsibilities which are specified for his/her position are stored. Columns, Datatypes and other properties are shown in Table 4.1.1.4.20.1.

Field	Type	Null	Primary Key	Foreign Key	References
ID	Varchar(16)	Not-Null	Yes	No	
PES_ID	Varchar(16)	Not-Null	No	Yes	TBL_PES.ID
EMPLOYEE_ID	Varchar(16)	Not-Null	No	Yes	TBL_EMPLOYEE.EMPLOYEEID
COMPETENCE	Nvarchar(64)	Not-Null	No	No	
CREATED_BY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
CREATION_DATE	Datetime	Not-Null	No	No	
MODIFIED_BY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
MODIFY_DATE	Datetime	Not-Null	No	No	

**Table 4.1.1.4.20.1 : Table of Competences assigned to employees by Manager**

#### 4.1.1.4.21. TBL\_PES\_PROJECT\_AIM

In this database table aims of projects are kept, so that this information can be automatically added to “Performance Evaluation Report” of employees. Columns, Datatypes and other properties are shown in Table 4.1.1.4.1.21.

Field	Type	Null	Primary Key	Foreign Key	References
ID	Varchar(16)	Not-Null	Yes	No	
PROJECT_ID	Varchar(64)	Not-Null	No	Yes	TBL_EMPLOYEE_PROJECT
AIM	Varchar(64)	Not-Null	No	No	
DUE_DATE	Datetime	Not-Null	No	No	
CREATED_BY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
CREATION_DATE	Datetime	Not-Null	No	No	
MODIFIED_BY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
MODIFY_DATE	Datetime	Not-Null	No	No	

**Table 4.1.1.4.21.1 : Table of Aims of Projects**

#### 4.1.1.4.22. TBL\_PES\_AIM

In this table, aims of the employees and evaluation of them are kept. Columns, Datatypes and other properties are shown in Table 4.1.1.4.22.1.

Field	Type	Null	Primary Key	Foreign Key	References
ID	Varchar(16)	Not-Null	Yes	No	
EMPLOYEE_ID	Varchar(16)	Not-Null	No	Yes	TBL_EMPLOYEE.EMPLOYEEID
PES_ID	Varchar(16)	Not-Null	No	Yes	TBL_PES.ID
MANAGER_ID	Varchar(16)	Not-Null	No	Yes	TBL_EMPLOYEE.EMPLOYEEID
AIM	Varchar(64)	Not-Null	No	No	
DUE_DATE	Varchar(16)	Not-Null	No	No	
RESULT_BY_EMPLOYEE	Nvarchar(16)	Null	No	No	
RESULT_BY_MANAGER	Nvarchar(16)	Null	No	No	

**Table 4.1.1.4.22.1 : Table of Aims of Employees**

#### 4.1.1.4.23. TBL\_PES\_EVALUATION\_FORM

This is “Manager Evaluation Form” database table. Specified criterias for managers are evaluated here. Columns, Datatypes and other properties are shown in Table 4.1.1.4.23.1.

Field	Type	Null	Primary Key	Foreign Key	References
ID	Varchar(16)	Not-Null	Yes	No	
PES_ID	Varchar(16)	Not-Null	No	Yes	TBL_PES.ID
EMPLOYEEID	Varchar(16)	Not-Null	No	Yes	TBL_EMPLOYEE.EMPLOYEEID
LEADERSHIP_PROFILE	Nvarchar(256)	Null	No	No	
EVALUATION_FORM_TYPE	Varchar(3)	Not-Null	No	No	

**Table 4.1.1.4.23.1 : Table Showing Manager Evaluation Form**

#### 4.1.1.4.24. TBL\_PES\_EVALUATION\_TYPE

This is “Manager Evaluation Form” database table. Specified criterias for managers are evaluated here. Columns, Datatypes and other properties are shown in Table 4.1.1.4.24.1.

Field	Type	Null	Primary Key	Foreign Key	References
ID	Varchar(16)	Not-Null	Yes	No	
TITLE	Varchar(16)	Not-Null	No	No	
DESCRIPTION	Varchar(256)	Null	No	No	
SEQUENCE	Nvarchar(2)	Not-Null	No	No	

**Table 4.1.1.4.24.1 : Table Showing Manager Evaluation Form**

#### 4.1.1.4.25. TBL\_PES\_EVAL\_TYPE\_DEF

This is “Manager Evaluation Form” database table. Specified criterias for managers are evaluated here. Columns, Datatypes and other properties are shown in Table 4.1.1.4.25.1.

Field	Type	Null	Primary Key	Foreign Key	References
ID	Varchar(16)	Not-Null	Yes	No	
EVALUATION_TYPE_ID	Varchar(16)	Not-Null	No	Yes	TBL_PES_EVALUATION_TYPE.ID
EVALUATION_FORM_TYPE	Varchar(3)	Not-Null	No	Yes	TBL_PES_EVALUATION_FORM.EVALUATION_FORM_TYPE
CRITERIA_ID	Varchar(16)	Not-Null	No	No	
DESCRIPTION	Nvarchar(64)	Not-Null	No	No	
SEQUENCE	Nvarchar(64)	Not-Null	No	No	

**Table 4.1.1.4.25.1 : Table Showing Manager Evaluation Form**

#### 4.1.1.4.26. TBL\_PES\_EVALUATION\_PERSON

This is “Manager Evaluation Form” database table. Specified criterias for managers are evaluated here. Columns, Datatypes and other properties are shown in Table 4.1.1.4.26.1.

Field	Type	Null	Primary Key	Foreign Key	References
ID	Varchar(16)	Not-Null	Yes	No	
EVALUATION_TYPE_DEF_ID	Varchar(16)	Not-Null	No	Yes	TBL_PES_EVAL_TYPE_DEF.ID
EVALUATION_FORM_ID	Varchar(16)	Not-Null	No	Yes	TBL_PES_EVALUATION_FORM.ID
EVALUATOR_ID	Varchar(16)	Not-Null	No	Yes	TBL_EMPLOYEE.EMPLOYEEID
EVALUATION	Varchar(10)	Not-Null	No	No	

**Table 4.1.1.4.26.1 : Table Showing Manager Evaluation Form**

#### 4.1.1.4.27. TBL\_APPL\_USER

This is the main database table for HRMS. This table holds information about users of the system. Columns, Datatypes and other properties are shown in Table 4.1.1.4.27.1.

Field	Type	Null	Primary Key	Foreign Key	References
ID	Varchar(16)	Not-Null	Yes	No	
USER_NAME	Varchar(16)	Not-Null	Yes	Yes	TBL_EMPLOYEE.EMPLOYEEID
PASSWORD	Nvarchar(16)	Not-Null	No	No	
NAME	Nvarchar(32)	Not-Null	No	No	
SURNAME	Nvarchar(32)	Not-Null	No	No	
INACTIVE	Boolean	Not-Null	No	No	
CREATEDDATE	Datetime	Not-Null	No	No	
CREATEDBY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
MODIFYDATE	Datetime	Not-Null	No	No	
MODIFIEDBY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
TITLE	Varchar(1)	Null	No	No	
PHONE	Varchar(16)	Null	No	No	
CELLPHONE	Varchar(16)	Null	No	No	
FAX	Varchar(16)	Null	No	No	

EMAIL	Varchar(50)	Null	No	No	
COUNTRY	Nvarchar(100)	Null	No	No	
LANGUAGE	Nvarchar(50)	Null	No	No	
COMPANY_NAME	Nvarchar(100)	Null	No	No	
CUSTOMER_DEPARTMENT	Nvarchar(50)	Null	No	No	
FAILED_ATTEMPT_COUNT	Int	Not-Null	No	No	
MUST_CHANGE_PASSWORD	Boolean	Not-Null	No	No	
PASSWORD_EXPIRATION_ENABLE	Boolean	Not-Null	No	No	
LAST_PASSWORD_UPDATE	Datetime	Not-Null	No	No	
EXPIRATION_PERIOD	Varchar(16)	Null	No	No	
EXPIRATION_WARNING_PERIOD	Varchar(16)	Null	No	No	

**Table 4.1.1.4.27.1 : A Table that holds the information about users of HRMS**

#### 4.1.1.4.28. TBL\_APPL\_FUNCTIONS

This database table keeps information about functions of HRMS. Columns, Datatypes and other properties are shown in Table 4.1.1.4.28.1.

Field	Type	Null	Primary Key	Foreign Key	Reference
ID	Varchar(16)	Not-Null	Yes	No	
FUNCTION_NAME	Nvarchar(32)	Not-Null	No	No	
CREATEDDATE	Datetime	Not-Null	No	No	
CREATEDBY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
MODIFYDATE	Datetime	Not-Null	No	No	
MODIFIEDBY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID

**Table 4.1.1.4.28.1 : Table holding information about functions of HRMS**

#### 4.1.1.4.29. TBL\_APPL\_ROLES

This database table keeps list of roles, defined for the system. Columns, Datatypes and other properties are shown in Table 4.1.1.4.29.1.

Field	Type	Null	Primary Key	Foreign Key	Reference
ID	Varchar(16)	Not-Null	Yes	No	
ROLE_NAME	Nvarchar(32)	Not-Null	No	No	
CREATEDDATE	Datetime	Not-Null	No	No	
CREATEDBY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
MODIFYDATE	Datetime	Not-Null	No	No	
MODIFIEDBY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID

**Table 4.1.1.4.29.1 : Table holding list of roles defined for HRMS**

#### 4.1.1.4.30. TBL\_APPL\_FUNC\_ROLE

In this database table, authorization of roles for functions are determined. Columns, Datatypes and other properties are shown in Table 4.1.1.4.30.1.

Field	Type	Null	Primary Key	Foreign Key	Reference
ID	Varchar(16)	Not-Null	Yes	No	
ROLE_ID	Varchar(16)	Not-Null	No	Yes	TBL_APPL_ROLES.ID
FUNCTION_ID	Varchar(16)	Not-Null	No	Yes	TBL_APPL_FUNCTIONS.ID
CREATEDDATE	Datetime	Not-Null	No	No	
CREATEDBY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID
MODIFYDATE	Datetime	Not-Null	No	No	
MODIFIEDBY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER. ID

**Table 4.1.1.3.30.1 : Table holding authorization roles for determined functions**

#### 4.1.1.4.31. TBL\_APPL\_USER\_ROLE

In this database table, kept the roles of users are defined. Columns, Datatypes and other properties are shown in Table 4.1.1.4.31.1.

Field	Type	Null	Primary Key	Foreign Key	Reference
ID	Varchar(16)	Not-Null	Yes	No	
ROLE_ID	Varchar(16)	Not-Null	No	Yes	TBL_APPL_ROLES.ID
USER_ID	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER.ID
CREATEDDATE	Datetime	Not-Null	No	No	
CREATEDBY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER.ID
MODIFYDATE	Datetime	Not-Null	No	No	
MODIFIEDBY	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER.ID

**Table 4.1.1.4.31.1 : Table holding the roles of users defined**

#### 4.1.1.4.32. TBL\_APPL\_USER\_LOG

This database table kept logs of users. Columns, Datatypes and other properties are shown in Table 4.1.1.4.32.1.

Field	Type	Null	Primary Key	Foreign Key	Reference
ID	Varchar(16)	Not-Null	Yes	No	
USER_ID	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER.ID
LOGIN_DATE	Datetime	Not-Null	No	No	
LOGOUT_DATE	Datetime	Null	No	No	
LOGOUT_TYPE	Nvarchar(10)	Null	No	No	
IP	Varchar(15)	Not-Null	No	No	

**Table 4.1.1.4.32.1 : Table keeping logs of users**

#### 4.1.1.4.33. TBL\_APPL\_PASSWORD\_HISTORY

This database table stores passwords of users, in crypted form. Columns, Datatypes and other properties are shown in Table 4.1.1.4.33.1.

Field	Type	Null	Primary Key	Foreign Key	Reference
ID	Varchar(16)	Not-Null	Yes	No	
USER_ID	Varchar(16)	Not-Null	No	Yes	TBL_APPL_USER.ID
DATE	Datetime	Not-Null	No	No	
PASSWORD	Nvarchar(16)	Not-Null	No	No	

**Table 4.1.1.5.33.1 : Table storing passwords of users**

## 4.2. Data Dictionary

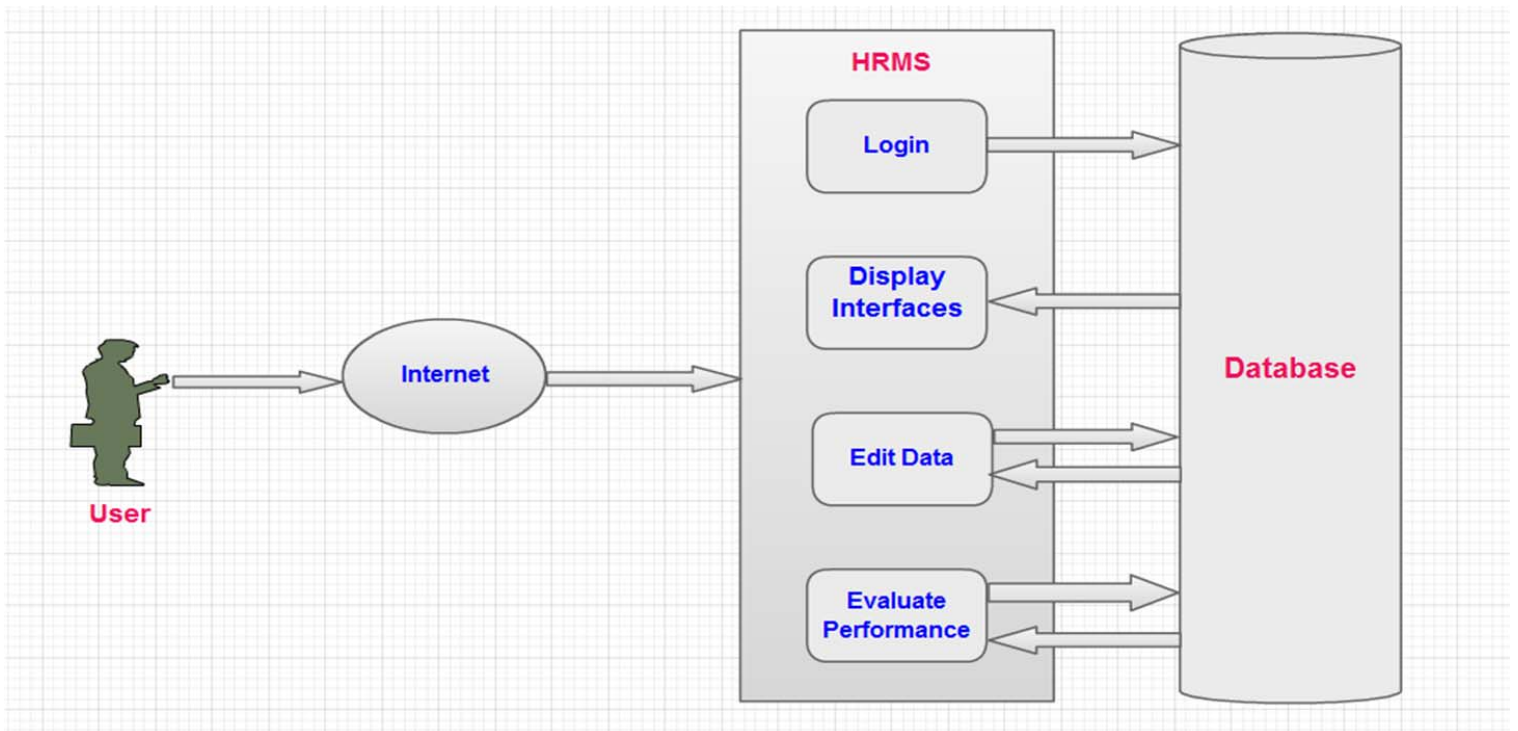
Data dictionary of the system is shown on Table 4.2.1

Name	Type	Refer to
<b>varchar[ ]</b>	variable length char[ ] (ascii code)	Sec 6
<b>nvarchar[ ]</b>	Variable length char[ ] (Unicode)	Sec 6

<b>char[ ]</b>	Character array	Sec 6
<b>Date</b>	Library data time	Sec 4 – Sec 6
<b>DateTime</b>	Library data time	Sec 6
<b>Boolean</b>	Primary data type	Sec 4 – Sec 6
<b>Numeric</b>	Primary data type	Sec 6
<b>int</b>	Primary data type	Sec 6
<b>String</b>	Primary data type	Sec 4
<b>ProjectAim</b>	Data module	4.1.1.2.2
<b>PersonalGoals</b>	Data module	4.1.1.2.2

**Table 4.2.1: Data Dictionary**

## 5. System Architecture



### 5.1. Architectural Design

**Figure 5.1: General Overview of the HRMS Application**

Mainly, our HRMS consists modules and a Client/Server architecture comprising interfaces and a main database. These modules are interrelated with each other through the predefined role types that are assigned to each user. Actually, those modules are the main and fundamental part of the HRMS which play a critical role to configure the specific interfaces corresponding to the different role types. Considering the role types and their specific

interfaces data access will be verified through database. The main database will keep all the data related to all specified modules. Therefore, data manipulation will be carried out throughout the HRMS by means of those modules. So there will be HRMS application server-through database connector-handles all database requests from the client's side to the database, as well as the responses are controlled by the server.

Our HRMS system can be subcategorized into 4 main components as modules according to their unique activities performed on the main database. The main modules are namely:

- Authentication and Authorization
- Personal Data
- Performance Evaluation
- Administration

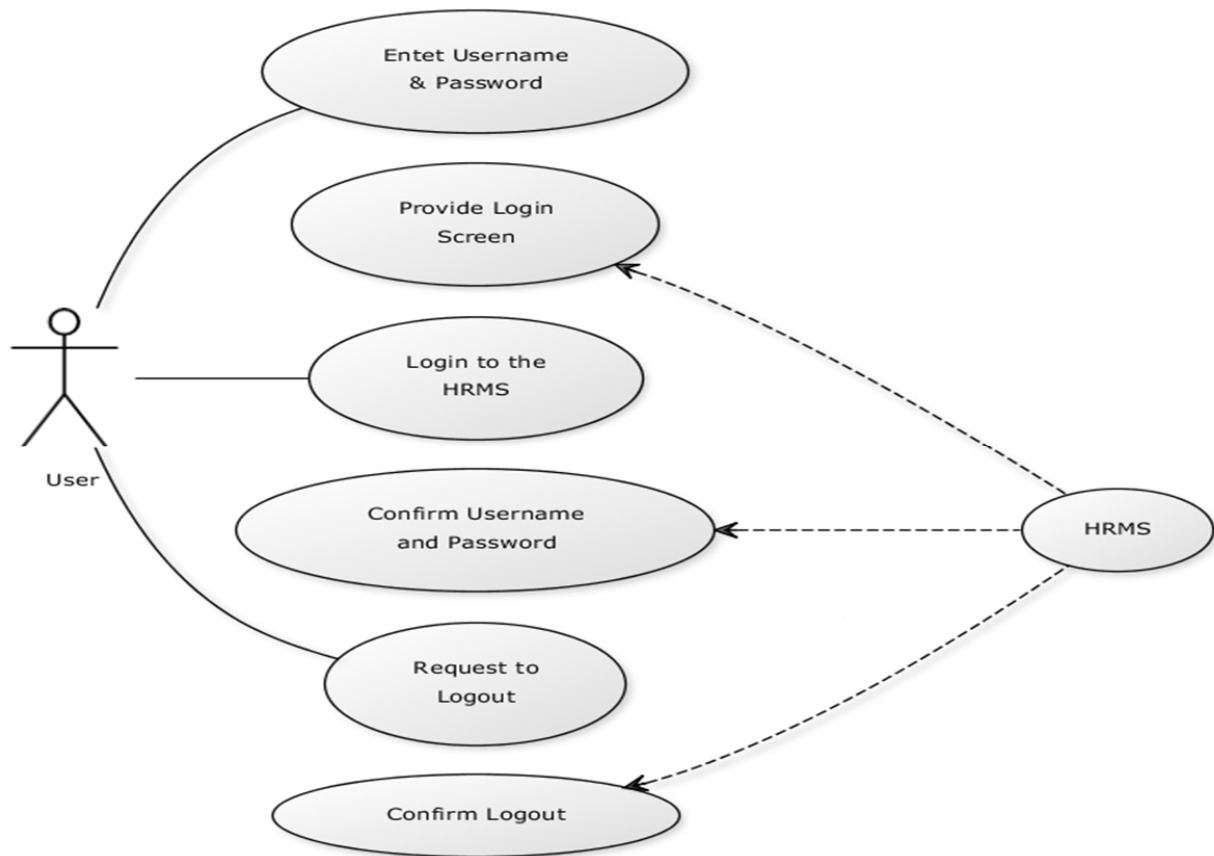
## **5.2. Description of Components**

### **5.2.1. Authentication and authorization Module**

#### *5.2.1.1. Processes Narrative for Authentication and Authorization*

This component is responsible for checking the critical requests with the permission of the clients. For example if a client tries to log on into the system Authentication checks if he is a registered user of the system according to the user identification and password. After a user is authenticated the authorization mechanism becomes active and authorizes the user according to the corresponding role types. Meanwhile this package controls the access of specific data corresponding to specific role type. An admin may be granted to view an employee's profile and edit the personal data while an employee will not be able to grant the admin's Personal

Data. The process of Authentication and Authorization is shown below in the figure 5.2.1.1.1:



**Figure 5.2.1.1.1: Use Case diagram for Authentication and Authorization**

### *5.2.1.2. Authentication and Authorization Interface Description*

The user is asked to enter his\her username and password to access to the system. The output is either request granted or denied. After a user is authenticated the authorization package decides the role type according to the corresponding user. It interacts with HRMS in order to get data from the data base.

### *5.2.1.3. Authentication and authorization Processing Detail*

The package operates as follows:

It receives authentication request from server along with the data from the database.

After the data is entered the given data is controlled in the database and starts processing authentication.

After a while the authenticated data is sent to authorization mechanism and the role type of the user is checked and sent back to the HRMS application.

It returns a grant or a denial response.

After the role type is checked from the database, interfaces according to the defined role type will be created in the HRMS application page.

Then user will be able to use the HRMS application.

