PUZZLE

Mert ÇALIK - 1679406

Oğuz Can KARTAL – 1746106

Berke Çağkan TOPTAŞ – 1746387

Burak VELİOĞLU - 1679257

SOFTWARE REQUIREMENT SPECIFICATION

Version 1.1

Table of Contents

1. INTRODUCTION

1.1. Purpose

This document details the software requirements specification for the *MOBCOLL1.0* open source project. It will later be used as a base for the extension of the existing software itself. This document follows the IEEE standard for software requirements specification documents.

As mentioned in Wikipedia; “the hobby of collecting includes seeking, locating, acquiring, organizing, cataloguing, displaying, storing, and maintaining whatever items are of interest to the individual collector. Some collectors are generalists, accumulating merchandise, or stamps from all countries of the world. Others focus on a subtopic within their area of interest, perhaps 19th century postage stamps, milk bottle labels from Sussex, or Mongolian harnesses and tack. “ *(Collection, 2013)*

Album collecting is also a kind of this hobby. People may be collecting audio albums because of their collecting hobby or their interest in music. Audio albums in physical form are often provided with decorative covers (cover art) and liner notes and inserts about the music and recording, giving background information and analysis of the recording, lyrics and librettos, images of the performers, and other images and text. Since there are numerous audio albums and a new album come onto the market nearly every week keeping record of these albums is not very easy.

The purpose of this project is to provide an easy way to keeping record of own albums and also finding out the destination and owner of album being looked for.

1.2. Document Conventions

MOBCOLL was created prior to this document, so all requirements stated here are already satisfied. It is very important to update this document with every future requirement and clarify its priority for consistency purposes, so that this document can remain useful.

1.3. Intended Audience and Reading Suggestions

This Software Requirements document is intended for:

- Project testers can use this document as a base for their testing strategy as some bugs are easier to find using a requirements document. This way testing becomes more methodically organized.

- End users of this application who wish to read about what this project can do.

1.4. Project Scope

MOBCOLL is an application that provides user to look for albums' destination he/she does not have and get in contact with other users who have that album. This application also provides user to search through and keep record of own albums easily. By this application all this searching and finding out the place of albums can be done by using a smart phone. User can either use bar coding technology or its cover photo to find out the information about the looked for album.

1.5. References

Collection. (2013, January 4). Retrieved January 13, 2013, from Wikipedia: http://en.wikipedia.org/wiki/Collection

Android. (2012, November 15). Retrieved January 13, 2013, from index: http://developer.android.com/index.html

2. OVERALL DESCRIPTION

2.1. Product Perspective

MOBCOLL is a multifunctional application for searching albums through the common database by using smart phones. Although there are similar programs to help collectors, there is not any program to handle collecting albums with so many features as MOBCOLL.

2.2. Product Features

The application provides:

- Creating a profile at first login to the system.
- Login/Logout interactions with application.
- Updating profile.
- Updating own albums section by adding and deleting albums.
- Categorizing own albums.
- Searching for a certain album in the system.
- Searching for a user in the system.
- Glancing at other user’s profile.
- Chatting with other users.
- Adding comments to a certain album.
- Sharing an album through Facebook.
- Lending a certain album to other users.

Any of those features can be executed by using touch screen of a smart phone.

2.3. User Classes and Characteristics

This project refers to several types of any computer system. However, this project is meant to be used by two major use classes.

- General users who can use the software to cover specific needs:
    - People can use the software to find the album which a specific song belongs to.
    - Comments to albums can easily be written and read by this kind of users.
    - All people, without any experience, can use the software thanks to pleasant user friendly interface of MOBCOLL.
- Collectors:
    - To communicate with other collectors for buying and selling of unique items.
    - To keep track of the own lent albums.
    - Categorizing own albums.

2.4. Operating Environment

MOBCOLL is an Android application and it runs on all Android based smart phones of which version is 2.2 or higher. Internet connection of smart phone is also required. Being a collector or general user does not affect the hardware requirements of application.

2.5. Design and Implementation Constraints

MOBCOLL is Android based and is written in Java. Its user interface for smart phones is written with Java (Android SDK). Server and client sides of its web service are also written with Java.

2.6. Assumptions and Dependencies

A working Android based smart phone with version 2.2 or above and internet connection are necessary.

3. System Features

MOBCOLL consists of a number of screens which constitute its basic functions. All screens can be easily accessed through the main page.

This section describes the functional requirements of the application and the features it provides. System features are described in detail to help the future extension and testing of the system.

3.1. System Feature 1 – Creating a Profile

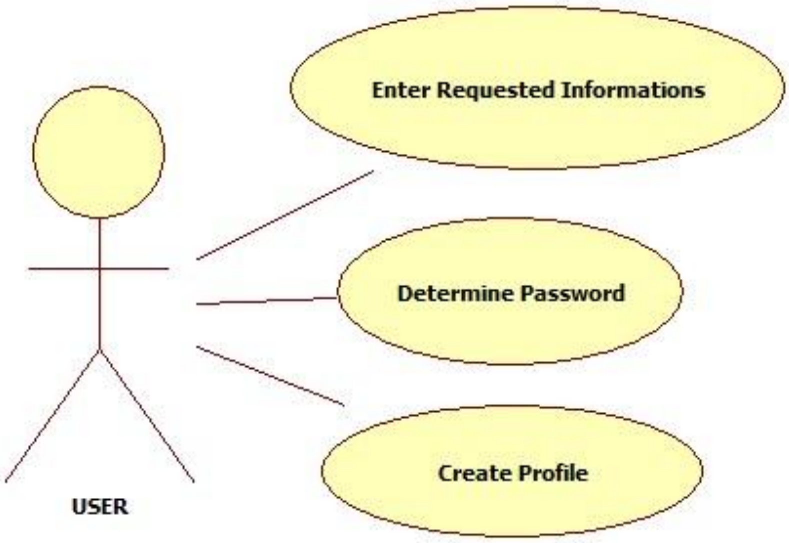

Figure 1 – Creating a Profile

Users not yet registered are asked to register to the system. User should click to register button in order to register the system. This information is required to register to the system:

- Username
- Name and surname
- Password
- Gender
- Date of birth
- Mail address

3.2. System Feature 2 – Login

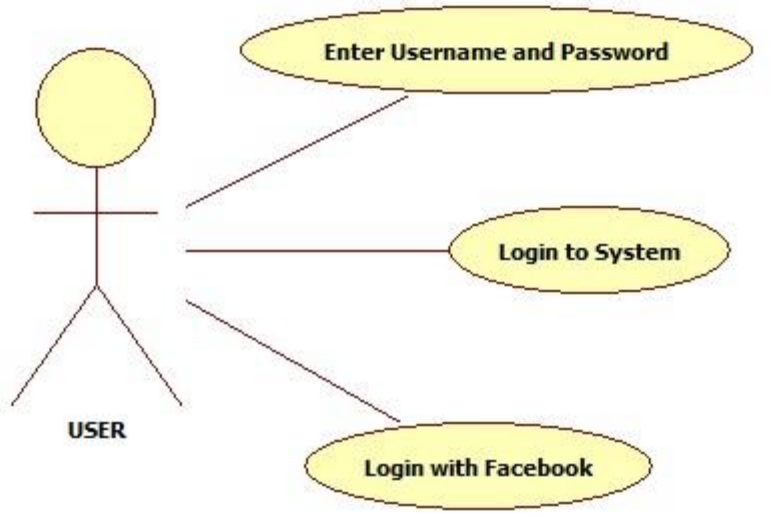

Figure 2 - Login

User who is already registered to the system can access the system by clicking the login button after he/she has entered username and password correctly.

Another option is logging into the system through Facebook. Even if user does not have an account in the system database he/she can login to the system by using their Facebook accounts.

3.3. System Feature 3 – Logout

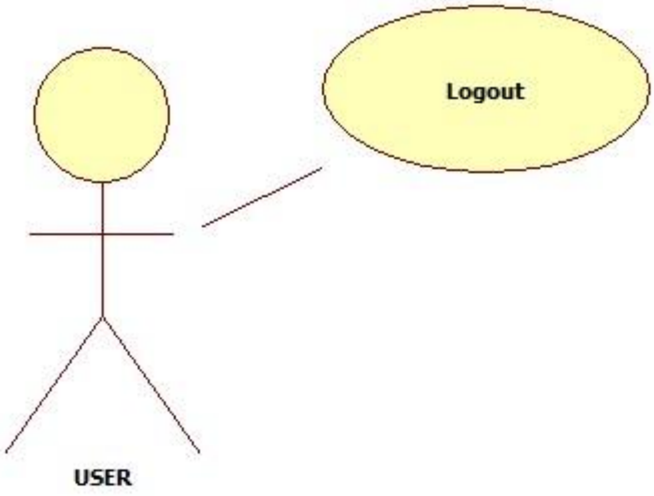

Figure 3 - Logout

User, who is already logged in to the system, could logout at any time by clicking the logout button. All pages of the application have the logout button.