#### 5.2.1.4 Dynamic Behavior of Authentication and Authorization

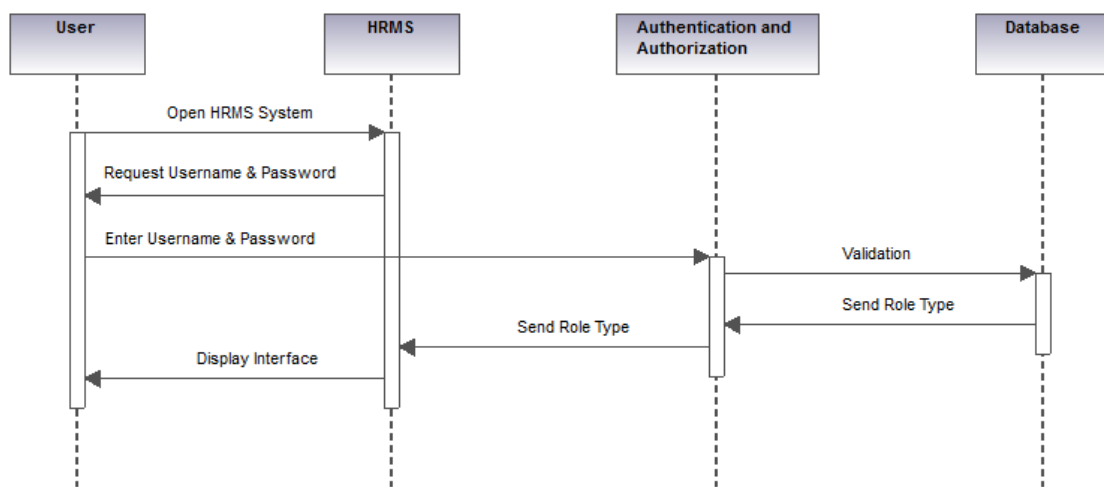


Figure 5.2.1.4.1 Sequence Diagram for the Authentication and Authorization

## 5.2.2. Personal Data Module

### 5.2.2.1. Processes narrative for Personal Data

This component is responsible for storing personal data. In fact by using this package the requested data is granted from database, in other words, it queries into the database and provides the requested data for the user. It uses the JDBC (java database connectivity) connector to get data from the database and create corresponding objects with attributes and methods to access the data easily. The main operation in manipulating the Personal Data Module can be shown by the figure below 5.2.2.1.1 below:

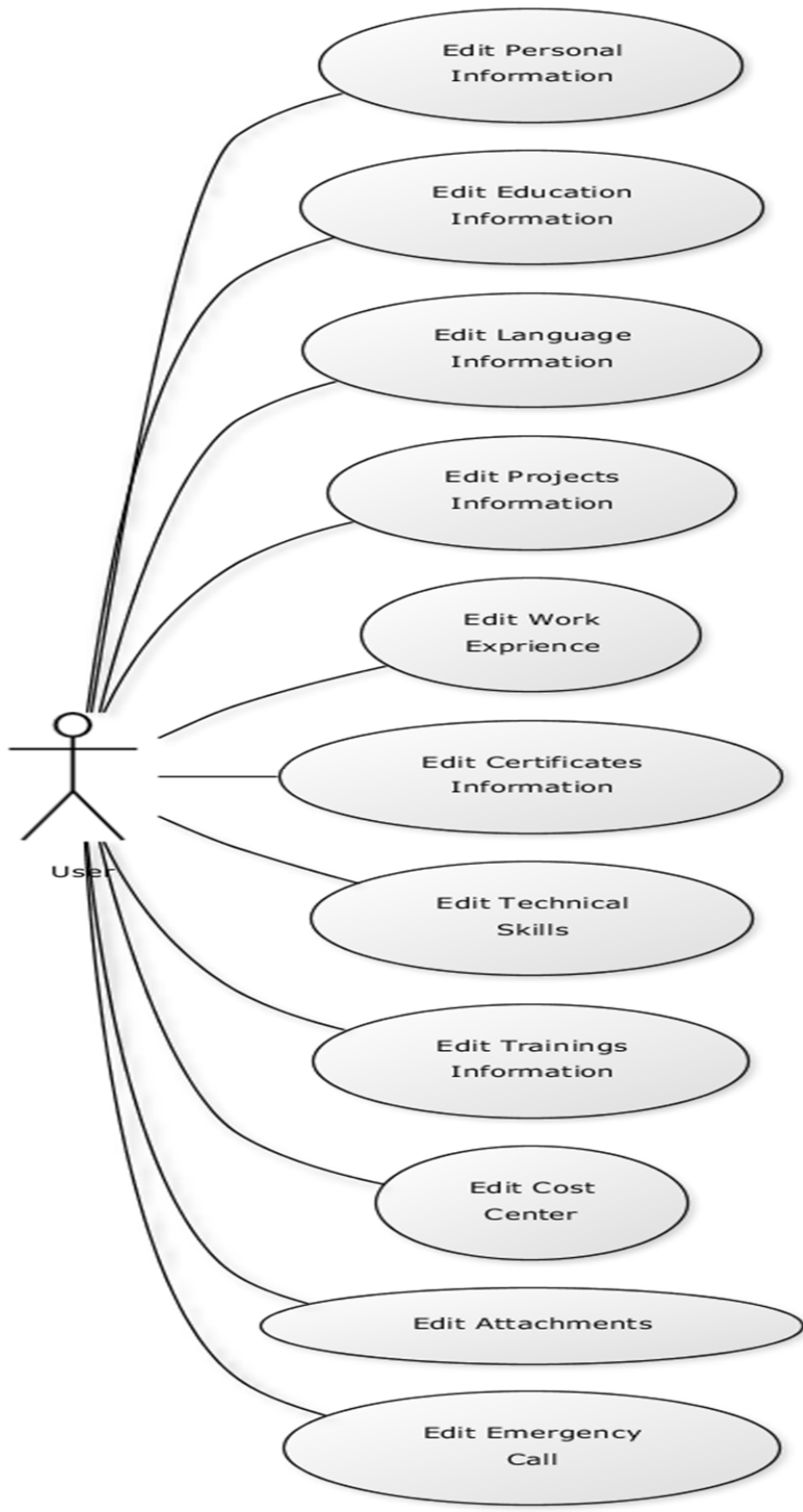


Figure 5.2.2.1.1: Use Case Diagram for Personal Data Module

#### *5.2.2.2. Personal Data interface description*

It receives data requests from the user and starts querying the database for the corresponding data. When a new data is added it translates these data into SQL commands and process them using JDBS connector. Then the data is stored into the database and when needed it is queried by the Personal Data package.

#### *5.2.2.3. Data Storage Processing Detail*

This module works as follows

It receives a request of data from the user.

When it is asked to display data it will query and provide the requested data from database

When asked to store data it will translate to data into SQL commands and store into the database.

It issues the command through JDBC connector.

The storage in the main database will be done by means of a bunch of functions that are listed below:

##### *5.2.2.3.1. Add an Employee*

This function lets HR Role Type tos add an employee to the database. All the required fields will be filled by his/her. It can be shown in the figure 5.2.2.3.1:

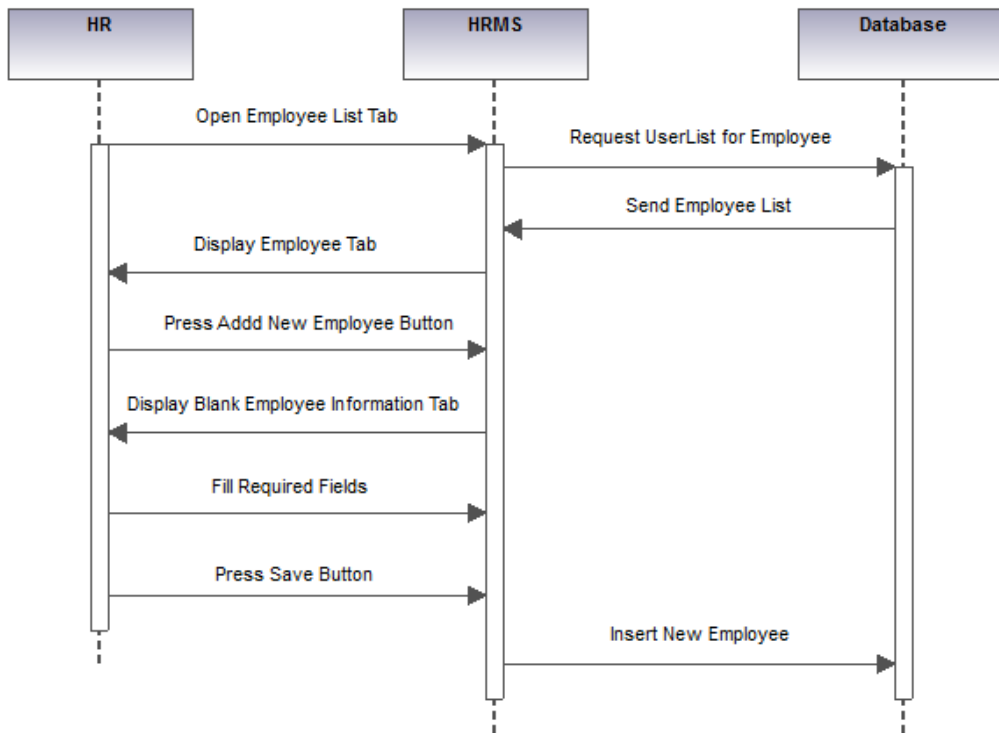


Figure 5.2.2.3.1: Sequence Diagram for Add an Employee

#### 5.2.2.3.1. Edit Work Experience

This function lets HR and Employee Role Types to add or edit work experiences that are stored in the database related to an employee. The operation shown in figure 5.2.2.3.1.1:

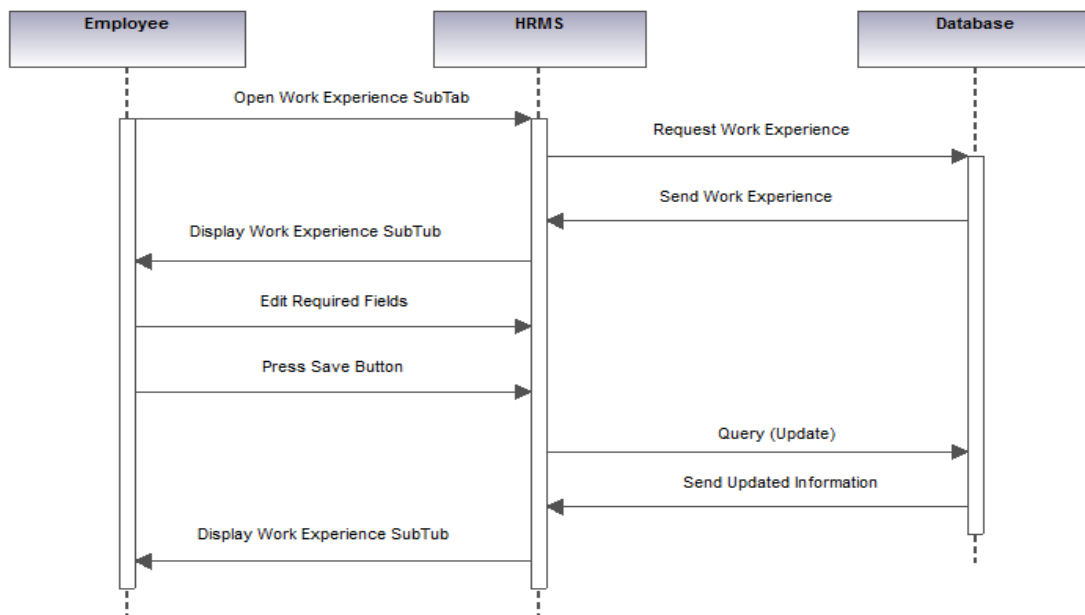


Figure 5.2.2.3.1.1: Sequence Diagram for Edit Work Experience

### 5.2.2.3.2. Dynamic Behavior of Personal Data Module

This sequence diagram in the figure 5.2.2.3.2.1 shows the main Personal Data tab, the specification of the module is discussed above.

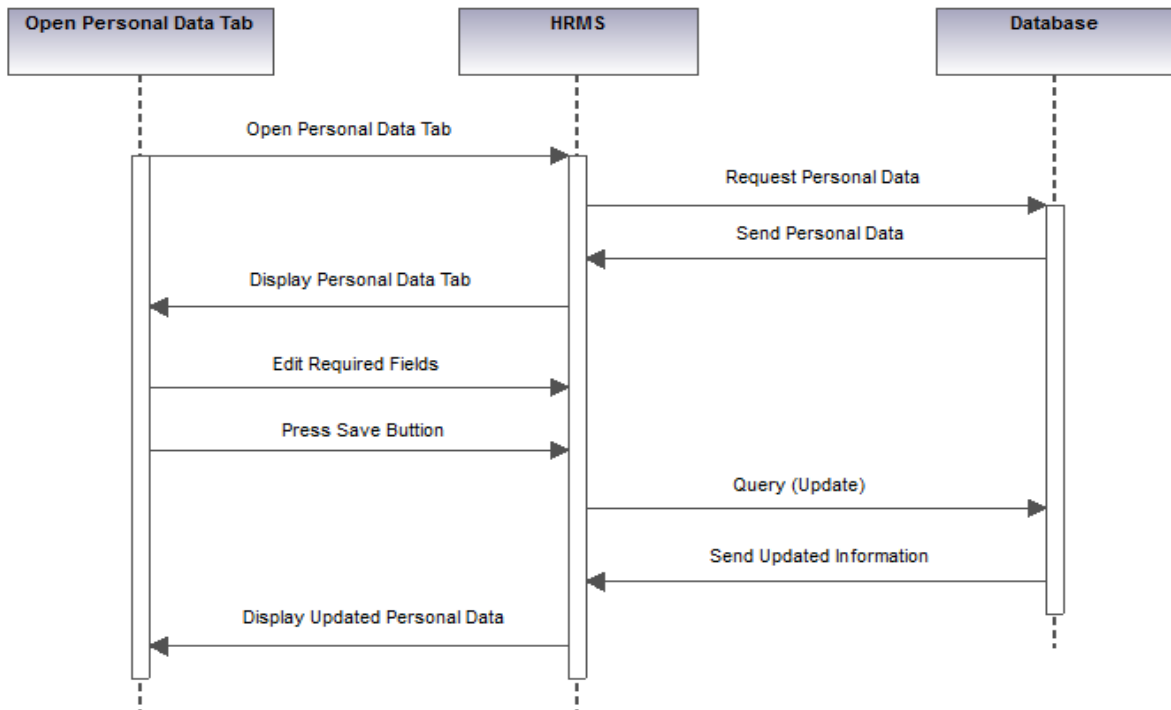


Figure 5.2.2.3.2.1: Sequence Diagram for Personal Data Module

## 5.2.3. Performance Evaluation Module

### 5.2.3.1. Processing Narrative for PEM

In order to have a better management and control over employees and projects, HRMS application carries out a performance evaluation. HRMS enables role types such as Managers and Employees to carry out performance evaluation.

### 5.2.3.2. PEM Interface Description

In order to use performance evaluation module, a viewable webpage requests from the client side will be started. After completing the evaluation, the manipulated data or the new data will be saved to the main database.

### 5.2.3.3. PEM Processing Details

#### Manager Performance Evaluation

In HRMS application, beside his/her Personal Data module, Manager role type is further responsible for carrying out performance evaluation. He/she will use Performance Evaluation module to do it. All data manipulation will be carried out via main database. By means of this module a manager role type will be able to collect related personal ideas and suggestions from the employees about projects, teamwork, their unique performances and improvement on each different matter. This module will be available throughout a time period that manager role type specifies and it can be carried out every year for that time period. Employees will be able to see and present their ideas and suggestions on that timeline. It can be shown in the figure 5.2.3.1.1:

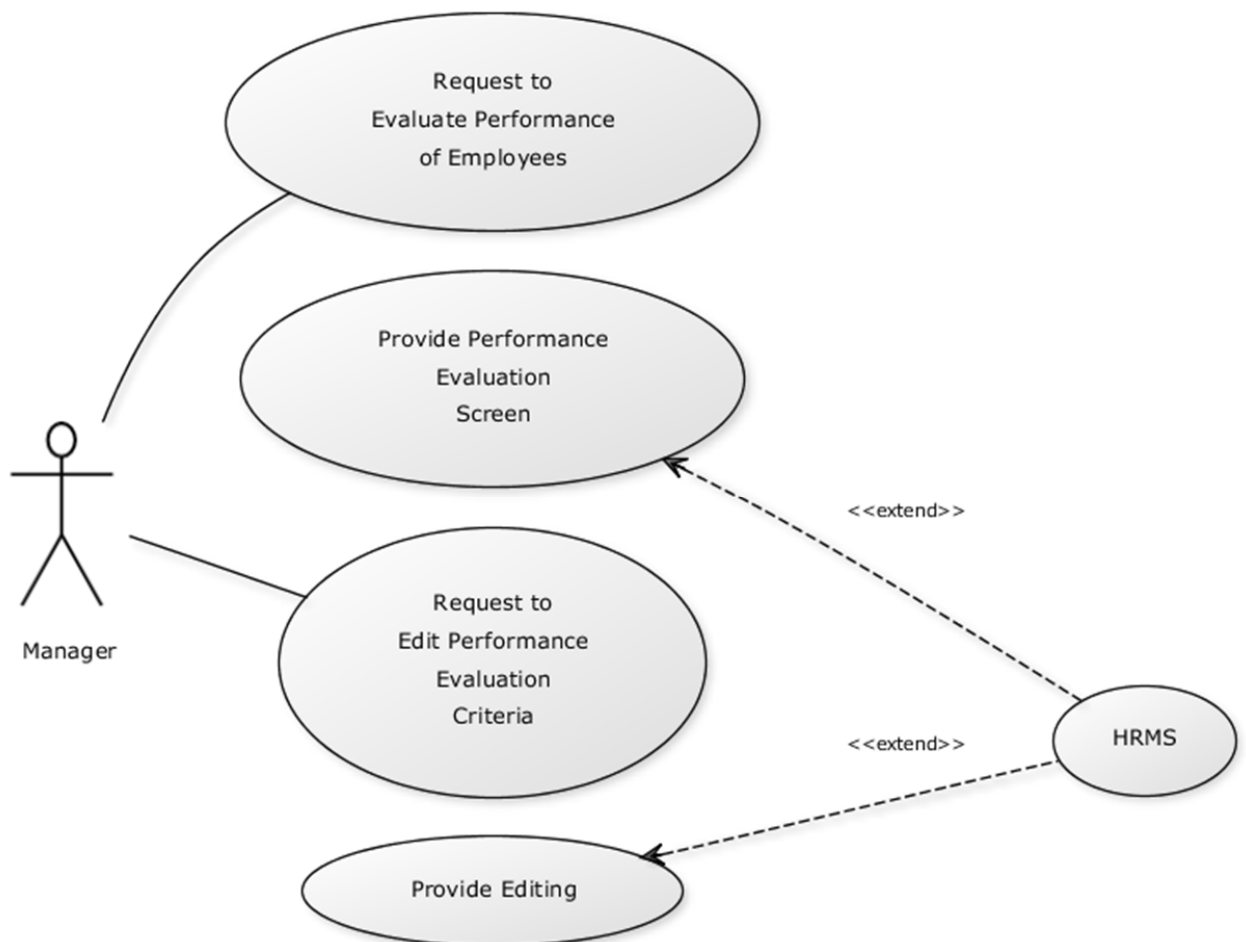


Figure 5.2.3.1.1: Use Case Diagram of Manager for PEM

### ***Responsibilities/Authorities***

Responsibilities/Authorities submodule will show the related responsibilities and authorities of manager role type.

### **Goals**

HRMS application may have different goals and objectives according to Siemens EC Company policy . However, HRMS application will provide manager role type to create new goals and objectives to be carried out by employees.

### ***Performance Evaluation Improvement***

This submodule is responsible for details of performance evaluation improvement. It specifically checks each fundamental and important factors that are the underlying reason behind reaching each goals in the Performance Evaluation Module. The submodule checks and lists every powerful competencies of each employee, his/her ideas to improve those competencies and skills, and his/her ideas for the past determination of competencies and skills. It further collects employees' ideas and suggestions which are very positive and negative towards the goals.

### ***Evaluation Form***

Inside the performance evaluation module, there is a variable to decide whether the Manager Evaluation form or Employee Evaluation form is used.

### ***Manager Evaluation Form***

Manager role type will consider all the personal ideas and suggestions that are gathered from the above submodules and represents his/her ideas suggestions for the specific area of evaluation form.

### ***Employee Evaluation Form***

As discussed above, manager role type in HRMS application will make the Performance Evaluation Module available throughout a time period every year. In this time period, employees are responsible for presenting their personal ideas and suggestions. Performance Evaluation module provides a facility called Employee Performance Evaluation Form for the employees to fill their ideas. This form contains some competency and skill fields related to each goal and objective so that each employee can measure his/her performance according to them. Also he/she will be able to present his/her personal ideas whether those goals and

objectives affect them positively or negatively and why. Main database will keep all these ideas, suggestions, and preferences of employees. The relationship between Employee and PEM is shown in the figure 5.2.3.1.2:

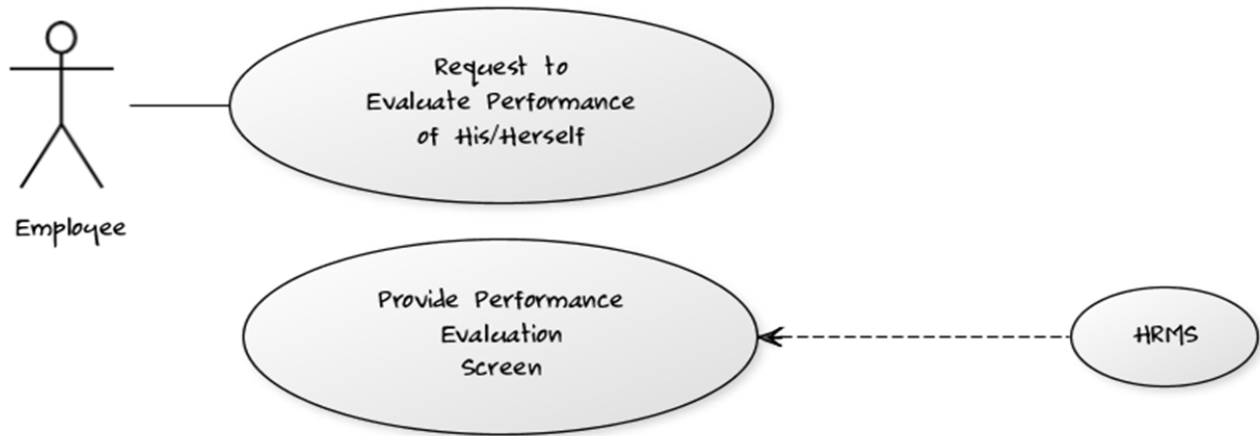


Figure 5.2.3.1.2: Use Case Diagram for Employee and PEM

#### 5.2.3.4. Dynamic Behavior of PEM

These use case diagrams, shown in the Figure 5.2.3.3.1, Figure 5.2.3.3.1, Figure 5.2.3.3.1 indicate the behavior of PEM in order to role types.

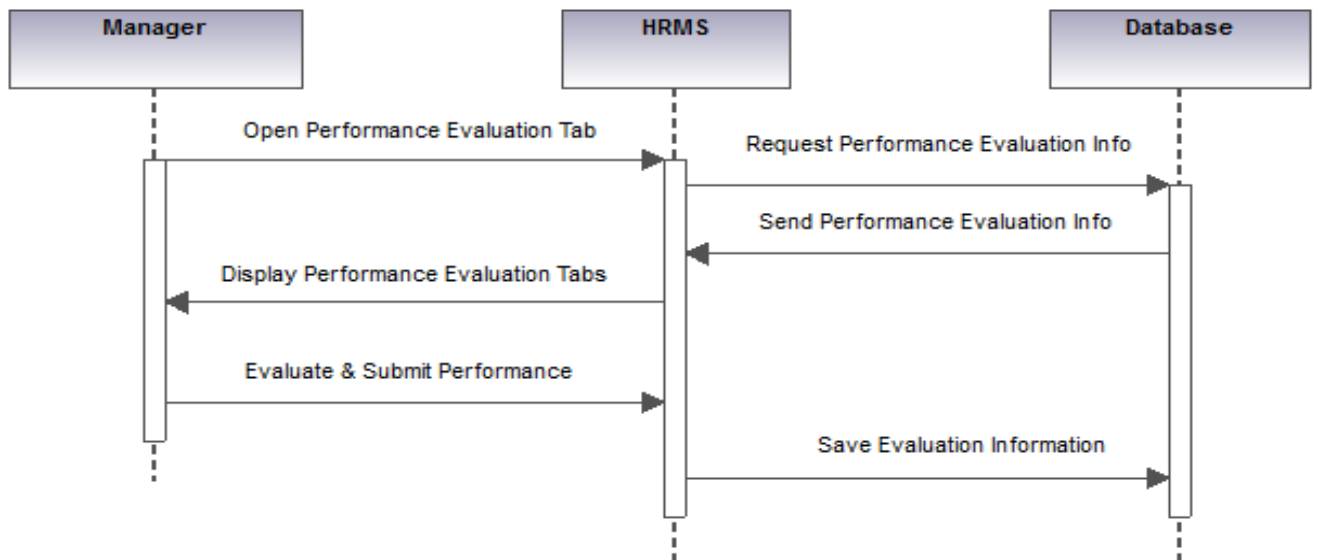
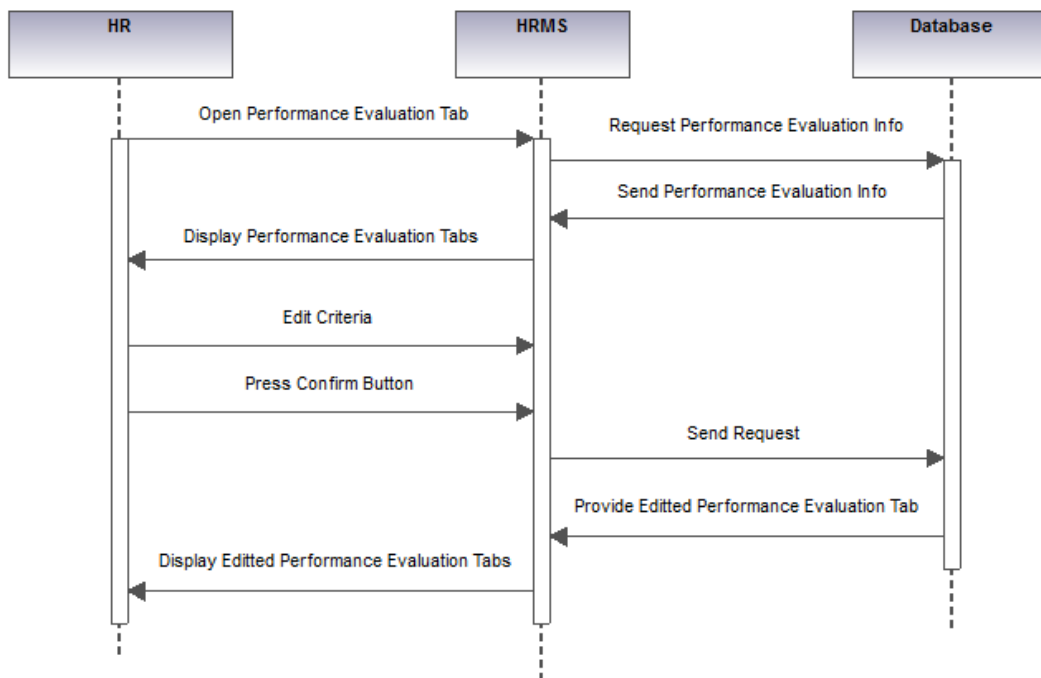
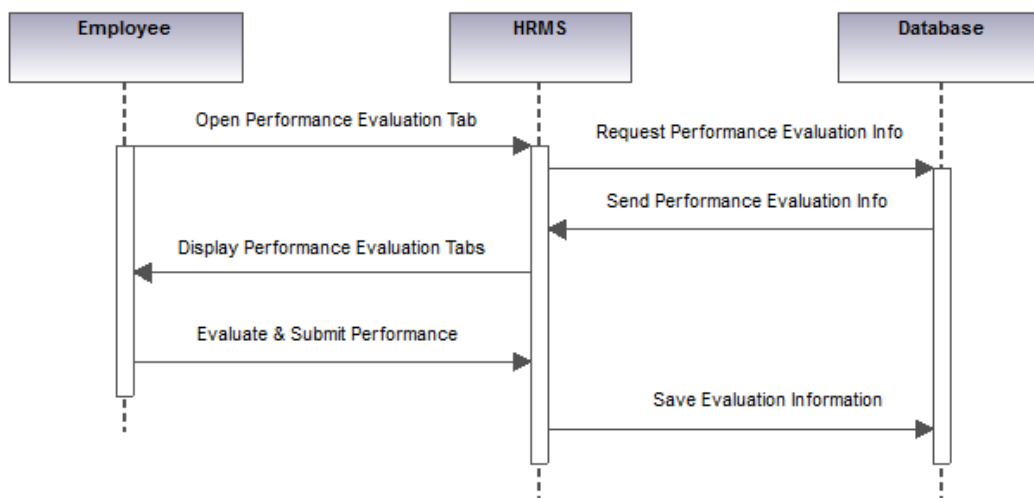


Figure 5.2.3.3.1: Sequence Diagram of PEM, used by Manager



Figure

### 5.2.3.3.2: Sequence Diagram of PEM, used by HR



Figure

### 5.2.3.3.3: Sequence Diagram of PEM, used by Employee

## 5.2.4. Administration Module

### 5.2.4.1. Processing Narrative for Administration

Admin is the person who has the authority to add new users to the system or change the role type of a user. By using this package admin will be able to see all users list with some corresponding information regarding each user.

#### *5.2.4.2. Administration Interface Description*

This package provides some basic methods for the admin to change or edit a user role type or see his\her users list. For instance if admin clicks on 'Edit Role Type' button a new window would be opened and the admin will be asked the give permission to change the role type so after while he\she selects a new role from the list of roles for the corresponding user.

#### *5.2.4.3. Administration Processing Detail*

This module operates as follows:

##### ***Add new user to the HRMS***

By this function admin will be able to add a new user to HRMS. The basic information will stored in the database such as storing name, surname, title, phone number, fax, email, country, languages, company name, assign role types to the users, and etc. As it displayed in the figure 5.2.7.3.1:

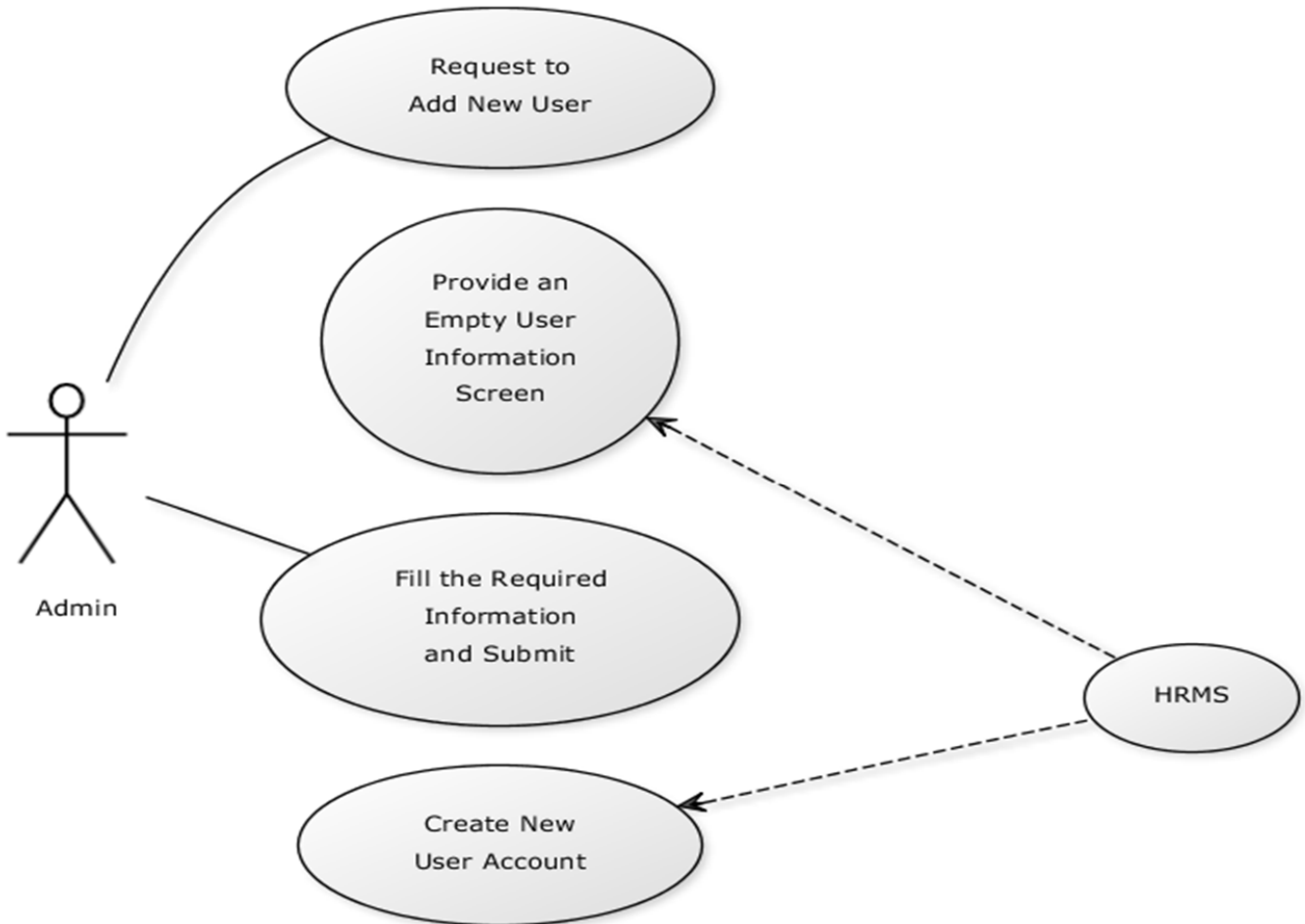


Figure 5.2.7.3.1: Use Case Diagram for Add New User

### ***Introduce New User Roles to the HRMS***

Admin role type will also be available for introducing new role types to the HRMS. For example, in our system, we have stated roles such as Admin, HR, Manager, and Employee. The Admin role type will be able to introduce a new role type like sales person. It can be shown in the figure 5.2.7.3.2:

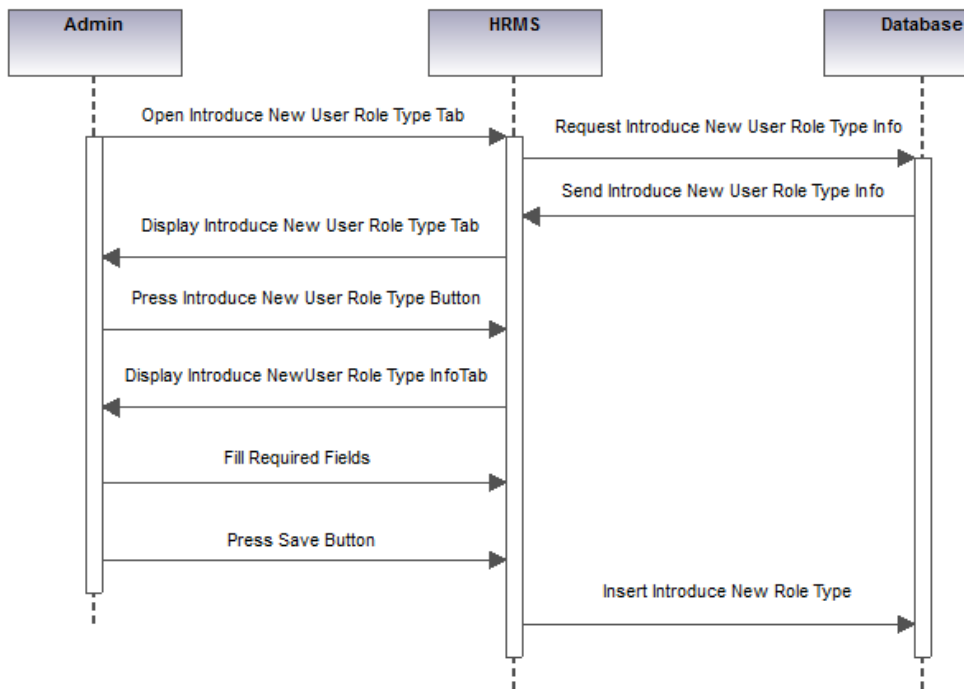


Figure 5.2.7.3.2: Sequence Diagram for Introduce New Role Type

### ***Edit User Roles***

Users with their defined role types can be edited and changed to assigned other role types. For example, an added user has Manager Role type; therefore, it can be changed to a HR role type. The figure 5.2.7.3.3 illustrates the operation:

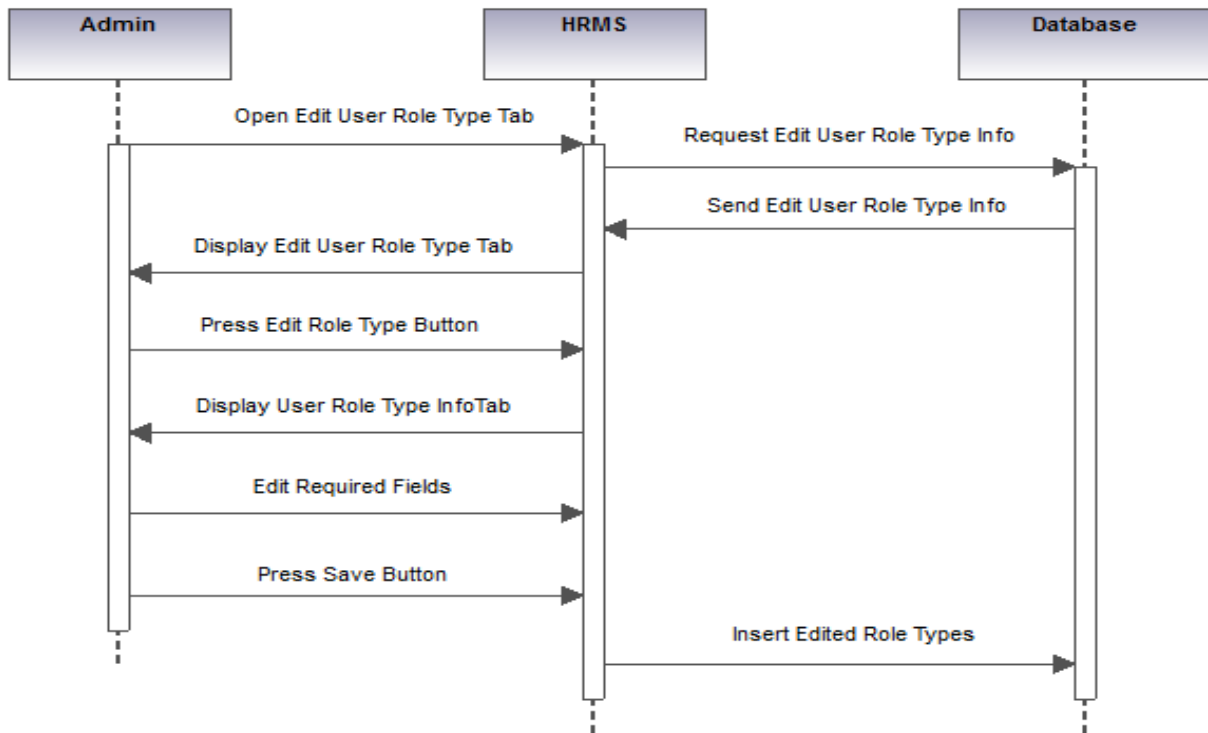


Figure 5.2.7.3.3: Sequence Diagram for Edit User Role Type

***Edit Current Role Type***

Admin will be able to restrict or extend a current role type that a user possesses. The restricted Role Type will not be able to see some data from the database. The extended Role Type will be able to see more data than his/her previous Role Type. The operation is shown by figure 5.2.7.3.4:

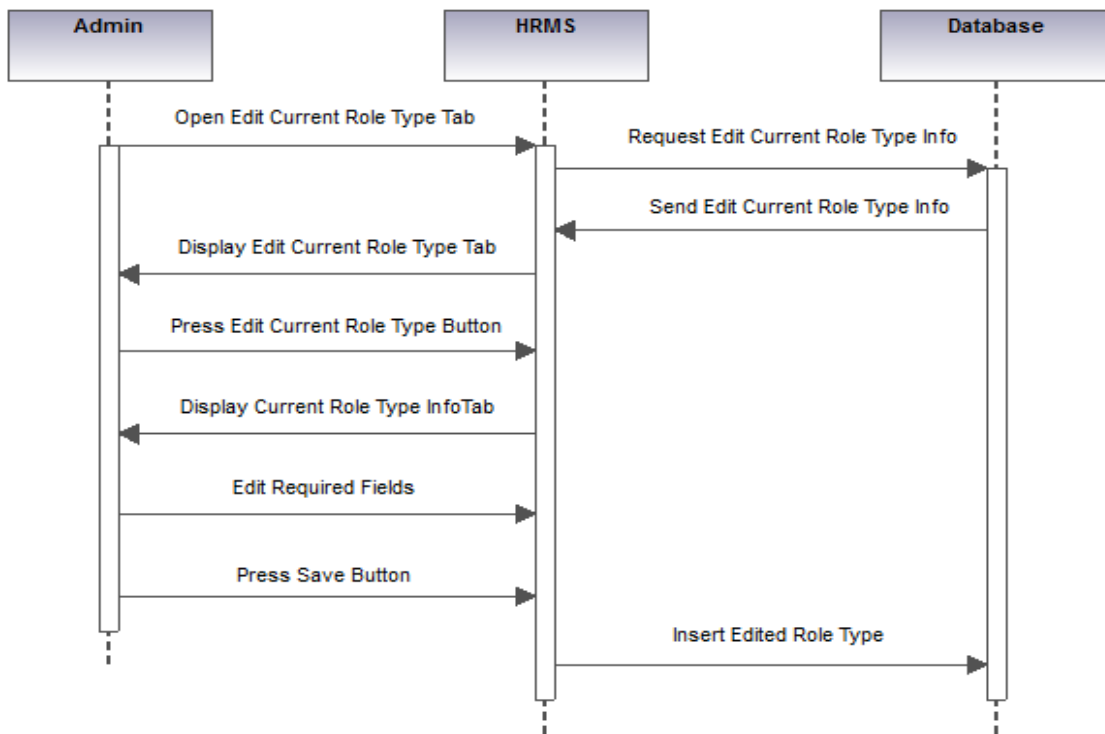


Figure 5.2.7.3.4: Sequence Diagram for Edit Current Role Type

### **Delete Current Role Type**

This function provides Admin Role Type to delete a Role Type so that the HRMS application will not contain any such Role Type anymore. The user with the deleted role type cannot see any data related to that Role Type from the database. The operation is shown in the figure 5.2.7.3.5 below:

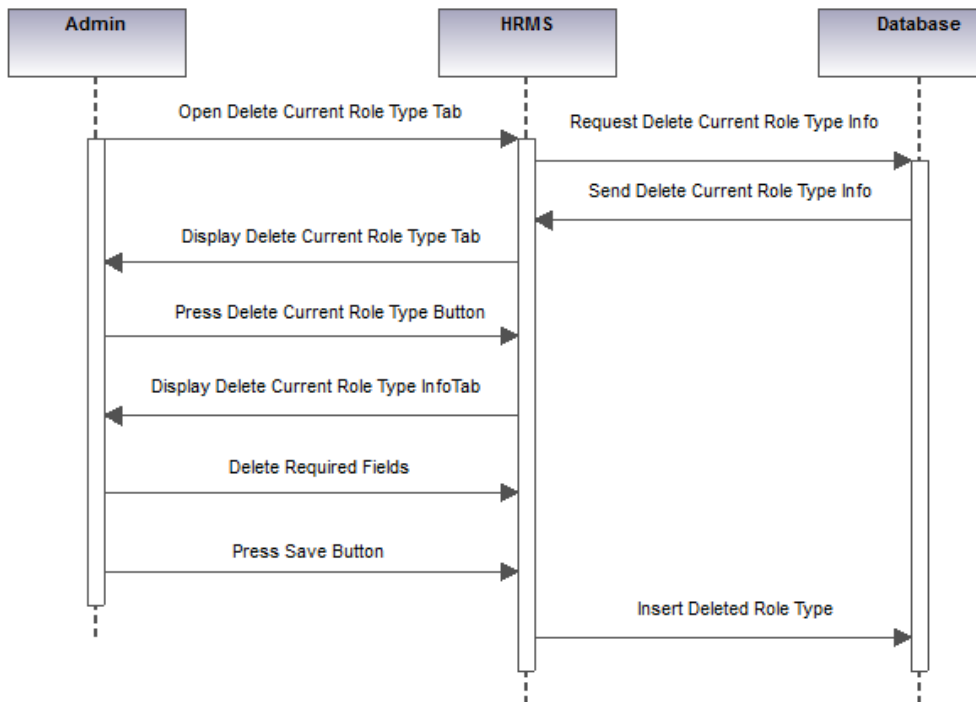


Figure 5.2.7.3.5: Sequence Diagram for Delete Current Role Type

#### 5.2.4.4. Dynamic Behavior of Administration

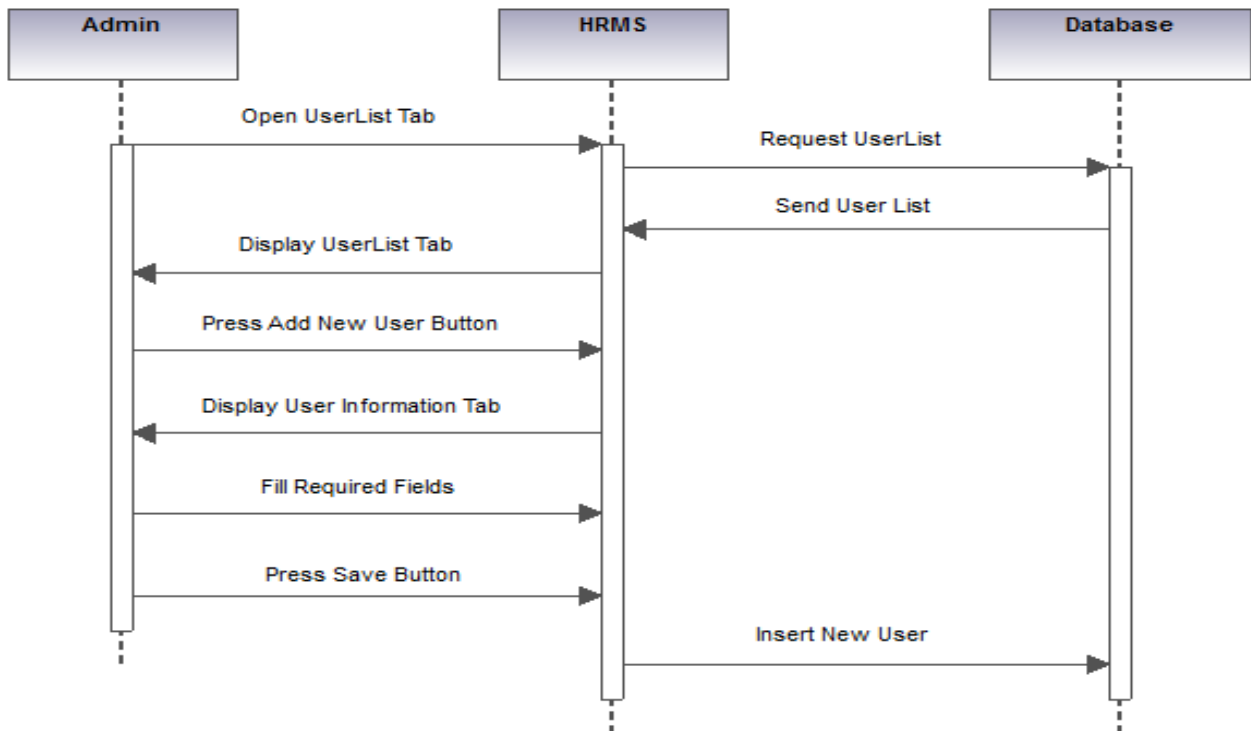


Figure 5.2.7.3.6: Sequence Diagram for Dynamic behavior of Administration

### 5.3. Traceability of Requirements

Traceability matrix of use case requirements in SRS and design component in initial design report is shown in the table (Table 5.3.1) below:

Use Case	Design Component
SRS 3.2.1.1.1 Log in	4.1.1.3 Authentication/Authorization Module
SRS 3.2.1.1.2 Log out	4.1.1.3 Authentication/Authorization Module
SRS 3.2.1.1.3 Log in failure	4.1.1.3 Authentication/Authorization Module
SRS 3.2.1.2.1 User Role Check	4.1.1.3 Authentication/Authorization Module
SRS 3.2.1.3.1 Display	4.1.1.1 Personal Data Module 4.1.1.2 Performance Evaluation Module 4.1.1.3 Authentication/Authorization Module
SRS 3.2.1.3.2 Edit	4.1.1.1 Personal Data Module 4.1.1.2 Performance Evaluation Module 4.1.1.3 Authentication/Authorization Module
SRS 3.2.1.3.3 Search	4.1.1.1 Personal Data Module 4.1.1.2 Performance Evaluation Module 4.1.1.3 Authentication/Authorization Module
SRS 3.2.1.3.4 Report	4.1.1.1 Personal Data Module 4.1.1.2 Performance Evaluation Module 4.1.1.3 Authentication/Authorization Module
SRS 3.2.1.3.5 Update Authentication	4.1.1.3 Authentication/Authorization Module
SRS 3.2.1.4.1 Add New User	4.1.1.3 Authentication/Authorization Module
SRS 3.2.1.4.2 Add Employee	4.1.1.1 Personal Data Module

Table 5.3.1: Traceability Matrix

## 6. User Interface Design

### 6.1. Overview of User Interface

#### 6.1.1. "Özlük Bilgileri" Tab:

##### 6.1.1.1. Restrictions of Tab:

#### **General:**

EMPLOYEEID is generated by the system automatically in employee creation and cannot be changed. So "Sicil No", in "Kişisel Bilgilerim" sub-tab, is not editable.

"Yönetici Adı" field in "Kişisel Bilgilerim" sub-tab, is filled with the NAME and SURNAME data of the employee whose EMPLOYEEID is same with the SUPERVISORID of the displayed employee.

"Mezuniyet Tarihi" field in "Kişisel Bilgilerim" sub-tab, is filled by newest GRADUATION\_DATE of the employee from the TBL\_EMPLOYEE\_EDUCATION.

"Dosya içeriği" field of the "Ekler" sub-tab is defined by the extension of the attached file.

"Sakla" button in a sub-tab, saves information, which edited only in that sub-tab, to the database.

"Onay" affects only that sub-tab.

#### **Employee:**

Users who have "Employee" role can see their own information in a form type view.

They can edit some information, specified below.

If user changes any information then "Sakla" button gets activated, only after is clicked, information get changed from the database.

If user changes an information which was already confirmed, confirmation gets deactivated.

If any information are changed by Manager or HR that "Employee" gets a notifying mail by the system.

**Manager:**

Users who have “Manager” role can see information of the employees is under the user in a form type view.

They can edit some information, specified below.

If user changes any information then “Sakla” button gets activated, only after is clicked, information get changed from the database.

If user changes an information which was already confirmed, confirmation gets deactivated.

If any information are changed by Employee or HR, “Manager” who is responsible from that employee, gets a notifying mail by the system.

**HR:**

Users who have “HR” role can see information of all employees in a form type view.

They can edit nearly all information, specified below.

If user changes any information then “Sakla” button gets activated, only after is clicked, information get changed from the database.

HR is responsible to check truth of the information in this tab and then confirm this information.

If any information are changed by Employee or Manager all “HR”s get notifying mail by the system to check and confirm the information.

**Admin:**

“Admin” role doesn’t provide any authorization to see this tab.

**Combo Boxes:**

Combo boxes which are used in this tab are shown in Table 6.1.1.1.1:

[1]	Bayan/Bay
[2]	0 rh-/0 rh+/A rh-/A rh+/B rh-/B rh+/AB rh-/AB rh+
[3]	Bekar/Evli
[4]	A1/A2/B/C/D/E/F/G/H
[5]	(Preferences are waited from company)

[6]	(Preferences are waited from company)
[7]	Tecilli/Yapmış
[8]	(Preferences are waited from company)
[9]	Orta Okul/Lise/Ön Lisans/Lisans/Yüksek Lisans/ Doktora
[10]	İngilizce/Almanca/Fransızca/Flemence/İspanyolca/İtalyanca (Full List Needed)
[11]	Başlangıç/Orta/İleri
[12]	All NAME values of TBL_EMPLOYEE_PROJECTS
[13]	C/C++/Java/Python (Full List Needed)
[14]	(Preferences are waited from company)
[15]	Özgeçmiş (Full List Needed)

Table 6.1.1.1.1: Combo boxes

### 6.1.1.2. “Kişisel Bilgilerim”

This sub-tab displays general information of employees in a form-like interface. All fields and information about them are shown in Table 6.1.1.2.1.

Field Name	Type	Employee	HR	Manager	Table Name	Table Column
Sicil No	Textbox	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE	EMPLOYEEID
Adı	Textbox	Read-Only	Editable	Read-Only	TBL_EMPLOYEE	NAME
Soyadı	Textbox	Read-Only	Editable	Read-Only	TBL_EMPLOYEE	SURNAME
Cinsiyet	Combo Box[1]	Read-Only	Editable	Read-Only	TBL_EMPLOYEE	GENDERID
Uyruğu	Textbox	Read-Only	Editable	Read-Only	TBL_EMPLOYEE	NATIONALITY
Kan Grubu	Combo Box[2]	Read-Only	Editable	Read-Only	TBL_EMPLOYEE	BLOODTYPEID
Doğum Tarihi	Date Box	Read-Only	Editable	Read-Only	TBL_EMPLOYEE	BIRTHDATE
Medeni Hali	Combo Box[3]	Editable	Editable	Read-Only	TBL_EMPLOYEE	MARITALSTATUSID
Sürücü Belgesi	Combo Box[4]	Editable	Editable	Read-Only	TBL_EMPLOYEE	DRIVINGLICENCEID
E-Posta	Textbox	Read-Only	Editable	Read-Only	TBL_EMPLOYEE	EMAIL
İş Telefonu	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE	PHONE
Cep Telefonu	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE	CELLPHONE
Ev Telefonu	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE	HOUSEPHONE
Görev	Textbox	Read-Only	Editable	Read-Only	TBL_EMPLOYEE	POSITIONID
Bölüm	Combo Box[5]	Read-Only	Editable	Read-Only	TBL_EMPLOYEE	DEPARTMENTID
Yönetici	Text Box	Read-Only	Editable	Read-Only	TBL_EMPLOYEE	SUPERVISORID
Yönetici Adı	Textbox	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE	
Ünvanı	Textbox	Read-Only	Editable	Read-Only	TBL_APPL_USER	TITLE
TC Kimlik No	Textbox	Read-Only	Editable	Read-Only	TBL_EMPLOYEE	TCKIMLIKNO
Vergi No	Textbox	Read-Only	Editable	Read-Only	TBL_EMPLOYEE	TAXNO
SSK No	Textbox	Read-Only	Editable	Read-Only	TBL_EMPLOYEE	SSKNO
Mezuniyet Tarihi	Date Box	Read-Only	Editable	Read-Only	TBL_EMPLOYEE_EDUCATION	GRADUATION_DATE
Kontrat Tipi	Combo Box[6]	Read-Only	Editable	Read-Only	TBL_EMPLOYEE	CONTRACTTYPE
Siemens EC İşe Başlama Tarihi	Date Box	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE	SIEMENSGIRIS
Siemens AŞ İşe Başlama Tarihi	Date Box	Read-Only	Editable	Read-Only	TBL_EMPLOYEE	STARTDATE
Askerlik Durumu	Combo Box[7]	Editable	Editable	Read-Only	TBL_EMPLOYEE	ASKERLIKDURUMUID
Askerlik Tescil/Terhis Tarihi	Date Box	Editable	Editable	Read-Only	TBL_EMPLOYEE	ASKERLIKTECIL
Fotoğraf	Text Box	Editable	Editable	Read-Only	TBL_EMPLOYEE	
Meslek Odası Üyelik Tarihi	Date Box	Editable	Editable	Read-Only	TBL_EMPLOYEE	MESLEKODASIUYELIK
Yer	Combo Box[8]	Read-Only	Editable	Read-Only	TBL_EMPLOYEE	LOCATION
Ofis Yeri	Text Box	Editable	Editable	Read-Only	TBL_EMPLOYEE	OFFICESEAT
Arbis Kaydı	Check Box	Read-Only	Editable	Read-Only	TBL_EMPLOYEE	ARBISRECORD
Onay	Check Box	Not-Visible	Editable	Read-Only	TBL_EMPLOYEE	CONFIRMATION
Sakla	Button	Clickable	Clickable	Not-Clickable		

Table 6.1.1.2.1: “Kişisel Bilgilerim Tab Field Informations

### 6.1.1.3. "Eğitim Bilgileri"

This sub-tab includes education information of employees in a form-like interface.

Field Name	Type	Employee	HR	Manager	Table Name	Table Column
Eğitim Seviyesi	Combo Box[9]	Editable	Editable	Read-Only	TBL_EMPLOYEE_EDUCATION	DEGREEID
Kurum Adı	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_EDUCATION	INSTITUTION
Bölüm	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_EDUCATION	DEPARTMENT
Tez	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_EDUCATION	THESIS
Eğitime Devam Ediyor?	Check Box	Editable	Editable	Read-Only	TBL_EMPLOYEE_EDUCATION	STILLSTUDYING
Giriş Tarihi	Date Box	Editable	Editable	Read-Only	TBL_EMPLOYEE_EDUCATION	ENTERANCEDATE
Mezuniyet Tarihi	Date Box	Editable	Editable	Read-Only	TBL_EMPLOYEE_EDUCATION	GRADUATIONDATE
Onay	Check Box	Read-Only	Editable	Read-Only	TBL_EMPLOYEE_EDUCATION	CONFIRMATION
Notlar	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_EDUCATION	NOTES
Sakla	Button	Clickable	Clickable	Not-Clickable		

Table 6.1.1.3.1: "Eğitim Bilgileri" Tab Field Informations

### 6.1.1.4. "İş Tecrübeleri"

This sub-tab displays work experiences information of employees in a form-like interface.

Field Name	Type	Employee	HR	Manager	Table Name	Table Column
Firma Adı	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_WORKEXPERIENCE	COMPANY_NAME
Görev	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_WORKEXPERIENCE	POSITION
Çalışma Yeri	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_WORKEXPERIENCE	WORKPLACE
Başlangıç Tarihi	Date Box	Editable	Editable	Read-Only	TBL_EMPLOYEE_WORKEXPERIENCE	START_DATE
Bitiş Tarihi	Date Box	Editable	Editable	Read-Only	TBL_EMPLOYEE_WORKEXPERIENCE	END_DATE
Onay	Check Box	Read-Only	Editable	Read-Only	TBL_EMPLOYEE_WORKEXPERIENCE	CONFIRMATION
Notlar	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_WORKEXPERIENCE	NOTES
Sakla	Button	Clickable	Clickable	Not-Clickable		

Table 6.1.1.4.1: "İş Tecrübeleri" Tab Field Informations

### 6.1.1.5. "Diller"

This sub-tab displays language knowledge information of employees in a form-like interface.

Field Name	Type	Employee	HR	Manager	Table Name	Table Column
Dil	Combo Box[10]	Editable	Editable	Read-Only	TBL_EMPLOYEE_LANGUAGE	LANGUAGE
Yazma Seviyesi	Combo Box[11]	Editable	Editable	Read-Only	TBL_EMPLOYEE_LANGUAGE	WRITTENLEVELID
Konuşma Seviyesi	Combo Box[11]	Editable	Editable	Read-Only	TBL_EMPLOYEE_LANGUAGE	SPEAKINGLEVELID
Okuma Seviyesi	Combo Box[11]	Editable	Editable	Read-Only	TBL_EMPLOYEE_LANGUAGE	READINGLEVELID
Ana Dil	Check Box	Editable	Editable	Read-Only	TBL_EMPLOYEE_LANGUAGE	NATIVELANG
Onay	Check Box	Read-Only	Editable	Read-Only	TBL_EMPLOYEE_LANGUAGE	CONFIRMATION
Sakla	Button	Clickable	Clickable	Not-Clickable		

Table 6.1.1.5.1: "Diller" Tab Field Informations

### 6.1.1.6. "Projeler"

This sub-tab displays information of the projects that employees are involved in, in a form-like interface.

Field Name	Type	Employee	HR	Manager	Table Name	Table Column
<b>Proje Adı</b>	Combo Box[12]	Read-Only	Editable	Editable	TBL_EMPLOYEE_PROJECTS	NAME
<b>Görev</b>	Textbox	Read-Only	Editable	Editable	TBL_EMPLOYEE_PROJECTS	POSITION
<b>Tamamlanmış</b>	Textbox	Read-Only	Editable	Editable	TBL_EMPLOYEE_PROJECTS	COMPLETED
<b>Başlangıç Tarihi</b>	Data Box	Read-Only	Editable	Editable	TBL_EMPLOYEE_PROJECTS	START
<b>Bitiş Tarihi</b>	Data Box	Read-Only	Editable	Editable	TBL_EMPLOYEE_PROJECTS	FINISH
<b>Tubitak</b>	Check Box	Read-Only	Editable	Editable	TBL_EMPLOYEE_PROJECTS	TUBITAK
<b>Onay</b>	Check Box	Read-Only	Editable	Read-Only	TBL_EMPLOYEE_PROJECTS	CONFIRMATION
<b>Notlar</b>	Textbox	Read-Only	Editable	Editable	TBL_EMPLOYEE_PROJECTS	NOTES
<b>Sakla</b>	Button	Not-Clickable	Clickable	Clickable		

**Table 6.1.1.6.1: "Projeler" Tab Field Informations**

#### 6.1.1.7. "Sertifikalar"

This sub-tab displays information about the certificates that employees have, in a form-like interface.

Field Name	Type	Employee	HR	Manager	Table Name	Table Column
<b>Kurum</b>	Textbox	Read-Only	Editable	Read-Only	TBL_EMPLOYEE_CERTIFICATES	PROVIDER
<b>Sertifika Adı</b>	Textbox	Read-Only	Editable	Read-Only	TBL_EMPLOYEE_CERTIFICATES	NAME
<b>Tarih</b>	Data Box	Read-Only	Editable	Read-Only	TBL_EMPLOYEE_CERTIFICATES	DATE
<b>Onay</b>	Check Box	Read-Only	Editable	Read-Only	TBL_EMPLOYEE_CERTIFICATES	CONFIRMATION
<b>Notlar</b>	Textbox	Read-Only	Editable	Read-Only	TBL_EMPLOYEE_CERTIFICATES	NOTES
<b>Sakla</b>	Button	Not-Clickable	Clickable	Not-Clickable		

**Table 6.1.1.7.1: "Sertifikalar" Tab Field Informations**

#### 6.1.1.8. "Teknik Bilgiler"

This sub-tab displays technical knowledge information of employees in a form-like interface.

Field Name	Type	Employee	HR	Manager	Table Name	Table Column
<b>Bilgi Adı</b>	Combo Box[13]	Editable	Editable	Read-Only	TBL_EMPLOYEE_TECHNICALSKILLS	NAMEID
<b>Seviye</b>	Combo Box[11]	Editable	Editable	Read-Only	TBL_EMPLOYEE_TECHNICALSKILLS	LEVELID
<b>Onay</b>	Check Box	Read-Only	Editable	Read-Only	TBL_EMPLOYEE_TECHNICALSKILLS	CONFIRMATION
<b>Notlar</b>	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_TECHNICALSKILLS	NOTES
<b>Sakla</b>	Button	Clickable	Clickable	Not-Clickable		

**Table 6.1.1.8.1: "Teknik Bilgiler" Tab Field Informations**

#### 6.1.1.9. "Eğitimler"

This sub-tab displays the trainings employees participated, in a form-like interface.

Field Name	Type	Employee	HR	Manager	Table Name	Table Column
<b>Eğitim Adı</b>	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_TRAININGS	NAME
<b>Yer</b>	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_TRAININGS	LOCATION
<b>Kurum</b>	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_TRAININGS	PROVIDER
<b>Başlangıç Tarihi</b>	Data Box	Editable	Editable	Read-Only	TBL_EMPLOYEE_TRAININGS	START
<b>Bitiş Tarihi</b>	Data Box	Editable	Editable	Read-Only	TBL_EMPLOYEE_TRAININGS	FINISH
<b>Süre</b>	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_TRAININGS	DURATION
<b>Onay</b>	Check Box	Read-Only	Editable	Read-Only	TBL_EMPLOYEE_TRAININGS	CONFIRMATION
<b>Notlar</b>	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_TRAININGS	NOTES
<b>Sakla</b>	Button	Clickable	Clickable	Not-Clickable		

**Table 6.1.1.9.1: "Eğitimler" Tab Field Informations**

#### 6.1.1.10. "Masraf Yeri"

This sub-tab displays expenses information of employees in a form-like interface.

Field Name	Type	Employee	HR	Manager	Table Name	Table Column
Masraf Yeri	Combo Box[14]	Editable	Editable	Read-Only	TBL_EMPLOYEE_COST_CENTER	COST_CENTER_ID
Ağırlık %	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_COST_CENTER	WEIGHT
Açıklama	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_COST_CENTER	NOTES
Onay	Check Box	Read-Only	Editable	Read-Only	TBL_EMPLOYEE_COST_CENTER	CONFIRMATION
Sakla	Button	Clickable	Clickable	Not-Clickable		

Table 6.1.1.10.1: "Masraf Yeri" Tab Field Informations

#### 6.1.1.11. "Ekler"

This sub-tab displays information of attachments of employees in a form-like interface.

Field Name	Type	Employee	HR	Manager	Table Name	Table Column
Tip	Combo Box[15]	Editable	Editable	Read-Only	TBL_EMPLOYEE_ATTACHMENT	TYPEID
Dosya İçeriği	Textbox	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE_ATTACHMENT	CONTENT_TYPE
Dosya Adı	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_ATTACHMENT	FILE_NAME
Sadece Adres	Check Box	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE_ATTACHMENT	URL_ONLY
Notlar	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_ATTACHMENT	NOTES
Onay	Check Box	Read-Only	Editable	Read-Only	TBL_EMPLOYEE_ATTACHMENT	CONFIRMATION
Sakla	Button	Clickable	Clickable	Not-Clickable		

Table 6.1.1.11.1: "Ekler" Tab Field Informations

#### 6.1.1.12. "Acil Durumda Ulaşılabacak Kişi"

This sub-tab displays information of the people to reach in emergency, in a form-like interface.

Field Name	Type	Employee	HR	Manager	Table Name	Table Column
Adı	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_EMERGENCY_CALL	NAME
Soyadı	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_EMERGENCY_CALL	SURNAME
Yakınlık Derecesi	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_EMERGENCY_CALL	RELATIONTO
Telefon Numarası	Textbox	Editable	Editable	Read-Only	TBL_EMPLOYEE_EMERGENCY_CALL	PHONE
Sakla	Button	Clickable	Clickable	Not-Clickable		

Table 6.1.1.12.1: "Acil Durumda Ulaşılabacak Kişi" Tab Field Informations

### 6.1.2. "Performans Değerlendirme" Tab:

#### 6.1.2.1. Restrictions of Tab:

##### General:

"Personel Adı", "Personel Soyadı", "Yönetici Adı" and "Yönetici Soyadı" in every sub-tab, display values from the TBL\_EMPLOYEE database table in order to "Sicil No" which is kept as EMPLOYEEID in the same table.

“Personel Bölümü”, “Personel Pozisyonu” and “Yönetici Bölümü” fields in “Sorumluluk/Yetkinlikler” sub-tab, display values from the TBL\_EMPLOYEE database table in order to “Sicil No” which is kept as EMPLOYEEID in the same table.

“Tarih” fieldin “Sorumluluk/Yetkinlikler” sub-tab, is automatically filled by the sistem just after mutual confirmation by employee and him/her manager as that day.

“Önceki görüşme tarihi” field in “Sorumluluk/Yetkinlikler” sub-tab, displays “DATE” value of previous TBL\_PES database entry of that user.

“Sorumluluk Alanları” field displays all NAME values from TBL\_PES\_RESP with same ID with RESPID from the TBL\_PES\_EMPLOYEE\_RESP table that matches with the ID of current employee. And it displays those information as list.

“Gerekli Yetkinlikler” field displays all NAME values from TBL\_PES\_COMP with same ID with COMPID from the TBL\_PES\_EMPLOYEE\_COMP table that matches with the ID of current employee. And it displays those information as list.

“Diğer Sorumluluklar” field displays all RESP\_NAME vales from TBL\_MAN\_RESP table which matches with EMPLOYEEID of current employee.

“Diğer Yetkinlikler” field displays all COMP\_NAME vales from TBL\_MAN\_COMP table which matches with EMPLOYEEID of current employee.

“Personel Onayı” and “Yönetici Onayı” fields affect all sub-tabs of this tab.

“Sakla” button affects only current sub-tab.

“Yönetici Değerlendirme Formu” sub-tab will be available only for employees who are also manager of other employees.

### **Employee:**

Users who have “Employee” role can see their own evaluation form in a form type view.

Employees are supposed to make self evaluate in some areas, specified below.

If user changes any information then “Sakla” button gets activated, only after is clicked, information get changed from the database.

After self evaluation finished, “Employee” confirms his/her evaluation.