3.4. System Feature 4 – Updating Profile

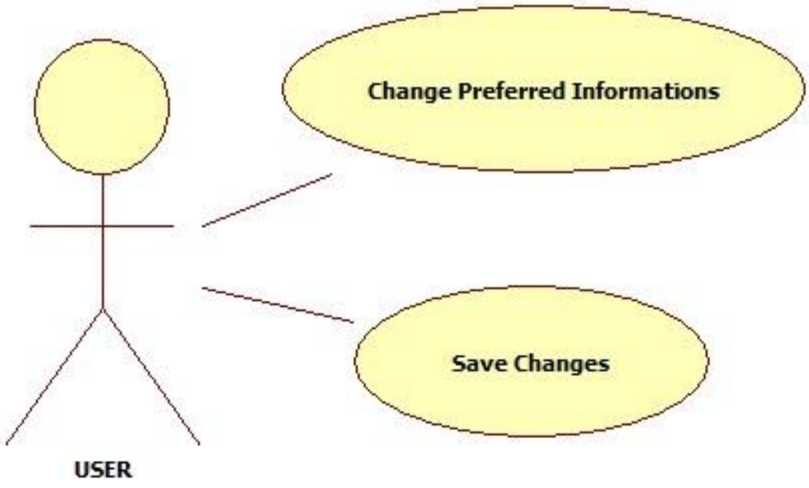

Figure 4 - Updating Profile

User can update his/her information which are given during the registration phase. All the information of user except username can be updated by this page. To access this page user should click the update profile button.

3.5. System Feature 5 – Updating Album Section

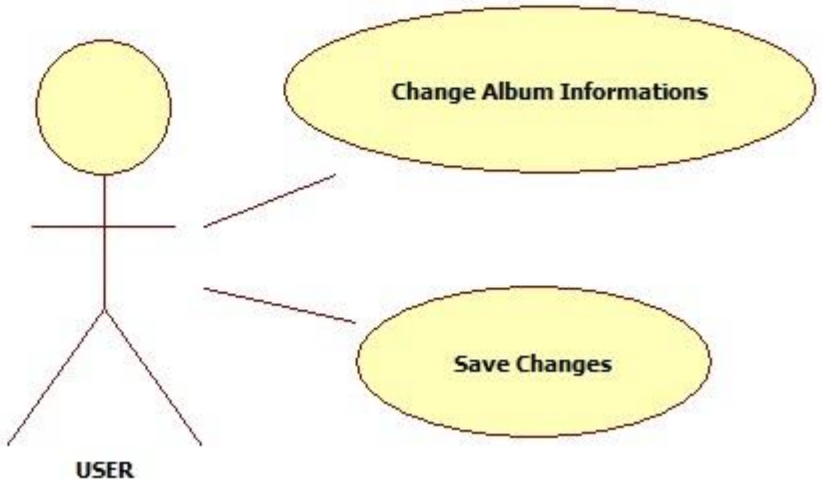

Figure 5 - Updating Album Section

User can access update screen through clicking my albums section. Update screen has two main purpose of use.

- Adding new album to database

  User can add a new album to his/her collection if the album is already in system database, otherwise a request is sent to the system admin and system database is updated in a while.

  - A new album can be added to the self database by scanning its bar code.
  - A new album can be added to the self database by scanning its album cover.
- Deleting an existing album from database
  - An existing album can be deleted from self database by clicking delete button.

When a user tries to add an album by barcode or album cover program guides the user to smart phone's camera. By taking photo of either album barcode or cover user can add a new album to his/her collection.