If an “Employee” tries to confirm a self-evaluation form which still have some fields that needs to be filled then system gives an error message about that.

Before mutual confirmation of the form employee cannot see the evaluations of his/her manager.

Just after mutual confirmation system sends a notification mail to the “Employee”.

### **Manager:**

Users who have “Manager” role can see evaluation forms of employees’, whose manager is the current user in a form-like interface.

Manager writes “EMPLOYEEID” of the employee that manager wants to see evaluation form of, to the “Sicil No” field in “Sorumluluklar/Yetkinlikler” sub-tab, then system brings current form of that user. Other sub-tabs are displays data in order to same EMPLOYEEID.

If EMPLOYEEID entered is not valid or not belongs to an employee whose “Manager” is current user then system gives an error message to the user.

Evaluation form of an employee shaped and mainly evaluated by his/her “Manager”

“Sorumluluk Alanları” field is filled by “Manager” from the TBL\_PES\_POS\_RESP table. Only responsibilities which are match with POSITIONID of currently evaluated user can be selected.

“Gerekli Yetkinlikler” field is filled by “Manager” from the TBL\_PES\_POS\_COMP table. Only responsibilities which are match with POSITIONID of currently evaluated user can be selected.

“Diğer Sorumluluklar” field is filled by “Manager” manually.

“Diğer Yetkinlikler” field is filled by “Manager” manually.

Rows of “Bireysel Hedefler” table are added manually by “Manager”.

If user changes any information then “Sakla” button gets activated, only after is clicked, information get changed from the database.

After an employee confirms self-evaluation, a notification mail is sent to his/her “Manager” by the system.

After evaluation of an employee ends and that employee confirms self-evaluation, his/her manager is able to confirm that evaluation form.

If a “Manager” tries to confirm a form of an employee who didn’t confirm self evaluation, then system gives an error message about that.

If a “Manager” tries to confirm a form which still have some fields that needs to be filled then system gives an error message about that.

#### **HR:**

Users who have “HR” role can see evaluation forms of all employees in a form-like interface.

Manager writes “EMPLOYEEID” of the employee that “HR” wants to see evaluation form of, to the “Sicil No” field in “Sorumluluklar/Yetkinlikler” sub-tab, then system brings current form of that user. Other sub-tabs are displays data in order to same EMPLOYEEID.

If EMPLOYEEID entered is not valid then system gives an error message to the user.

Just after mutual confirmation af an evaluation form, system sends a notification mail to all “HR”s.

#### **Admin:**

“Admin” role doesn’t provide any authorization to see this tab.

#### **Combo Boxes:**

[16]	All NAME values of TBL_EMPLOYEE_PROJECTS
[17]	Gelişmeye Açık/Beklentiyi Karşılıyor/Beklentinin Üzerinde

#### **Tables:**

##### ***Table[1]Proje Hedefleri***

This table displays column names in first row and other rows are filled by all AIM and DUE\_DATE values of project specified in TBL\_PES with PROJECT\_ID from TBL\_PES\_PROJECT\_AIM.

Column #	Column Name	Type	Employee	HR	Manager	Table Name	Table Column
1	Proje Hedefleri	Textbox	Read-Only	Read-Only	Read-Only	TBL_PES_PROJECT_AIM	AIM
2	Termin	Textbox	Read-Only	Read-Only	Read-Only	TBL_PES_PROJECT_AIM	DUE_DATE

**Table[1] : A table showing the aims of the projects**

### **Table[2]Bireysel Hedefler**

This table displays column names in first row and other rows are filled by determined values as below (as Table Name and Table Column) of evaluated employee (TBL\_PES\_AIM.EMPLOYEEID == TBL\_PES.EMPLOYEEID and TBL\_PES\_AIM.PES\_ID == TBL\_PES.ID)

Column #	Column Name	Type	Employee	HR	Manager	Table Name	Table Column
1	Hedef	Textbox	Read-Only	Read-Only	Editable	TBL_PES_AIM	AIM
2	Termin	Textbox	Read-Only	Read-Only	Editable	TBL_PES_AIM	DUE_DATE
3	Sonuç (Personel)	Textbox	Editable	Read-Only	Read-Only	TBL_PES_AIM	RESULT_BY_EMPLOYEE
4	Sonuç (Yönetici)	Textbox	Read-Only	Read-Only	Editable	TBL_PES_AIM	RESULT_BY_MANAGER

**Table[2] : A table showing the aims of the employees**

### **Table[3] Değerlendirme Tablosu**

This table have only one column and displays TITLE value in first row, DESCRIPTION value in second row of current evaluation type and a table as defined in Table[4] in third row.

Row #	Row Name	Type	Employee	HR	Manager	Table Name	Table Column
1	Başlık	Textbox	Read-Only	Read-Only	Read-Only	TBL_PES_EVALUATION_TYPE	TITLE
2	Açıklama	Textbox	Read-Only	Read-Only	Read-Only	TBL_PES_EVALUATION_TYPE	DESCRIPTION
3	Değerlendirmeler	Table[4]					

**Table[3] : A table containing the evaluation feature**

### **Table[4]Değerlendirmeler**

This table displays column names in first row and other rows are filled by determined values as below (as Table Name and Table Column) of evaluated employee.

Column #	Column Name	Type	Employee	HR	Manager	Table Name	Table Column
1	Kriter	Textbox	Read-Only	Read-Only	Read-Only	TBL_PES_EVAL_TYPE_DEF	DESCRIPTION
2	Çalışan Değerlendirmesi	Combo Box[17]	Editable	Read-Only	Read-Only	TBL_PES_EVALUATION_PERSON	EVALUATION
3	Yönetici Değerlendirmesi	Combo Box[17]	Read-Only	Read-Only	Editable	TBL_PES_EVALUATION_PERSON	EVALUATION

**Table[4] : A table showing the evaluation of employees**

#### **6.1.2.2. "Sorumluluklar/Yetkinlikler"**

In this sub-tab general information, responsibilities and competences about the employee, who is this performance evaluation belongs to, is shown in table below(**Table 6.1.2.2.1**)

Field Name	Type	Employee	HR	Manager	Table Name	Table Column
Personel Adı	Textbox	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE	NAME
Personel Soyadı	Textbox	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE	SURNAME
Personel Sicil No	Textbox	Read-Only	Editable	Editable	TBL_PES	EMPLOYEEID
Personel Bölümü	Textbox	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE	DEPARTMENTID
Personel Pozisyonu	Textbox	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE	POSITION
Pozisyona Atanma Tarihi	Date Box	Read-Only	Read-Only	Editable	TBL_PES	POSITION_START
Yönetici Adı	Textbox	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE	NAME

Yönetici Soyadı	Textbox	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE	SURNAME
Yönetici Bölümü	Textbox	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE	POSITION
Tarih	Date Box	Read-Only	Read-Only	Read-Only	TBL_PES	DATE
Önceki Görüşme Tarihi	Date Box	Read-Only	Read-Only	Read-Only	TBL_PES	DATE
Sorumluluk Alanları	Textbox List	Read-Only	Read-Only	Editable	TBL_PES_RESP	NAME
Diğer Sorumluluklar	Textbox List	Read-Only	Read-Only	Editable	TBL_PES_MAN_RESP	RESP_NAME
Gerekli Yetkinlikler	Textbox List	Read-Only	Read-Only	Editable	TBL_PES_COMPETENCE	NAME
Diğer Yetkinlikler	Textbox List	Read-Only	Read-Only	Editable	TBL_PES_MAN_COMP	COMP_NAME
Personel Onayı	Check Box	Editable	Read-Only	Read-Only	TBL_PES	CONFIRMATION_BY_EMPLOYEE
Yönetici Onayı	Check Box	Read-Only	Read-Only	Editable	TBL_PES	CONFIRMATION_BY_MANAGER
Sakla	Button	Not-Clickable	Not-Clickable	Clickable		

(Table 6.1.2.2.1) : Table showing Responsibilities and Competences about employees

### 6.1.2.3. "Hedeflere Ulaşım"

In this sub-tab, aims of the project that the employee in, aims of person with due dates and evaluation of that aims both by employee and manager is shown in (Table 6.1.2.3.1)

Field Name	Type	Employee	HR	Manager	Table Name	Table Column
Personel Adı	Textbox	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE	NAME
Personel Soyadı	Textbox	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE	SURNAME
Personel Sicil No	Textbox	Read-Only	Read-Only	Read-Only	TBL_PES	EMPLOYEEID
Yönetici Adı	Textbox	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE	NAME
Yönetici Soyadı	Textbox	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE	SURNAME
Dönem Başlangıç	Textbox	Read-Only	Read-Only	Editable	TBL_PES	TERM_START
Dönem Bitiş	Textbox	Read-Only	Read-Only	Editable	TBL_PES	TERM_END
Proje Adı	Combo Box[16]	Read-Only	Read-Only	Editable	TBL_EMPLOYEE_PROJECTS	NAME
Proje Hedefleri	Table[1]					
Bireysel Hedefler	Table[2]					
Personel Onayı	Check Box	Editable	Read-Only	Read-Only	TBL_PES	CONFIRMATION_BY_EMPLOYEE
Yönetici Onayı	Check Box	Read-Only	Read-Only	Editable	TBL_PES	CONFIRMATION_BY_MANAGER
Sakla	Button	Clickable	Not-Clickable	Clickable		

(Table 6.1.2.3.1) : Table showing the aims of the projects employees responsible for

### 6.1.2.4. "Performans Değerlendirme ve Geliştirme"

In this sub-tab, comments of the manager about the employee are shown, such as; evaluation, personal opinions, improvements shown in the table (Table 6.1.2.4.1)

Field Name	Type	Employee	HR	Manager	Table Name	Table Column
Personel Adı	Textbox	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE	NAME
Personel Soyadı	Textbox	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE	SURNAME
Personel Sicil No	Textbox	Read-Only	Read-Only	Read-Only	TBL_PES	EMPLOYEEID
Yönetici Adı	Textbox	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE	NAME
Yönetici Soyadı	Textbox	Read-Only	Read-Only	Read-Only	TBL_EMPLOYEE	SURNAME
Dönem Başlangıç	Textbox	Read-Only	Read-Only	Editable	TBL_PES	TERM_START
Dönem Bitiş	Textbox	Read-Only	Read-Only	Editable	TBL_PES	TERM_END
Değerlendirme	Textbox	Read-Only	Read-Only	Editable	TBL_PES	EVALUATION
Kişisel Görüşler	Textbox	Read-Only	Read-Only	Editable	TBL_PES	PERSONAL_OPINIONS
Geliştirme	Textbox	Read-Only	Read-Only	Editable	TBL_PES	IMPROVEMENT
Personel Onayı	Check Box	Editable	Read-Only	Read-Only	TBL_PES	CONFIRMATION_BY_EMPLOYEE
Yönetici Onayı	Check Box	Read-Only	Read-Only	Editable	TBL_PES	CONFIRMATION_BY_MANAGER
Sakla	Button	Clickable	Not-Clickable	Clickable		

(Table 6.1.2.4.1): Table showing the performance evaluation of the employees and their development

### 6.1.2.5. “Yönetici Değerlendirme Formu”

This tab is an evaluation form which will be both filled by employee and manager. (Table 6.1.2.5.1)

Field Name	Type	Employee	HR	Manager	Table Name	Table Column
Değerlendirme Tablosu	Table[3]					
Liderlik Profili	Textbox	Read-Only	Read-Only	Editable	TBL_PES_EVALUATION_FORM	LEADERSHIP_PROFILE
Değerlendiren	Textbox	Read-Only	Read-Only	Read-Only	TBL_PES	EMPLOYEEID
Değerlendirilen	Textbox	Read-Only	Read-Only	Read-Only	TBL_PES	MANAGERID
Tarih	Date Box	Read-Only	Read-Only	Read-Only	TBL_PES	CONFIRMATION_DATE
Sakla	Button	Clickable	Not-Clickable	Clickable		

(Table 6.1.2.5.1) : Table the evaluation performance of employees under the coverage of manager

### 6.1.2.6. “Çalışan Değerlendirme Formu”

This tab is an evaluation form which will be both filled by employee and manager. (Table 6.1.2.6.1)

Field Name	Type	Employee	HR	Manager	Table Name	Table Column
Değerlendirme Tablosu	Table[3]					
Liderlik Profili	Textbox	Read-Only	Read-Only	Editable	TBL_PES_EVALUATION_FORM	LEADERSHIP_PROFILE
Değerlendiren	Textbox	Read-Only	Read-Only	Read-Only	TBL_PES	EMPLOYEEID
Değerlendirilen	Textbox	Read-Only	Read-Only	Read-Only	TBL_PES	MANAGERID
Tarih	Date Box	Read-Only	Read-Only	Read-Only	TBL_PES	CONFIRMATION_DATE
Sakla	Button	Clickable	Not-Clickable	Clickable		

(Table 6.1.2.6.1) : Table showing employee performance evaluation

### 6.1.3. “Çalışanlar” Tab:

#### 6.1.3.1. Restrictions of Tab:

#### General:

If “Raporlama” button is clicked, a new window opens; user can select preferred columns, whether all users or selected users (selected with “Seç” field) and export type to export a report.

When “Arama” button is clicked, a new window opens; user can create a filter by one/some/all of following criterias: “İsim”, “Soyisim”, “Sicil No”, “Cinsiyet”, “Uyruğu”, “Kan Grubu”, “Yaşı”, “Medeni Hali”, “Sürücü Belgesi”, “Görev”, “Bölüm”, “Yönetici Sicil No”, “Yönetici Adı”, “Ünvanı”, “Mezuniyet Tarihi”, “Kontrat Tipi”, “Siemens EC başlama tarihi”, “Siemens A.Ş. Başlama Tarihi”, “Askerlik Durumu”, “Askerlik Tecil Tarihi”, “Yer”, “Ofis Yeri”, “Eğitim Seviyesi”, “Eğitim Kurum Adı”, “Eğitim Bölüm”, “Dil”, “Dil Yazma Seviyesi”, “Dil Okuma Seviyesi”, “Dil Konuşma Seviyesi”, “Proje Adı”, “Proje Görevi”, “Sertifika Kurumu”, “Sertifika Adı”, “Teknik Bilgi Adı”, “Teknik Bilgi Seviyesi”. Define relations between this criterias as AND

or OR. After apply that filter, content of “Çalışanlar Listesi” gets filtered in order to that criterias.

**Employee:**

“Employee” role doesn’t provide any authorization to see this tab.

**Manager:**

“Manager” role doesn’t provide any authorization to see this tab.

**HR:**

Users who have “HR” role can see information of all employees in a list.

If “HR” clicks “Kişisel Bilgiler” button of any employee, then personal data of that employee will be displayed in “Kişisel Bilgiler Tab”.

If “HR” clicks “Çalışan Ekle” button, then a new EMPLOYEEID is generated by the system and “Kişisel Bilgiler Tab” will be open with all fields are empty except “Sicil No” which will be filled with generated EMPLOYEEID. If “HR” fills necessary fields and then clicks “Sakla” button then new employee gets created but if “HR” not save that information then generated EMPLOYEEID will be lost and creation process will be terminated.

“HR” can select multiple employees by “Seç” field of the table. This field is for “Raporlama”.

If “HR” clicks “Raporlama” button, then a new window opens, user can select preferred columns and whether all users or selected users (selected with “Seç” field)

**Admin:**

“Admin” role doesn’t provide any authorization to see this tab.

**Tables**

***[5]Çalışanlar Listesi***

This table displays column names in first row and other rows will be filled by values from database as defined below.

Column #	Field Name	Type	HR	Table Name	Table Column
1	Kişisel Bilgiler	Button	Clickable		
2	Seç	Check Box	Clickable		
3	Sicil No	Textbox	Read-Only	TBL_EMPLOYEE	EMPLOYEEID
4	Adı	Textbox	Read-Only	TBL_EMPLOYEE	NAME
5	Soyadı	Textbox	Read-Only	TBL_EMPLOYEE	SURNAME
6	Cinsiyet	Textbox	Read-Only	TBL_EMPLOYEE	GENDERID
7	Uyruğu	Textbox	Read-Only	TBL_EMPLOYEE	NATIONALITY
8	Kan Grubu	Textbox	Read-Only	TBL_EMPLOYEE	BLOODTYPEID
9	Doğum Tarihi	Textbox	Read-Only	TBL_EMPLOYEE	BIRTHDATE
10	Medeni Hali	Textbox	Read-Only	TBL_EMPLOYEE	MARITALSTATUSID
11	Sürücü Belgesi	Textbox	Read-Only	TBL_EMPLOYEE	DRIVINGLICENSEID
12	Görev	Textbox	Read-Only	TBL_EMPLOYEE	POSITIONID
13	Bölüm	Textbox	Read-Only	TBL_EMPLOYEE	DEPARTMENTID
14	Yönetici	Text Box	Read-Only	TBL_EMPLOYEE	SUPERVISORID
15	Ünvanı	Textbox	Read-Only	TBL_APPL_USER	TITLE
16	Mezuniyet Tarihi	Textbox	Read-Only	TBL_EMPLOYEE_EDUCATION	GRADUATION_DATE
17	Kontrat Tipi	Textbox	Read-Only	TBL_EMPLOYEE	CONTRACTTYPE
18	Siemens EC İşe Başlama Tarihi	Textbox	Read-Only	TBL_EMPLOYEE	SIEMENSGIRIS
19	Siemens AŞ İşe Başlama Tarihi	Textbox	Read-Only	TBL_EMPLOYEE	STARTDATE
20	Askerlik Durumu	Textbox	Read-Only	TBL_EMPLOYEE	ASKERLIKDURUMUID
21	Askerlik Tescil/Terhis Tarihi	Textbox	Read-Only	TBL_EMPLOYEE	ASKERLIKTECIL
22	Meslek Odası Üyelik Tarihi	Textbox	Read-Only	TBL_EMPLOYEE	MESLEKODASIUYELIK
23	Yer	Textbox	Read-Only	TBL_EMPLOYEE	LOCATION
24	Ofis Yeri	Text Box	Read-Only	TBL_EMPLOYEE	OFFICESEAT
25	Arbis Kaydı	Textbox	Read-Only	TBL_EMPLOYEE	ARBISRECORD
26	Onay	Textbox	Read-Only	TBL_EMPLOYEE	CONFIRMATION

**Tables6.1.3.1: Table keeping the list of the users**

### 6.1.3.2. Interface Analysis of Tab:

In this tab will include employee list, search and report in it. Also new employee creation starts here. Table 6.1.3.2.1

Field Name	Type	HR	Table Name	Table Column
Arama	Button	Clickable		
Raporlama	Button	Clickable		
Çalışan Ekle	Button	Clickable		
Çalışanlar Listesi	Table[5]			

**Table 6.1.3.2.1: Table showing the interface analysis**

### 6.1.4. “Çalışanlarım” Tab:

#### 6.1.4.1. Restrictions of Tab:

#### General:

If “Raporlama” button is clicked, a new window opens; user can select preferred columns, whether all users or selected users (selected with “Seç” field) and export type to export a report.

When “Arama” button is clicked, a new window opens; user can create a filter by one/some/all of following criterias: “İsim”, “Soyisim”, “Sicil No”, “Cinsiyet”, “Uyruğu”, “Kan Grubu”, “Yaşı”, “Medeni Hali”, “Sürücü Belgesi”, “Görev”, “Bölüm”, “Ünvanı”, “Mezuniyet Tarihi”, “Kontrat

Tipi”, “Siemens EC başlama tarihi “, “Siemens A.Ş. Başlama Tarihi”, “Askerlik Durumu”, “Askerlik Tecil Tarihi”, “Yer”, “Ofis Yeri”, “Eğitim Seviyesi”, “Eğitim Kurum Adı”, “Eğitim Bölüm”, “Dil”, “Dil Yazma Seviyesi”, “Dil Okuma Seviyesi”, “Dil Konuşma Seviyesi”, “Proje Adı”, “Proje Görevi”, “Sertifika Kurumu”, Sertifika Adı”, “Teknik Bilgi Adı”, “Teknik Bilgi Seviyesi”(Similar with “Çalışanlar” Tab except; “Yönetici Sicil No” and “Yönetici Adı” because this list already filtered by “Yönetici Sicil No” with value of current user’s EMPLOYEEID). Define relations between this criterias as AND or OR. After apply that filter, content of “Çalışanlarım Listesi” gets filtered in order to that criterias.

### **Employee:**

“Employee” role doesn’t provide any authorization to see this tab.

### **Manager:**

Users who have “Manager” role can see information of employees whose manager is user, in a list.

If “Manager” clicks “Kişisel Bilgiler” button of any employee, then personal data of that employee will be displayed in “Kişisel Bilgiler Tab”.

“Manager” can select multiple employees by “Seç” field of the table. This field is for “Raporlama”.

If “Manager” clicks “Raporlama” button, then a new window opens, user can select preferred columns and whether all users (whose manager is the user) or selected users (selected with “Seç” field).

### **HR:**

“HR” role doesn’t provide any authorization to see this tab.

### **Admin:**

“Admin” role doesn’t provide any authorization to see this tab.

### **Tables**

#### **[6]Çalışanlarım Listesi**

This table displays column names in first row and other rows will be filled by values from database as defined below. Table 6.1.4.1

Column #	Field Name	Type	Manager	Table Name	Table Column
1	Kişisel Bilgiler	Button	Clickable		
2	Seç	Check Box	Clickable		
3	Sicil No	Textbox	Read-Only	TBL_EMPLOYEE	EMPLOYEEID
4	Adı	Textbox	Read-Only	TBL_EMPLOYEE	NAME
5	Soyadı	Textbox	Read-Only	TBL_EMPLOYEE	SURNAME
6	Cinsiyet	Textbox	Read-Only	TBL_EMPLOYEE	GENDERID
7	Uyruğu	Textbox	Read-Only	TBL_EMPLOYEE	NATIONALITY
8	Kan Grubu	Textbox	Read-Only	TBL_EMPLOYEE	BLOODTYPEID
9	Doğum Tarihi	Textbox	Read-Only	TBL_EMPLOYEE	BIRTHDATE
10	Medeni Hali	Textbox	Read-Only	TBL_EMPLOYEE	MARITALSTATUSID
11	Sürücü Belgesi	Textbox	Read-Only	TBL_EMPLOYEE	DRIVINGLICENSEID
12	Görev	Textbox	Read-Only	TBL_EMPLOYEE	POSITIONID
13	Bölüm	Textbox	Read-Only	TBL_EMPLOYEE	DEPARTMENTID
14	Yönetici	Text Box	Read-Only	TBL_EMPLOYEE	SUPERVISORID
15	Ünvanı	Textbox	Read-Only	TBL_APPL_USER	TITLE
16	Mezuniyet Tarihi	Textbox	Read-Only	TBL_EMPLOYEE_EDUCATION	GRADUATION_DATE
17	Kontrat Tipi	Textbox	Read-Only	TBL_EMPLOYEE	CONTRACTTYPE
18	Siemens EC İşe Başlama Tarihi	Textbox	Read-Only	TBL_EMPLOYEE	SIEMENSGIRIS
19	Siemens AŞ İşe Başlama Tarihi	Textbox	Read-Only	TBL_EMPLOYEE	STARTDATE
20	Askerlik Durumu	Textbox	Read-Only	TBL_EMPLOYEE	ASKERLIKDURUMUID
21	Askerlik Tescil/Terhis Tarihi	Textbox	Read-Only	TBL_EMPLOYEE	ASKERLIKTECIL
22	Meslek Odası Üyelik Tarihi	Textbox	Read-Only	TBL_EMPLOYEE	MESLEKODASIUYELIK
23	Yer	Textbox	Read-Only	TBL_EMPLOYEE	LOCATION
24	Ofis Yeri	Text Box	Read-Only	TBL_EMPLOYEE	OFFICESEAT
25	Arbis Kaydı	Textbox	Read-Only	TBL_EMPLOYEE	ARBISRECORD
26	Onay	Textbox	Read-Only	TBL_EMPLOYEE	CONFIRMATION

**Table 6.1.4.1: Table keeps the list of my employees**

#### 6.1.4.2. Interface Analysis of Tab:

In this tab will include list of employees whose manager is the user also search and report in that list. Table 6.1.4.2.1 gives a brief information about user interface of this tab.