3.6. System Feature 6 – Categorizing Albums

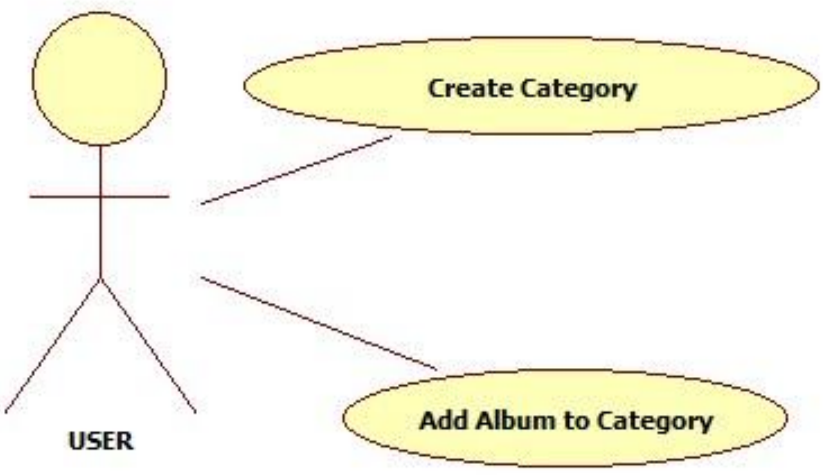

Figure 6 - Categorizing

User can categorize his/her albums from profile page. In this page user can create a new category and add albums to these categories. When an album is added by a user it is automatically added to all albums section, from there user can insert that album to any category that was created. By this way user can have a look at all albums or the albums in a specific category.

3.7. System Feature 7 – Searching an Album

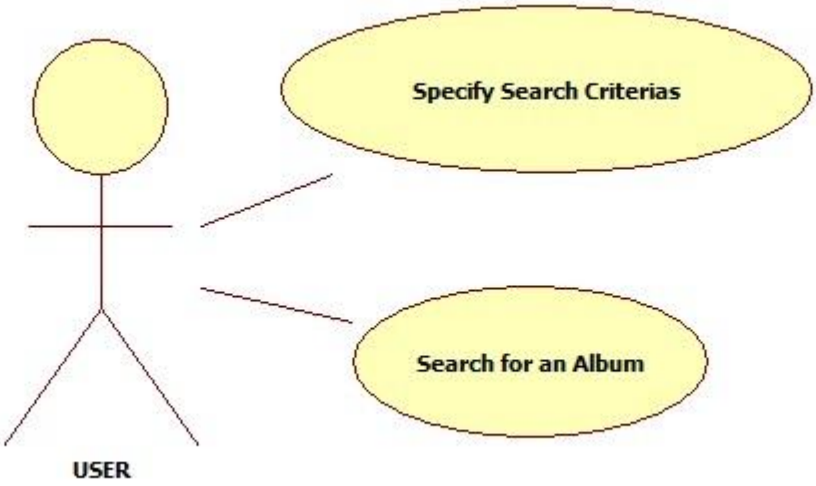

Figure 7 - Searching an Album

User can access the album search section of the application from all of its pages. Searching can be done by numerous criteria which are:

- Bar code
- Album cover
- Release year
- Artist
- Album name
- Genre
- One of its song's name

3.8. System Feature 8 – Searching a User

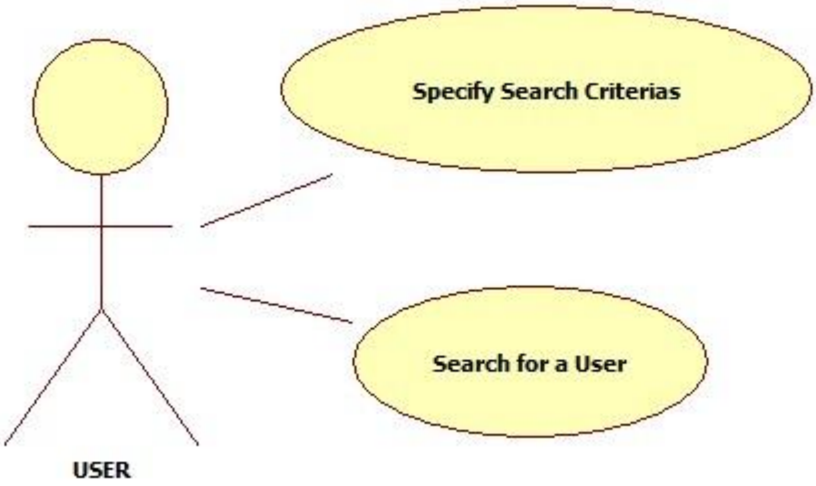

Figure 8 - Searching User

User can access the user search section of the application from all of its pages. Searching can be done by numerous criteria which are:

- username
- name
- surname
- album name

3.9. System Feature 9 – Glancing At Other User Profiles

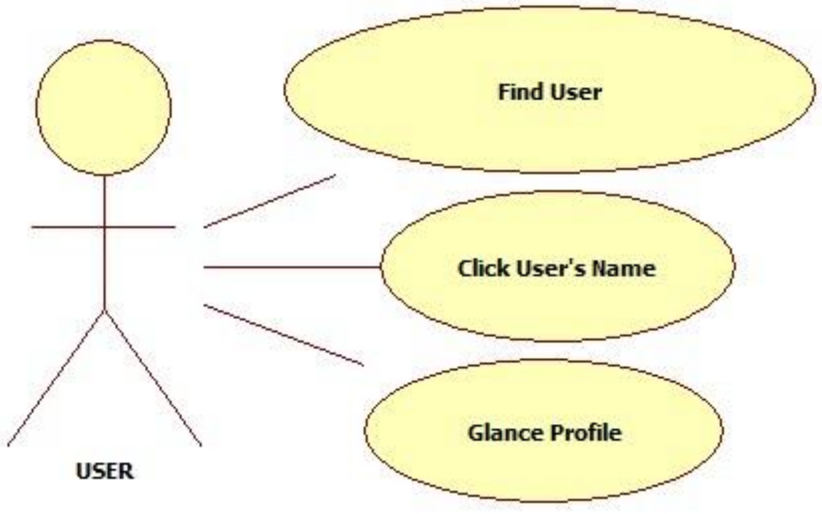

Figure 9 – Glancing At Other User Profiles

User can access to the profile of other users profile page by clicking on the user's user name. User can find other users' user names by searching a user.

3.10. System Feature 10 – Messaging

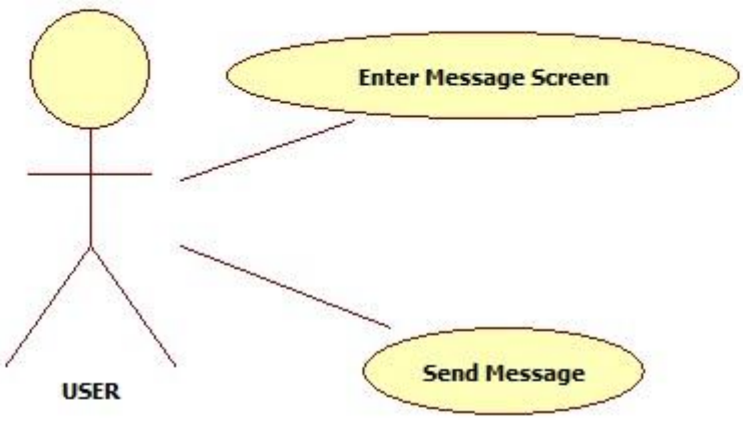

Figure 10 - Messaging

User can communicate with another user by sending a private message. Private message can be sent through message page. User can see inbox and sent messages from his/her message page.