Field Name	Type	Manager	Table Name	Table Column
Arama	Button	Clickable		
Raporlama	Button	Clickable		
Çalışanlarım Listesi	Table[6]			

**Table 6.1.4.2.1: Table showing the interface analysis**

#### 6.1.5. “Kullanıcı Bilgileri” Tab:

##### 6.1.5.1. Restrictions of Tab:

#### Employee:

“Employee” role doesn’t provide any authorization to see this tab.

#### Manager:

“Manager” role doesn’t provide any authorization to see this tab.

**HR:**

“HR” role doesn’t provide any authorization to see this tab.

**Admin:**

Users who have “Admin” role can see information of all users in a form-like interface.

If user changes any information then “Sakla” button gets activated, only after is clicked, information get changed from the database.

#### 6.1.5.2. “Kullanıcı Bilgileri” Tab:

This sub-tab displays general information about users in form-like interface. Table 6.1.5.2.1

Field Name	Type	Admin	Table Name	Table Column
Sicil No	Textbox	Editable	TBL_APPL_USER	USER_NAME
Adı	Textbox	Editable	TBL_APPL_USER	NAME
Soyadı	Textbox	Editable	TBL_APPL_USER	SURNAME
Rol	Textbox List	Selectable	TBL_APPL_ROLES	ROLE_NAMES
Oluşturan	Textbox	Read-Only	TBL_APPL_USER	CREATEDBY
Oluşturulmuş Tarihi	Textbox	Read-Only	TBL_APPL_USER	CREATEDATE
Son Değiştiren	Textbox	Read-Only	TBL_APPL_USER	MODIFIEDBY
Değiştiriliş Tarihi	Textbox	Read-Only	TBL_APPL_USER	MODIFYDATE
Ünvan	Textbox	Editable	TBL_APPL_USER	TITLE
İş Telefonu	Textbox	Editable	TBL_APPL_USER	MOBILE
Ev Telefonu	Textbox	Editable	TBL_APPL_USER	PHONE
Faks	Textbox	Editable	TBL_APPL_USER	FAX
E-Posta	Textbox	Editable	TBL_APPL_USER	EMAIL
Ülke	Textbox	Editable	TBL_APPL_USER	COUNTRY
Dil	Textbox	Editable	TBL_APPL_USER	LANGUAGE
Firma İsmi	Textbox	Editable	TBL_APPL_USER	COMPANY_NAME
Müşteri Bölüm	Textbox	Editable	TBL_APPL_USER	CUSTOMER_DEPARTMENT
Başarısız Deneme	Textbox	Read-Only	TBL_APPL_USER	FAILED_ATTEMPT_COUNT
Şifreyi Değiştirmek Zorunda Mı	Check Box	Editable	TBL_APPL_USER	MUST_CHANGE_PASSWORD
Şifre Geçerlilik Süresi Var Mı	Check Box	Editable	TBL_APPL_USER	PASSWORD_EXPIRATION_ENABLE
Son Şifre Değiştirme Tarihi	Textbox	Editable	TBL_APPL_USER	LAST_PASSWORD_UPDATE
Şifre Geçerlilik Süresi	Textbox	Editable	TBL_APPL_USER	EXPIRATION_PERIOD
Şifre Değiştirme Uyarı Süresi	Textbox	Editable	TBL_APPL_USER	EXPIRATION_WARNING_PERIOD
Sakla	Button	Clickable		

**Table 6.1.5.2.1 : Table showing the information of the users**

#### 6.1.5.3. “Sistem Günlüğü” Tab:

This sub-tab displays system logs of the user in a list.

Field Name	Type	Admin	Table Name	Table Column
Giriş Tarihi	Textbox	Read-Only	TBL_APPL_USER_LOG	LOGIN_DATE
Çıkış Tarihi	Textbox	Read-Only	TBL_APPL_USER_LOG	LOGOUT_DATE
Çıkış Şekli	Textbox	Read-Only	TBL_APPL_USER_LOG	LOGOUT_TYPE
IP	Textbox	Read-Only	TBL_APPL_USER_LOG	IP

**Table 6.1.5.3.1 : Table showing the record of the day of entrance and leave of employee**

## 6.1.6. "Kullanıcılar" Tab:

### 6.1.6.1. Restrictions of Tab:

#### General:

Function of "Arama" button is pretty similar with "Çalışanlar" and "Çalışanlarım" Tabs, except for the criterias, which are: "Kullanıcı Adı", "Sicil No", "Adı", "Soyadı", "Yetki", "Rol", "Başarısız Deneme Sayısı", "Görevi", "Dil", "Son Log In"

#### Employee:

"Employee" role doesn't provide any authorization to see this tab.

#### Manager:

"Manager" role doesn't provide any authorization to see this tab.

#### HR:

"HR" role doesn't provide any authorization to see this tab.

#### Admin:

Users who have "Admin" role can see information of all users in a list.

If "Admin" clicks "Kullanıcı Bilgileri" button of any user, then informations of that user will be displayed in "Kullanıcı Bilgileri" Tab.

If "Admin" clicks "Kullanıcı Ekle" button, then "Kullanıcı Bilgileri" Tab will be open with all fields are. If "Admin" fills necessary fields and then clicks "Sakla" button then new user gets created but if "Admin" not save that information, creation process will be terminated.

#### Tables

##### [7]Kullanıcı Listesi

This table displays column names in first row and other rows will be filled by values from database as defined below.

Column #	Column Name	Type	Admin	Table Name	Table Column
1	Kullanıcı Bilgileri	Button	Clickable		
2	Sicil No	Textbox	Read-Only	TBL_APPL_USER	USER_NAME
3	İsim	Textbox	Read-Only	TBL_APPL_USER	NAME
4	Soyisim	Textbox	Read-Only	TBL_APPL_USER	SURNAME

5	Yetki	Textbox	Read-Only	TBL_APPL_USER	INACTIVE
6	Roles	Textbox	Read-Only	TBL_APPL_ROLES	ROLE_NAME
7	Ünvan	Textbox	Read-Only	TBL_APPL_USER	TITLE
8	Ülke	Textbox	Read-Only	TBL_APPL_USER	COUNTRY
9	Şirket Adı	Textbox	Read-Only	TBL_APPL_USER	COMPANY_NAME
10	Müşteri Bölümü	Textbox	Read-Only	TBL_APPL_USER	CUSTOMER_DEPARTMENT
11	Başarısız Deneme	Textbox	Read-Only	TBL_APPL_USER	FAILED_ATTEMPT_COUNT

**Table 6.1.5.1 : Table showing the list of the users**

### 6.1.6.2. Interface Analysis of Tab:

This tab is listing all users as a grid Table 6.1.6.2.1 gives a brief information about user interface of this tab.

Field Name	Type	Admin	Table Name	Table Column
Arama	Button	Clickable		
Kullanıcı Ekle	Button	Clickable		
Kullanıcı Listesi	Table[7]			

**Table 6.1.5.1 : Table showing the list of the users**

### 6.1.7. "Admin" Tab:

#### 6.1.7.1. Restrictions of Tab:

#### General:

"Kullanıcı Listesi" displays all users with selected role from the "Rol Listesi".

#### Employee:

"Employee" role doesn't provide any authorization to see this tab.

#### Manager:

"Manager" role doesn't provide any authorization to see this tab.

#### HR:

"HR" role doesn't provide any authorization to see this tab.

#### Admin:

Users who have "Admin" role can see information of all role types in a list.

If "Admin" clicks "Kullanıcı Bilgileri" button of any user, then informations of that user will be displayed in "Kullanıcı Bilgileri" Tab.

If “Admin” clicks “Role Düzenle” button, then a new window is opened to change permissions for selected role from the “Rol Listesi”.

If “Admin” clicks “Rol Ekle” button, then a new window is opened, user can enter name and permissions for new role type.

## Tables

### **Table[8]Kullanıcı Listesi**

This table displays column names in first row and other rows will be filled by values from database as defined below.

Column #	Column Name	Type	Admin	Table Name	Table Column
1	Kullanıcı Bilgileri	Button	Clickable		
2	Sicil No	Textbox	Read-Only	TBL_APPL_USER	USER_NAME
3	İsim	Textbox	Read-Only	TBL_APPL_USER	NAME
4	Soyisim	Textbox	Read-Only	TBL_APPL_USER	SURNAME
5	Yetki	Textbox	Read-Only	TBL_APPL_USER	INACTIVE
6	Roles	Textbox	Read-Only	TBL_APPL_RESP	RESP_NAME
7	Ünvan	Textbox	Read-Only	TBL_APPL_USER	TITLE
8	Ülke	Textbox	Read-Only	TBL_APPL_USER	COUNTRY
9	Şirket Adı	Textbox	Read-Only	TBL_APPL_USER	COMPANY_NAME
10	Müşteri Bölümü	Textbox	Read-Only	TBL_APPL_USER	CUSTOMER_DEPARTMENT
11	Başarısız Deneme	Textbox	Read-Only	TBL_APPL_RESP	FAILED_ATTEMPT_COUNT

**Table 6.1.5.2.1 : Table showing the list of employees**

### *6.1.7.2. Interface Analysis of Tab:*

This tab enables users to display list role types of the system and edit current ones or add new one. Table 6.1.7.2.1 gives brief information about the user interface of this tab.

Field Name	View Type	Admin	Table Name	Table Column
<b>Rol Düzenle</b>	Button	Clickable		
<b>Rol Ekle</b>	Button	Clickable		
<b>Rol Listesi</b>	Textbox List	Selectable	TBL_APPL_ROLES	ROLE_NAME
<b>Kullanıcı Listesi</b>	Table[8]			

**Table 6.1.5.1 : Table showing the list of the users**

### **6.1.8. “Raporlama” Tab:**

#### *6.1.8.1. Restrictions of Tab:*

#### **General:**

“Arama” Buttons searches in the tables below, search criterias could be the columns of the table in that sub-tab.

## Employee:

“Employee” role doesn’t provide any authorization to see this tab.

## Manager:

Users who have “Manager” role can see information of employees whose manager is user, in a list.

Users can add new aims for projects in “Proje Amaçları” sub-tab by clicking “Yeni Proje Amacı Ekle” Button.

## HR:

Users who have “HR” role can see information of all employees in a list.

HR can add new competence and responsibilities for positions to be used in “Performance Evaluation System” from “Sorumluluklar” and “Yetkinlikler” sub-tabs by clicking “Sorumluluk Ekle” and “Yetkinlik Ekle” buttons.

## Admin:

“Admin” role doesn’t provide any authorization to see this tab.

## Tables

### **Table[9]Eğitim Bilgileri Listesi**

This table displays column names in first row and other rows will be filled by values from database as defined below.

Column #	Column Name	Type	Manager	HR	Table Name	Table Column
1	Kullanıcı Bilgileri	Button	Clickable	Clickable		
2	Sicil No	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_EDUCATION	EMPLOYEEID
3	İsim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	NAME
4	Soyisim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	SURNAME
5	Eğitim Seviyesi	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_EDUCATION	DEGREEID
6	Kurum Adı	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_EDUCATION	INSTITUTION
7	Bölüm	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_EDUCATION	DEPARTMENT
8	Tez	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_EDUCATION	THESIS
9	Eğitime Devam Ediyor	Check Box	Read-Only	Read-Only	TBL_EMPLOYEE_EDUCATION	STILLSTUDYING
10	Giriş Tarihi	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_EDUCATION	ENTERANCEDATE
11	Mezuniyet Tarihi	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_EDUCATION	GRADUATIONDATE
12	Onay	Checkbox	Read-Only	Read-Only	TBL_EMPLOYEE_EDUCATION	CONFIRMATION

**Table 6.1.8.1 : Table showing the education information of the employees**

### **Table[10] İş Tecrübeleri Listesi**

This table displays column names in first row and other rows will be filled by values from database as defined below.

Column #	Column Name	Type	Manager	HR	Table Name	Table Column
1	Kullanıcı Bilgileri	Button	Clickable	Clickable		
2	Sicil No	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_WORKEXPERENCE	EMPLOYEEID
3	İsim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	NAME
4	Soyisim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	SURNAME
5	Firma Adı	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_WORKEXPERENCE	COMPANY_NAME
6	Görev	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_WORKEXPERENCE	POSITION
7	Çalışma Yeri	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_WORKEXPERENCE	WORKPLACE
8	Başlangıç Tarihi	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_WORKEXPERENCE	START_DATE
9	Bitiş Tarihi	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_WORKEXPERENCE	END_DATE
10	Onay	Check Box	Read-Only	Read-Only	TBL_EMPLOYEE_WORKEXPERENCE	CONFIRMATION

**Table 6.1.8.2 :Table showing the work experience of employees**

### **Table[11] Diller Listesi**

This table displays column names in first row and other rows will be filled by values from database as defined below.

Column #	Column Name	Type	Manager	HR	Table Name	Table Column
1	Kullanıcı Bilgileri	Button	Clickable	Clickable		
2	Sicil No	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_LANGUAGE	EMPLOYEEID
3	İsim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	NAME
4	Soyisim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	SURNAME
5	Dil	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_LANGUAGE	LANGUAGE
6	Yazma Seviyesi	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_LANGUAGE	WRITTENLEVELID
7	Konuşma Seviyesi	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_LANGUAGE	SPEAKINGLEVELID
8	Okuma Seviyesi	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_LANGUAGE	READINGLEVELID
9	Ana Dil	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_LANGUAGE	NATIVELANG
10	Onay	Check Box	Read-Only	Read-Only	TBL_EMPLOYEE_LANGUAGE	CONFIRMATION

**Table 6.1.8.3 :Table showing the list of languages employees know**

### **Table[12] Projeler Listesi**

This table displays column names in first row and other rows will be filled by values from database as defined below.

Column #	Column Name	Type	Manager	HR	Table Name	Table Column
1	Kullanıcı Bilgileri	Button	Clickable	Clickable		
2	Sicil No	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_PROJECTS	EMPLOYEEID
3	İsim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	NAME
4	Soyisim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	SURNAME
5	Proje Adı	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_PROJECTS	NAME
6	Görev	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_PROJECTS	POSITION
7	Tamamlanmış	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_PROJECTS	COMPLETED
8	Başlangıç Tarihi	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_PROJECTS	START
9	Bitiş Tarihi	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_PROJECTS	FINISH
10	Tubitak	Check Box	Read-Only	Read-Only	TBL_EMPLOYEE_PROJECTS	TUBITAK
11	Onay	Check Box	Read-Only	Read-Only	TBL_EMPLOYEE_PROJECTS	CONFIRMATION

**Table 6.1.8.3 :Table showing the list of projects**

### **Table[13] Proje Amaçları Listesi**

This table displays column names in first row and other rows will be filled by values from database as defined below.

Column #	Column Name	Type	Manager	HR	Table Name	Table Column
1	Proje Adı	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_PROJECTS	NAME
2	Amaç	Textbox	Read-Only	Read-Only	TBL_PES_PROJECT_AIM	AIM
3	Termin	Textbox	Read-Only	Read-Only	TBL_PES_PROJECT_AIM	DUE_DATE

**Table 6.1.8.4 :Table showing the aim of projects**

### **Table[14] Sertifikalar Listesi**

This table displays column names in first row and other rows will be filled by values from database as defined below.

Column #	Column Name	Type	Manager	HR	Table Name	Table Column
1	Kullanıcı Bilgileri	Button	Clickable	Clickable		
2	Sicil No	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_CERTIFICATES	EMPLOYEEID
3	İsim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	NAME
4	Soyisim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	SURNAME
5	Kurum	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_CERTIFICATES	PROVIDER
6	Sertifika Adı	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_CERTIFICATES	NAME
7	Tarih	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_CERTIFICATES	DATE
8	Onay	Check Box	Read-Only	Read-Only	TBL_EMPLOYEE_CERTIFICATES	CONFIRMATION

**Table 6.1.8.5 :Table showing the list of certificates**

### **Table[15] Teknik Bilgiler Listesi**

This table displays column names in first row and other rows will be filled by values from database as defined below.

Column #	Column Name	Type	Manager	HR	Table Name	Table Column
1	Kullanıcı Bilgileri	Button	Clickable	Clickable		
2	Sicil No	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_TECHNICALSKILLS	EMPLOYEEID
3	İsim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	NAME
4	Soyisim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	SURNAME
5	Bilgi Adı	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_TECHNICALSKILLS	NAMEID
6	Seviye	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_TECHNICALSKILLS	LEVELID
8	Onay	Check Box	Read-Only	Read-Only	TBL_EMPLOYEE_TECHNICALSKILLS	CONFIRMATION

**Table 6.1.8.6 :Table showing the technical skills**

### **Table[16] Eğitimler Listesi**

This table displays column names in first row and other rows will be filled by values from database as defined below.

Column #	Column Name	Type	Manager	HR	Table Name	Table Column
1	Kullanıcı Bilgileri	Button	Clickable	Clickable		
2	Sicil No	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_TRAININGS	EMPLOYEEID
3	İsim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	NAME
4	Soyisim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	SURNAME

5	Eğitim Adı	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_TRAININGS	NAME
6	Yer	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_TRAININGS	LOCATION
7	Kurum	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_TRAININGS	PROVIDER
8	Başlangıç Tarihi	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_TRAININGS	START
9	Bitiş Tarihi	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_TRAININGS	FINISH
10	Süre	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_TRAININGS	DURATION
11	Onay	Check Box	Read-Only	Read-Only	TBL_EMPLOYEE_TRAININGS	CONFIRMATION

**Table 6.1.8.7 :Table showing the list of trainings**

### **Table[17] Ekler Listesi**

This table displays column names in first row and other rows will be filled by values from database as defined below.

Column #	Column Name	Type	Manager	HR	Table Name	Table Column
1	Kullanıcı Bilgileri	Button	Clickable	Clickable		
2	Sicil No	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_ATTACHMENT	EMPLOYEEID
3	İsim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	NAME
4	Soyisim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	SURNAME
5	Tip	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_ATTACHMENT	TYPEID
6	Dosya İçeriği	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_ATTACHMENT	CONTENT_TYPE
7	Dosya Adı	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_ATTACHMENT	FILE_NAME
8	Sadece Adres	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE_ATTACHMENT	URL_ONLY
9	Onay	Check Box	Read-Only	Read-Only	TBL_EMPLOYEE_ATTACHMENT	CONFIRMATION

**Table 6.1.8.8 :Table showing list of attachments**

### **Table[18] Sorumluluklar Listesi**

This table displays column names in first row and other rows will be filled by values from database as defined below.

Column #	Column Name	Type	Manager	HR	Table Name	Table Column
1	Kullanıcı Bilgileri	Button	Clickable	Clickable		
2	Sicil No	Textbox	Read-Only	Read-Only	TBL_PES_EMPLOYEE_RESP	EMPLOYEEID
3	İsim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	NAME
4	Soyisim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	SURNAME
5	Sorumluluk	Textbox	Read-Only	Read-Only	TBL_PES_RESP	RESP_NAME

**Table 6.1.8.9 :Table showing list of responsibilities**

### **Table[19] Yetkinlikler Listesi**

This table displays column names in first row and other rows will be filled by values from database as defined below.

Column #	Column Name	Type	Manager	HR	Table Name	Table Column
1	Kullanıcı Bilgileri	Button	Clickable	Clickable		
2	Sicil No	Textbox	Read-Only	Read-Only	TBL_PES_EMPLOYEE_COMP	EMPLOYEEID
3	İsim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	NAME
4	Soyisim	Textbox	Read-Only	Read-Only	TBL_EMPLOYEE	SURNAME
5	Yetkinlik	Textbox	Read-Only	Read-Only	TBL_PES_COMP	COMP_NAME

**Table 6.1.8.10 :Table showing list of activities**

#### 6.1.8.2. "Eđitim Bilgileri":

Field Name	Type	Manager	HR	Table Name	Table Column
Arama	Button	Clickable	Clickable		
Eđitim Bilgileri Listesi	Table[9]				

**Table 6.1.8.2.1 :Table showing education information**

#### 6.1.8.3. "İř Tecrübeleri":

Field Name	Type	Manager	HR	Table Name	Table Column
Arama	Button	Clickable	Clickable		
İř Tecrübeleri Listesi	Table[10]				

**Table 6.1.8.3.1 :Table showing work experience**

#### 6.1.8.4. "Diller":

Field Name	Type	Manager	HR	Table Name	Table Column
Arama	Button	Clickable	Clickable		
Diller Listesi	Table[11]				

**Table 6.1.8.4.1 :Table showing languages**

#### 6.1.8.5. "Projeler":

Field Name	Type	Manager	HR	Table Name	Table Column
Arama	Button	Clickable	Clickable		
Projeler Listesi	Table[12]				

**Table 6.1.8.5.1 :Table showing projects**

#### 6.1.8.6. "Proje Amaçları":

Field Name	Type	Manager	HR	Table Name	Table Column
Arama	Button	Clickable	Clickable		
Yeni Proje Amacı Ekle	Button	Clickable	Not-Clickable		
Proje Amaçları Listesi	Table[13]				

**Table 6.1.8.6.1 :Table showing aims of projects**

#### 6.1.8.7. "Sertifikaalar":

Field Name	Type	Manager	HR	Table Name	Table Column
Arama	Button	Clickable	Clickable		
Sertifikaalar Listesi	Table[14]				

**Table 6.1.8.7.1 :Table showing certificates**

#### 6.1.8.8. "Teknik Bilgiler":

Field Name	Type	Manager	HR	Table Name	Table Column
Arama	Button	Clickable	Clickable		
Teknik Bilgiler Listesi	Table[15]				

**Table 6.1.8.8.1 :Table showing technical skills**

### 6.1.8.9. "Eğitimler":

Field Name	Type	Manager	HR	Table Name	Table Column
Arama	Button	Clickable	Clickable		
Eğitimler Listesi	Table[16]				

**Table 6.1.8.9.1 :Table showing educations**

### 6.1.8.10. "Ekler":

Field Name	Type	Manager	HR	Table Name	Table Column
Arama	Button	Clickable	Clickable		
Ekler Listesi	Table[17]				

**Table 6.1.8.10.1 :Table showing attachments**

### 6.1.8.11. "Sorumluluklar":

Field Name	Type	Manager	HR	Table Name	Table Column
Arama	Button	Clickable	Clickable		
Sorumluluk Ekle	Button	Not-Clickable	Clickable		
Sorumluluklar Listesi	Table[18]				

**Table 6.1.8.11.1 :Table showing responsibilities**

### 6.1.8.12. "Yetkinlikler":

Field Name	Type	Manager	HR	Table Name	Table Column
Arama	Button	Clickable	Clickable		
Yetkinlik Ekle	Button	Not-Clickable	Clickable		
Yetkinlikler Listesi	Table[19]				

**Table 6.1.8.12.1 :Table showing activities**

## 6.2. Screen Images.

General interface design is intended to be shown as sketch screen images of the sub-tabs of first tab: Personal Data Tab. Image 6.2.1, Image 6.2.2, Image 6.2.3, Image 6.2.4, Image 6.2.5, Image 6.2.6, Image 6.2.7, Image 6.2.8, Image 6.2.9, Image 6.2.10, Image 6.2.11 are sketch screen images of sub-tabs of first tab in the order of mentioned in sub-section 6.1.

Kişisel Bilgilerim Sakla 1/1 Q ↑

Fotoğraf

PHOTO

\* Sicil No

\* Adı

\* Soyadı

\* Cinsiyet

\* Uyruğu

\* Kan Grubu

\* Doğum Tarihi

\* Medeni Hali

Sürücü Belgesi

\* E-Posta

İş Telefonu

Cep Telefonu

Ev Telefonu

\* Görev

\* Bölüm

Yönetici

Yönetici Adı

\* Ünvanı

\* TC Kimlik No

\* Vergi Numarası

\* SSK Numarası

Mezuniyet Tarihi

Kontrat Tipi

\* Siemens EC İşe Başlama Tarihi

Siemens A.Ş. İşe Başlama Tarihi

Askerlik Durumu

Askerlik Tecil/Terhis Tarihi

Fotoğraf

Meslek Odası Üyelik Tarihi

Yer

Ofis Yeri

Arbıs Kaydı

Image 6.2.1: Sketch Screen Image of Personal Data Sub-Tab

Eğitim Bilgileri (1) İş Tecrübeleri (2) Diller (3) Projeler (0) Sertifikalar (0) Teknik Bilgiler (10) E ↑

Yeni Sakla 1/1 Q ↑

\* Eğitim Seviyesi

Tez

\* Giriş Tarihi

Onay

\* Kurum Adı

Eğitime Devam Ediyor

Mezuniyet Tarihi

Notlar

\* Bölüm

Image 6.2.2: Sketch Screen Image of Education Sub-Tab

Eğitim Bilgileri (1) İş Tecrübeleri (2) Diller (3) Projeler (0) Sertifikalar (0) Teknik Bilgiler (10) E ↑

Yeni Sakla 1/2 Q ↑

\* Firma Adı

\* Çalışma Yeri

\* Bitiş Tarihi

Notlar

\* Görev

\* Başlangıç Tarihi

Onay

Image 6.2.3: Sketch Screen Image of Work Experience Sub-Tab

Eğitim Bilgileri (1) İş Tecrübeleri (2) **Diller (3)** Projeler (0) Sertifikalar (0) Teknik Bilgiler (10) Eği

Yeni Sakla 1 / 3

\* Dil Konuşma Seviyesi Onay

Yazma Seviyesi Ana Dil

Image 6.2.4: Sketch Screen Image of Languages Sub-Tab

Eğitim Bilgileri (1) İş Tecrübeleri (2) Diller (3) **Projeler (0)** Sertifikalar (0) Teknik Bilgiler (10) Eği

Yeni Sakla Kayıt Yok

\* Proje Adı Tamamlanmış Bitiş Tarihi Onay

\* Görev \* Başlangıç Tarihi Tubitak Notlar

Image 6.2.5: Sketch Screen Image of Projects Sub-Tab

Eğitim Bilgileri (1) İş Tecrübeleri (2) Diller (3) Projeler (0) **Sertifikalar (0)** Teknik Bilgiler (10) Eği

Yeni Sakla Kayıt Yok

\* Kurum Tarih Notlar

\* Sertifika Adı Onay

Image 6.2.6: Sketch Screen Image of Certificates Sub-Tab

Eğitim Bilgileri (1) İş Tecrübeleri (2) Diller (3) Projeler (0) Sertifikalar (0) **Teknik Bilgiler (10)** Eği

Yeni Sakla 1 / 10

\* Bilgi Adı Onay

\* Seviye Notlar

Image 6.2.7: Sketch Screen Image of Technical Skills Sub-Tab

Image 6.2.8: Sketch Screen Image of Personal Data Sub-Tab

Image 6.2.9: Sketch Screen Image of Personal Data Sub-Tab

Image 6.2.10: Sketch Screen Image of Personal Data Sub-Tab

Image 6.2.11: Sketch Screen Image of Personal Data Sub-Tab

## 7. Detailed Design

### 7.1. Personal Data Module

#### 7.1.1. Constraints

Personal data module and its subcomponents defined and described in section 4.1.1.1 and its subsections are limited with the Authentication/Authorization module (Sec 4.1.1.4.3 Function Role Module) because only manager, HR and Employee can implement the edit functions of the Personal Data Module. Admin does not have permission to access Personal Data Module functions.

#### 7.1.2. Composition

Personal Data module is composed of several subclasses mentioned below. They are all independent classes. It is visualized in Figure 7.1.2.1

- ❖ PersonalData Entity
- ❖ Education Entity
- ❖ Work Experience Entity
- ❖ Languages Entity
- ❖ Projects Entity
- ❖ Certificates Entity
- ❖ Technical Skills Entity
- ❖ Trainings Entity
- ❖ Cost\_Center Entity
- ❖ Attachments Entity
- ❖ Emergency Call Entity

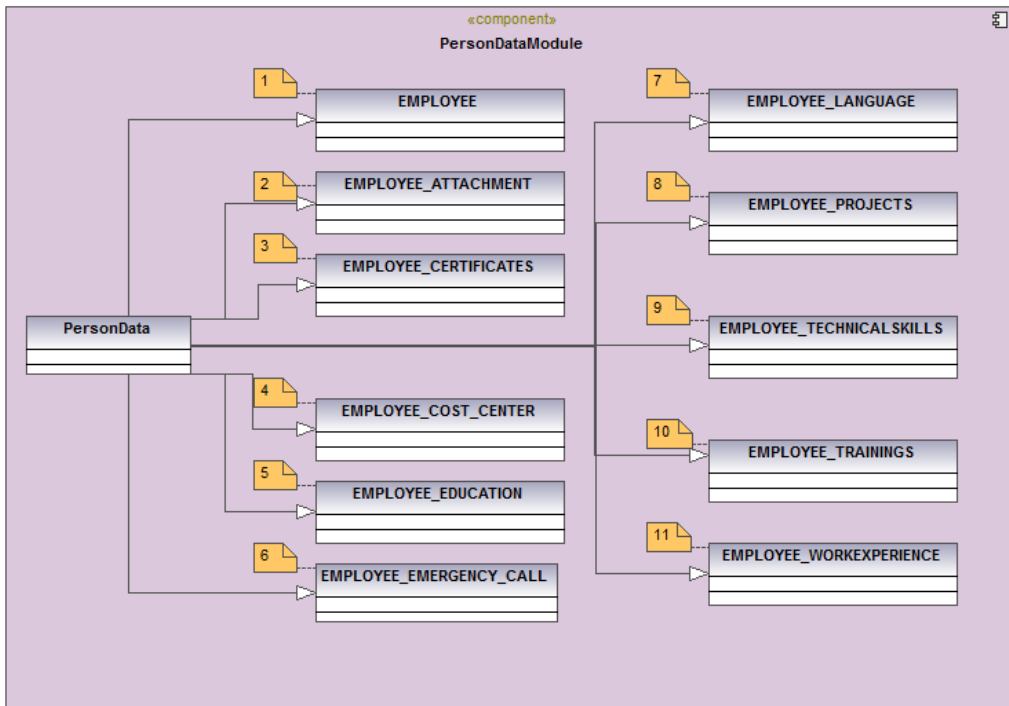


Figure 7.1.2.1 Entity Relation Diagram of PersonalDataModul

### 7.1.3. Sequence Diagram:

Sequence Diagram of Personal Data Object is below:

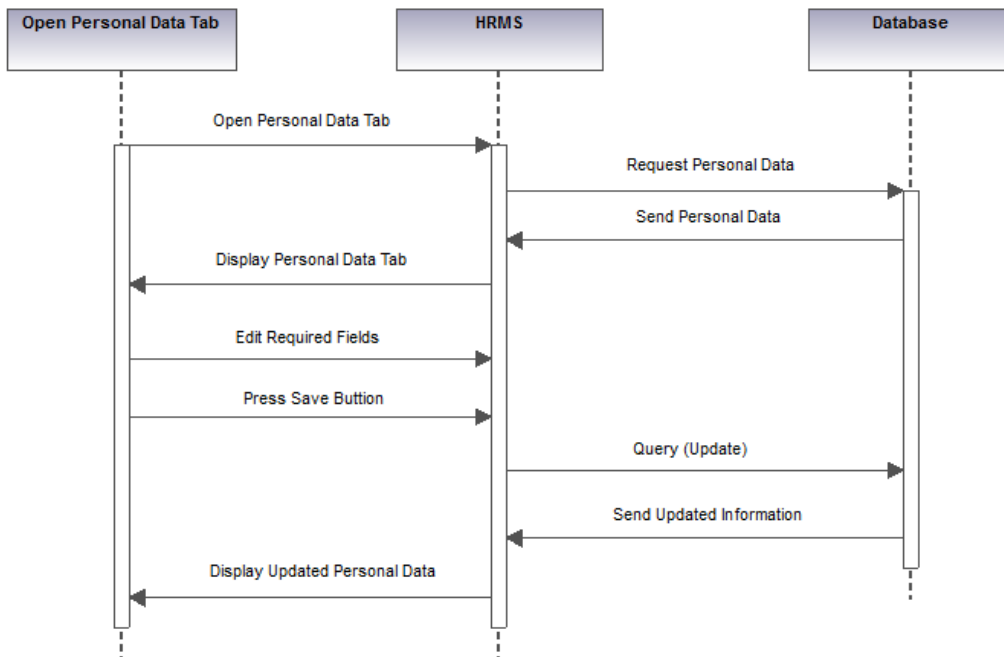


Figure 7.1.2.1.: Sequence Diagram of Personal Data Object

## 7.2. Performance Evaluation Module

### 7.2.1. Constraints:

Performance Evaluation Module and its sub modules are limited by the Authentication /Authorization module (Sec 4.1.1.4.3 Function Role Module). Employee is not able to edit performance evaluation criteria while HR and manager have permission.

### 7.2.2. Composition:

Performance evaluation module is composed of several subclasses mentioned below. As shown in the Figure 7.2.2.1, Hit target class has members of type Project Aim Entity and Personal Aim Entity.

- ❖ Responsibilities/Competences Entity
- ❖ Hit Target Entity
- ❖ Project Aim Entity
- ❖ Personal Aim Entity
- ❖ Performance Evaluation and Improvement Entity
- ❖ Evaluation Form Entity
- ❖ Evaluation Type Entity
- ❖ Evaluation Type Definition Entity
- ❖ Evaluation Person Entity

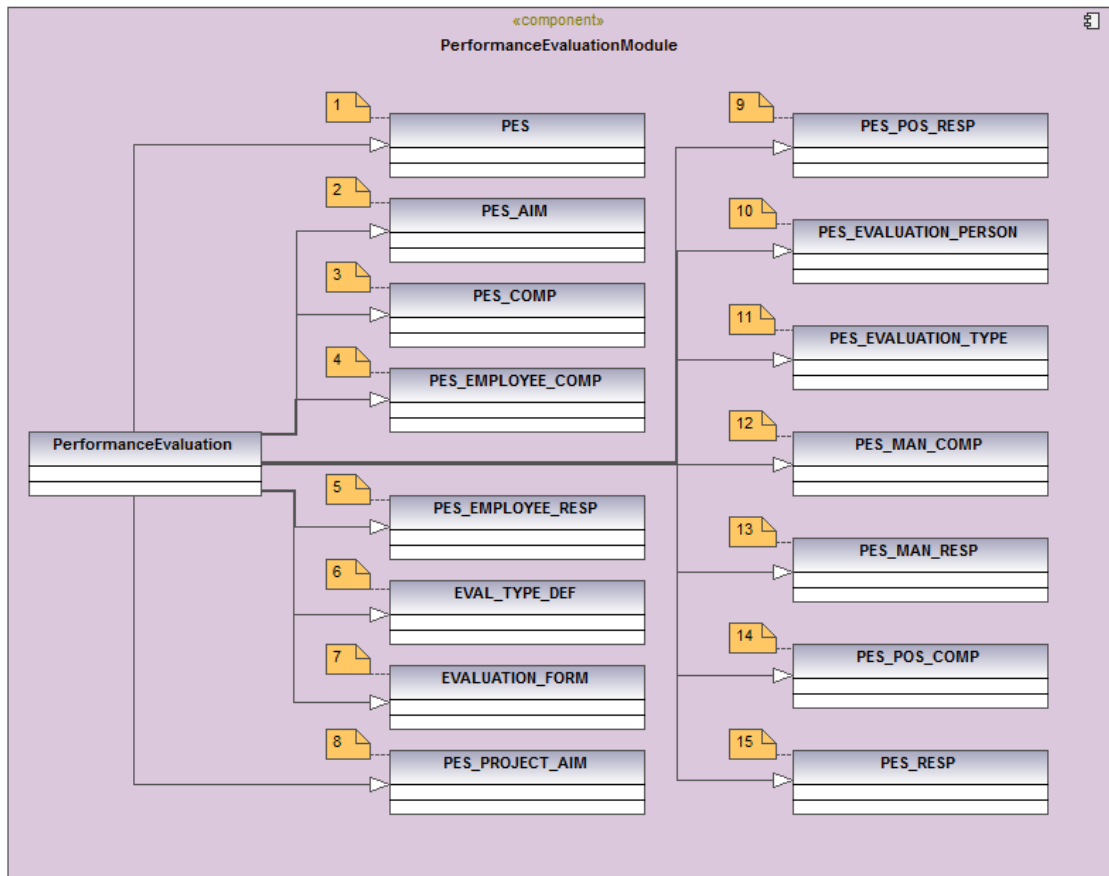


Figure 7.2.2.1 Entity Diagram of PerformanceEvaluationModule

### 7.2.3. Sequence Diagram:

Manager Performance Evaluation and Edition of criteria is shown in the figures below respectively in Figure 7.2.2.1 and in Figure 7.2.2.2

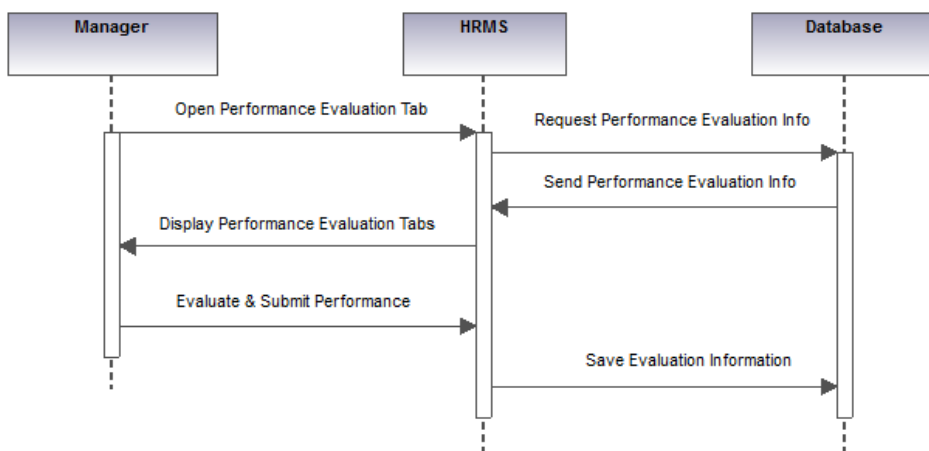
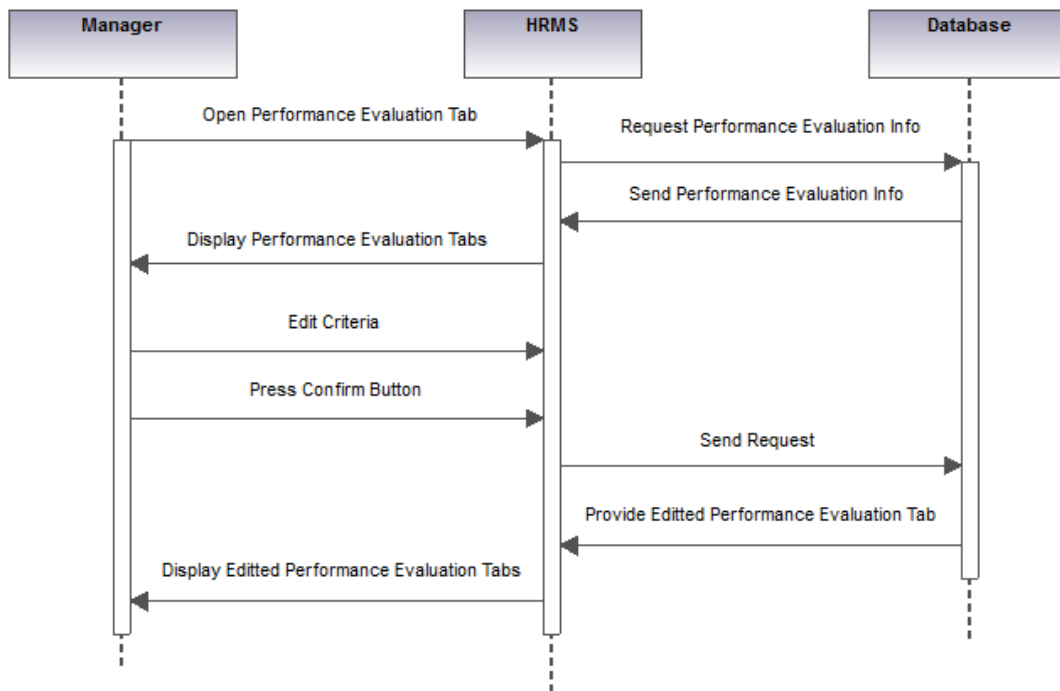


Figure 7.2.2.1: Sequence Diagram of manager for PEM



Figure

7.2.2.2: Sequence Diagram of manager to edit Performance Evaluation Report

### 7.3. User Module

#### 7.3.1. Constraints:

User module is constrained by Authentication /Authorization module (Sec 4.1.1.4.3 Function Role Module). User modules attributes can only be seen by the admin and methods can only be used by the admin.

#### 7.3.2. Use Case Diagram:

Use case diagram of user object is shown in Figure 7.3.2.1.

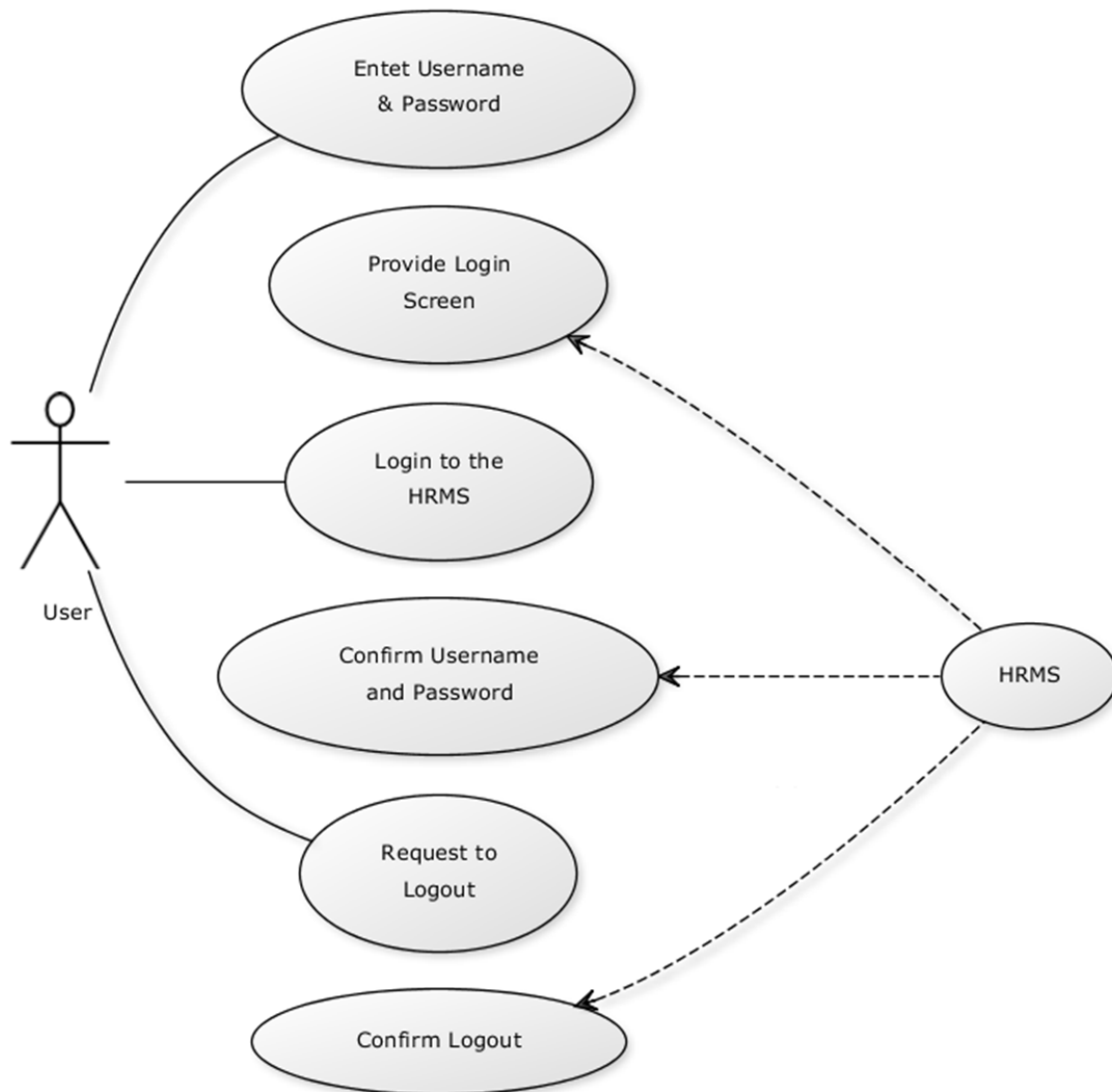


Figure 7.3.2.1: Use Case diagram of User object

## 7.4. Authentication/Authorization Module

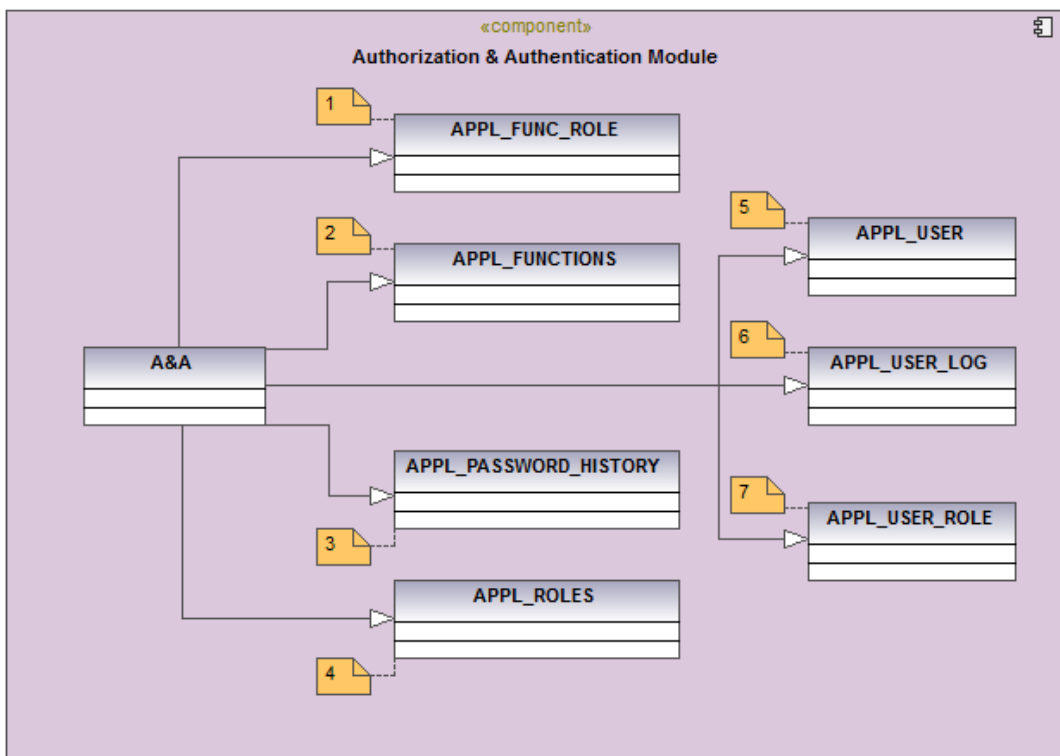
### 7.4.1. Constraints:

Authentication/Authorization module does not have any constraints. Any user can access this module. However, if it has not have the correct combination of user name and password it will be denied by the Authentication/Authorization module.

### 7.4.2. Composition:

Authentication/Authorization module is composed of sub classes mentioned below. Each subclass is independent. In other words there is no super sub class relation. It is visualized in Figure 7.4.2.1

- ❖ Functions Entity
- ❖ Roles Entity
- ❖ Function Role Entity
- ❖ User Role Entity
- ❖ User Log Entity
- ❖ Password History Entity



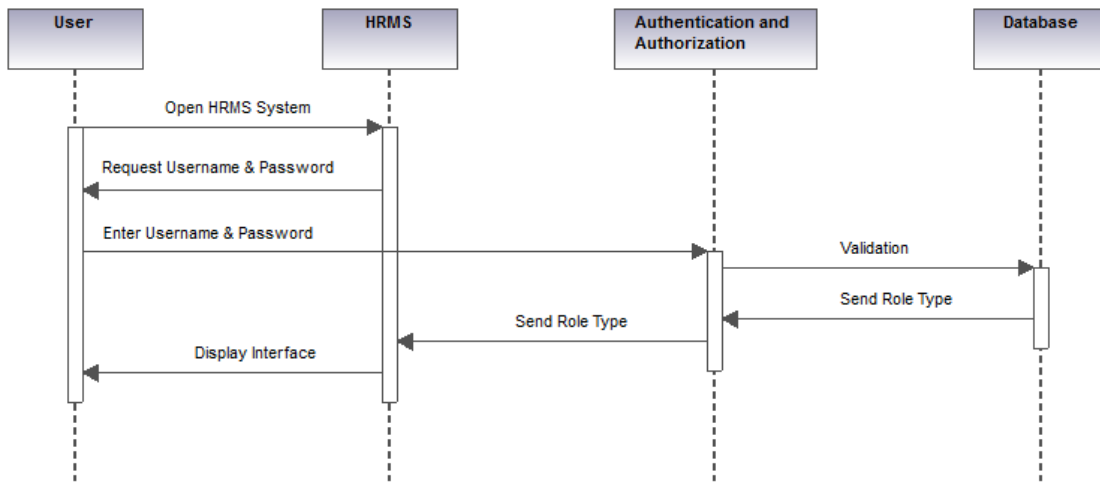
Generated by UModel

www.altova.com

Figure 7.4.2.1 Entity Relation Diagram of Authorization&Authentication Module

### 7.4.3. Sequence Diagram:

Sequence diagram of the Authentication and Authorization Mechanism is shown in Figure 7.4.3.1.



**Figure 7.4.3.1: Sequence Diagram for Authentication and Authorization System of HRMS**

## 7.5. Database Module

### 7.5.1. Constraints:

Accessing to the database tables are limited by the Authentication&Authorization module (Sec 4.1.1.4.3 Function Role Module). Each role type can only access specified tables defined in Authentication&Authorization module (4.1.1.4.4 User Role Module). All DataBase tables and relations between them are shown in Figure 7.5.1.1, Figure 7.5.1.2. and Figure 7.5.1.3..

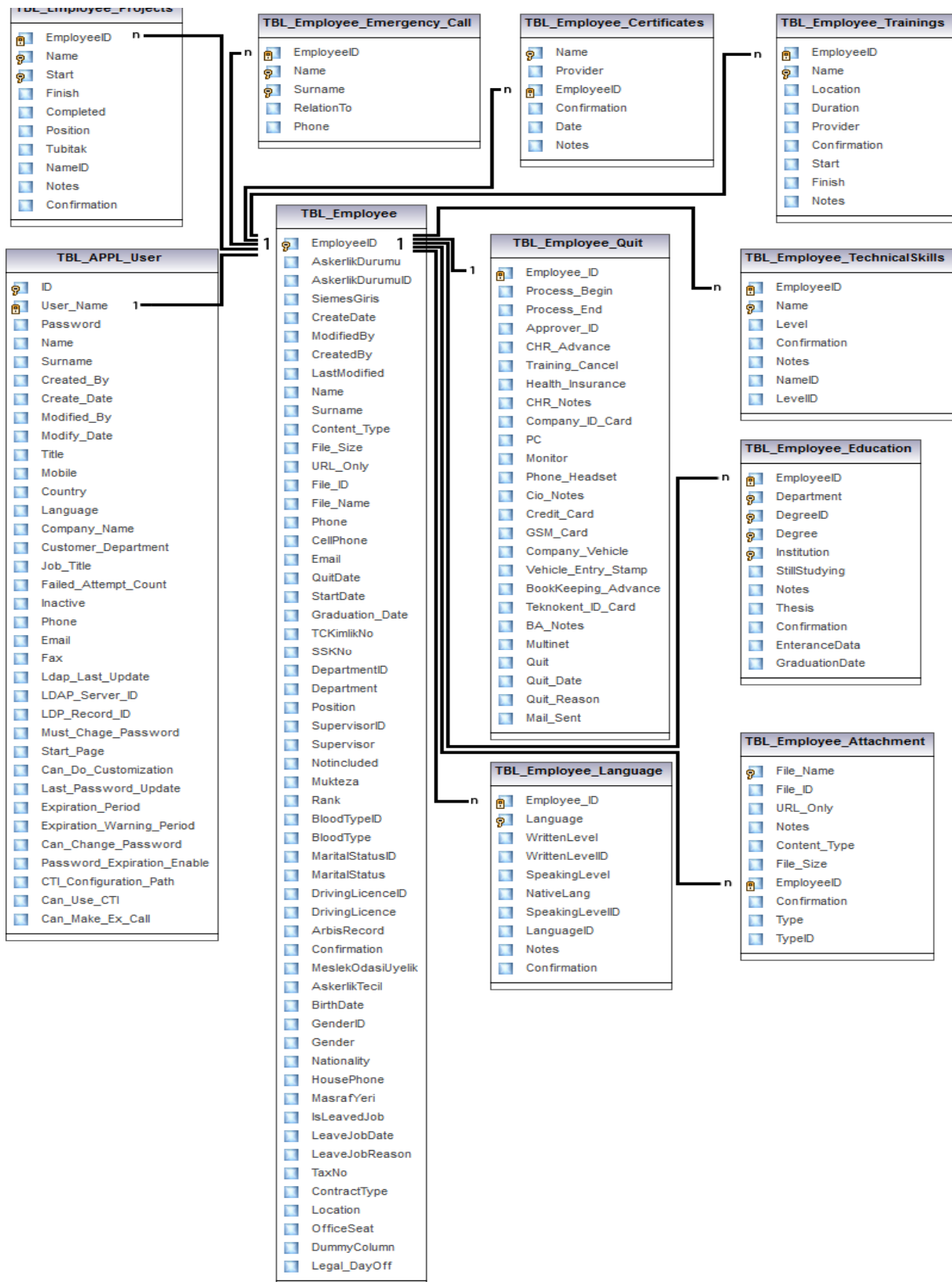


Figure 7.5.1.1: Relation between Database tables of Personal Data Module

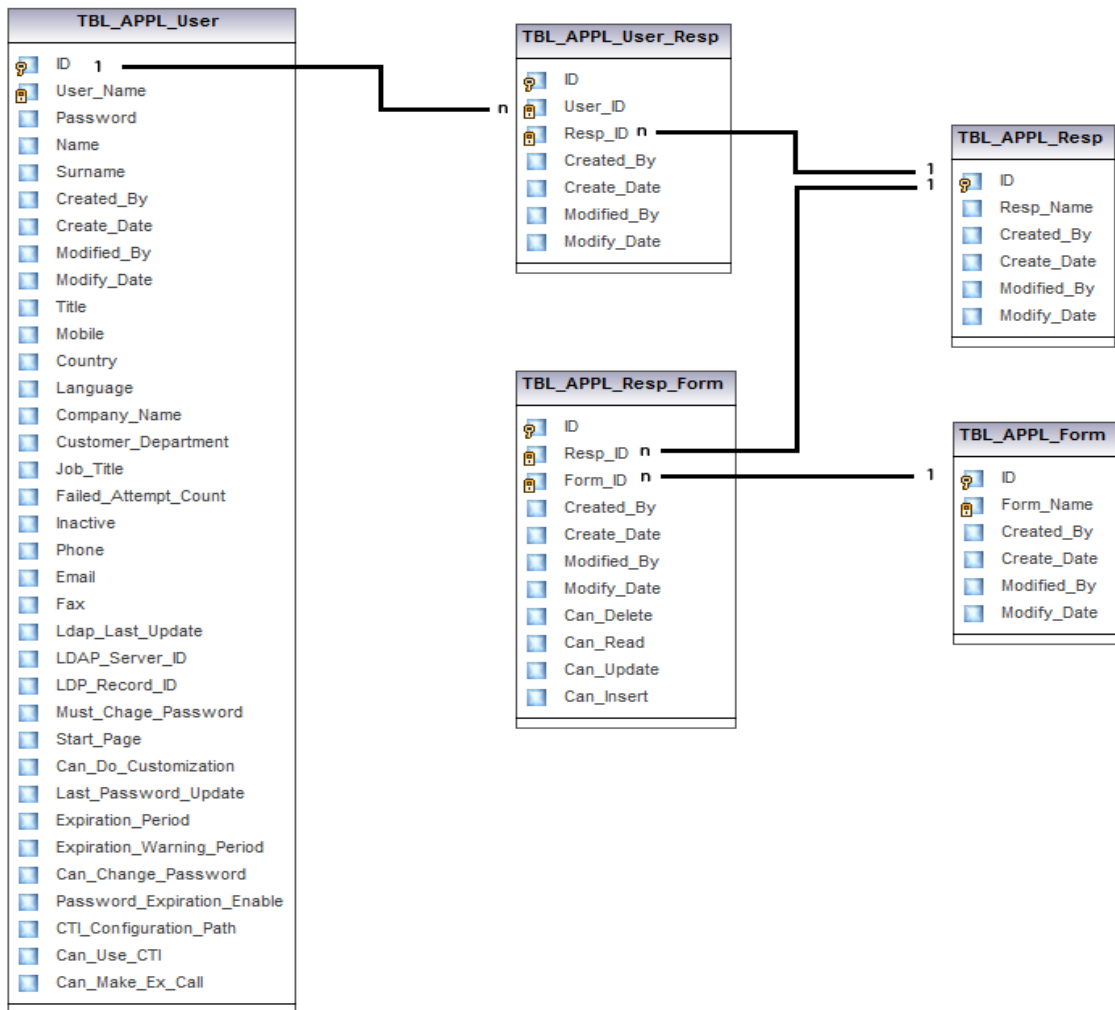


Figure 7.5.1.2: Relation between Database tables of Personal Evaluation Module

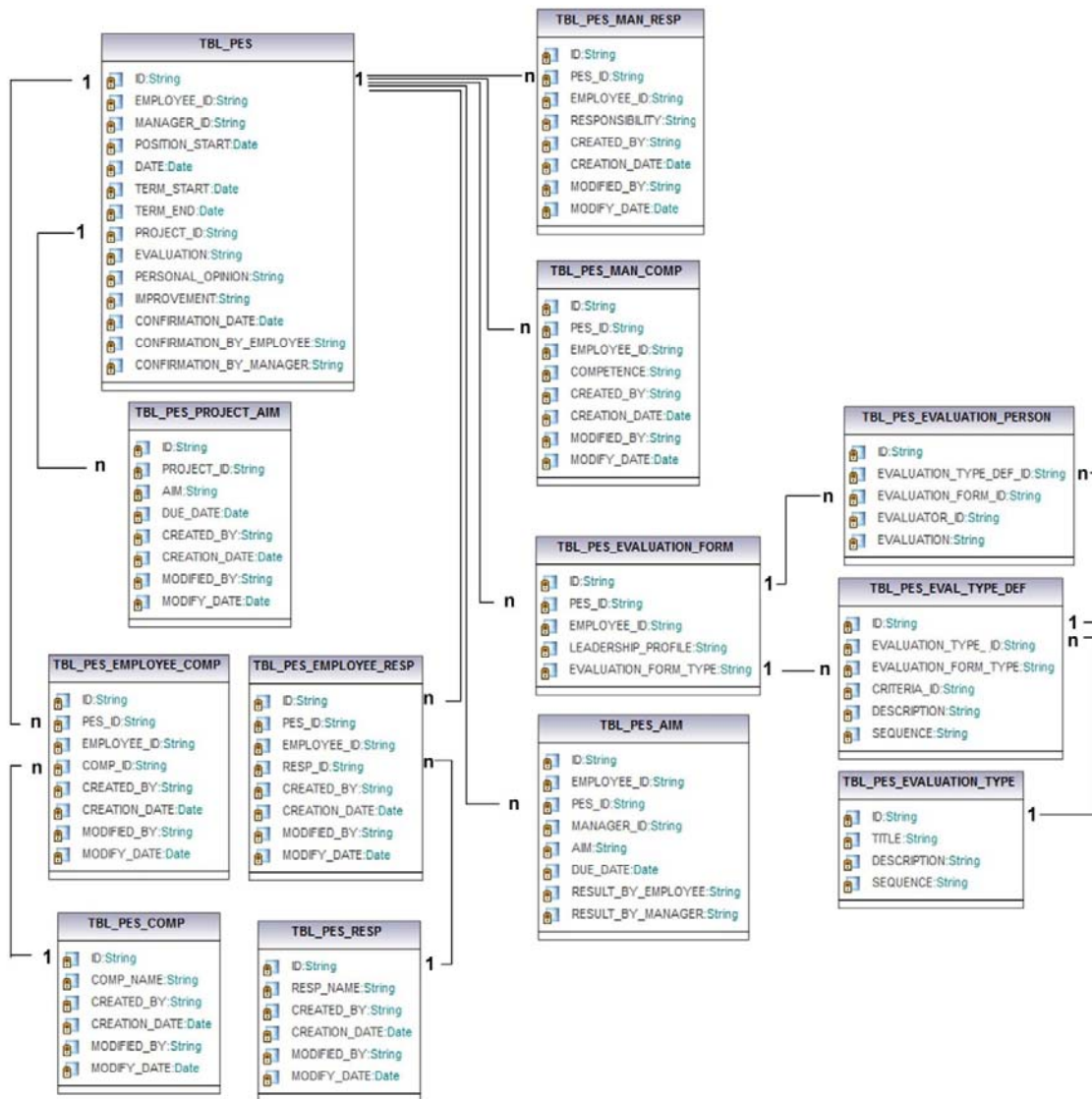


Figure 7.5.1.3: Relation between Database tables of Authentication & Authorization Module

## 8. Libraries and Tools

For the system design the following tools will be used during the implementation process.

### 8.1. UML

UML: The Unified Modeling Language (UML) is a standard language for specifying, visualizing, constructing, and documenting the artefacts of software systems, as well as for business modeling and other non-software systems. The UML represents a collection of best

engineering practices that have proven successful in the modeling of large and complex systems

## 8.2. J2EE

J2EE (Java 2 Platform, Enterprise Edition) is a Java platform designed for the mainframe-scale computing typical of large enterprises. Sun Microsystems (together with industry partners such as IBM) designed J2EE to simplify application development in a thin client tiered environment. [2]

## 8.3. AJAX

Ajax (sometimes called Asynchronous JavaScript and XML) is a way of programming for the Web that gets rid of the hourglass. Data, content, and design are merged together into a seamless whole.[3]

## 8.4. GlassFish

GlassFish is an open-source application server project started by Sun Microsystems for the Java EE platform and now sponsored by Oracle Corporation. The supported version is called Oracle GlassFish Server. GlassFish is free software, dual-licensed under two free software licenses: the Common Development and Distribution License (CDDL) and the GNU General Public License (GPL) with the classpath exception.

GlassFish supports all Java EE API specifications (by definition since it is the Java EE Reference implementation), such as JDBC, RMI, e-mail, JMS, web services, XML, etc., and defines how to coordinate them. Java EE also features some specifications unique to Java EE for components. These include Enterprise JavaBeans, Connectors, servlets, portlets (following the Java Portlet specification), JavaServer Pages and several web service technologies. This allows developers to create enterprise applications that are portable and scalable, and that integrate with legacy technologies. [4]

## 8.5. Eclipse

Eclipse is a multi-language software development environment comprising an integrated development environment (IDE) and an extensible plug-in system. It is written mostly in Java and can be used to develop applications in Java and, by means of various plug-ins, other programming languages including Ada, C, C++, COBOL, Perl, PHP, Python, R, Ruby (including Ruby on Rails framework), Scala, Clojure, Groovy and Scheme. It can also be used to develop packages

for the software Mathematica. The IDE is often called Eclipse ADT (Ada Development Toolkit) for Ada, Eclipse CDT for C/C++, Eclipse JDT for Java, and Eclipse PDT for PHP.

The initial codebase originated from VisualAge.<sup>[1]</sup> In its default form it is meant for Java developers, consisting of the Java Development Tools (JDT). Users can extend its abilities by installing plug-ins written for the Eclipse software framework, such as development toolkits for other programming languages, and can write and contribute their own plug-in modules.

Released under the terms of the Eclipse Public License, Eclipse is free and open source software. It was one of the first IDEs to run under GNU Classpath and it runs without issues under IcedTea.[5]

## **8.6. NetBeans**

NetBeans refers to both a platform framework for Java desktop applications, and an integrated development environment (IDE) for developing with Java, JavaScript, PHP, Python, Ruby, Groovy, C, C++, Scala, Clojure, and others. The NetBeans IDE is written in Java and runs everywhere where a JVM is installed, including Windows, Mac OS, Linux, and Solaris. A JDK is required for Java development functionality, but is not required for development in other programming languages. The NetBeans Platform allows applications to be developed from a set of modular software components called modules. Applications based on the NetBeans platform (including the NetBeans IDE) can be extended by third party developers. We chose it because we are experienced about using Netbeans and implementing Java applications with it.

## **8.7. Microsoft SQL Server**

Microsoft SQL Server is a relational database server, developed by Microsoft: It is a software product whose primary function is to store and retrieve data as requested by other software applications, be it those on the same computer or those running on another computer across a network (including the Internet).[6]

## **8.8. Hibernate(Java)**

Hibernate is an object-relational mapping (ORM) library for the Java language, providing a framework for mapping an object-oriented domain model to a traditional relational database. Hibernate solves object-relational impedance mismatch problems by replacing direct persistence-related database accesses with high-level object handling functions.

Hibernate is free software that is distributed under the GNU Lesser General Public License.

Hibernate's primary feature is mapping from Java classes to database tables (and from Java data types to SQL data types). Hibernate also provides data query and retrieval facilities. Hibernate generates the SQL calls and attempts to relieve the developer from manual result set handling and object conversion and keep the application portable to all supported SQL databases with little performance overhead.[7]

### 8.9. Data Migration

Data migration is the process of transferring data from one system to other. Data migration is usually performed programmatically to achieve an automated migration, freeing up human resources from tedious tasks. It is required when organizations or individuals change computer systems or upgrade to new systems.

To achieve an effective data migration procedure, data on the old system is mapped to the new system providing a design for data extraction and data loading. The design relates old data formats to the new system's formats and requirements. Programmatic data migration may involve many phases but it minimally includes data extraction where data is read from the old system and data loading where data is written to the new system.

When the old data is read and starts loading into the new system, results are subjected to data verification to determine whether data was accurately translated, is complete, and supports processes in the new system. During verification, there may be a need for a parallel run of both systems to identify areas of disparity and forestall erroneous data loss. As we are making a new HRMS for Siemens EC we will use this data migration method to load the old system's data to ours.

### 8.10. Tomcat

Apache Tomcat (or Jakarta Tomcat or simply Tomcat) is an open source web server and servlet container developed by the Apache Software Foundation (ASF). Tomcat implements the Java Servlet and the JavaServer Pages (JSP) specifications from Oracle Corporation, and provides a "pure Java" HTTP web server environment for Java code to run.

Tomcat should not be confused with the Apache web server, which is a C implementation of an HTTP web server; these two web servers are not bundled together, although they are frequently used together as part of a server application stack. Apache Tomcat includes tools for configuration and management, but can also be configured by editing XML configuration files.[8]

## 8.11. Spring Framework

The Spring Framework is an open source application framework for the Java platform.<sup>[1]</sup>

The first version was written by Rod Johnson, who released the framework with the publication of his book *Expert One-on-One J2EE Design and Development* in October 2002. The framework was first released under the Apache 2.0 license in June 2003. The first milestone release, 1.0, was released in March 2004, with further milestone releases in September 2004 and March 2005. The Spring 1.2.6 framework won a Jolt productivity award and a JAX Innovation Award in 2006.<sup>[2][3]</sup> Spring 2.0 was released in October 2006, Spring 2.5 in November 2007, Spring 3.0 in December 2009, and Spring 3.1 in December 2011. The current version is 3.1.0.

The core features of the Spring Framework can be used by any Java application, but there are extensions for building web applications on top of the Java EE platform. Although the Spring Framework does not impose any specific programming model, it has become popular in the Java community as an alternative to, replacement for, or even addition to the Enterprise JavaBean (EJB) model.[9]