3.11. System Feature 11 – Adding Comments

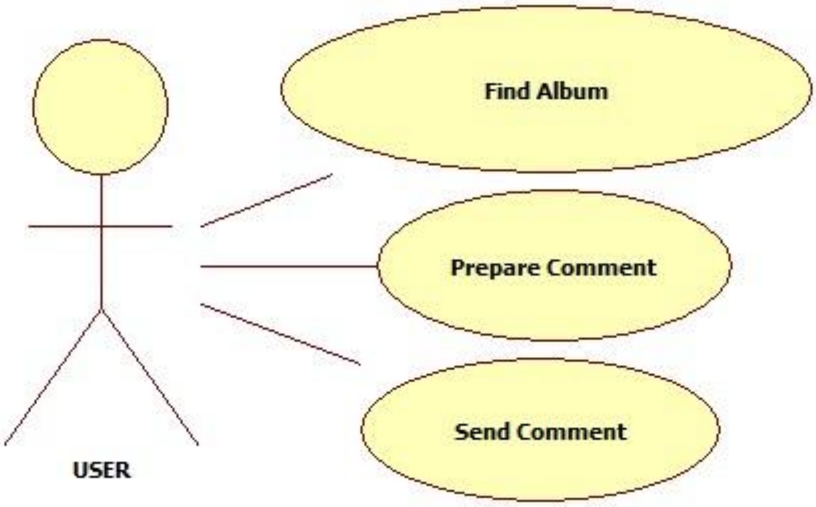

Figure 11 – Adding Comments

User can make a comment about a specific album by clicking add comment button which resides in all of the albums' page. The comment written to the appearing text area can be seen by other users.

3.12. System Feature 12 – Sharing

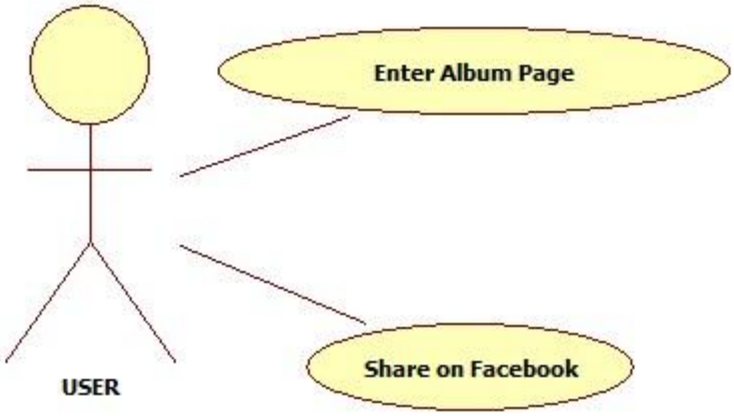

Figure 12 - Sharing

A user can share an album through Facebook if he/she has logged in with Facebook account to the system. Otherwise user is asked to log in to Facebook to share the album.

3.13. System Feature 13 – Lending Album

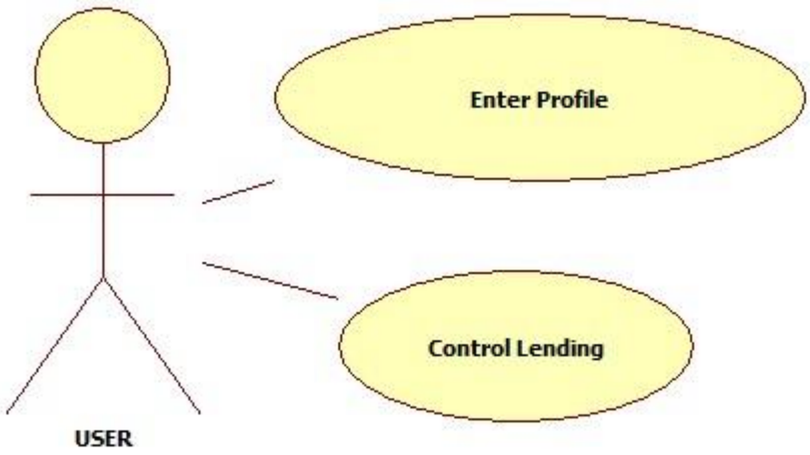

Figure 13 - Lending Album

User can label his/her albums as lent. Labelling process can be done through his/her profile page. User can keep record of the information about lending process. Information includes borrowing user’s username, date of lent, any comment.

4. EXTERNAL INTERFACE REQUIREMENTS

4.1. User Interfaces – GUI

The MOBCOLL GUI is a simple designed user interface which loads all the pages that constitute the basic functions of the program.

The most common features of MOBCOLL’s GUI are:

- Registration page: This page let the user register to the system by requesting some specific information about the user.
- Login page: In this page user enters his/her username and password to login the system. Another option for user is Facebook login; user can login to system through Facebook account.
- User profile page: Page that user information and records of user’s albums are displayed. In this page user can see the current situation of his/her albums and update

them on demand, categorize their albums, use the search feature or take a look at his/her private messages.

- Album page: Each album has a unique album page where the information about the album can be seen by users. Comments about that album can be made in this page by users. User can add album to his/her collection from this page. Also sharing on Facebook can be done from this page.
- Private message page: User can check his/her private messages in this page. This page can be reached from the profile page.
- Search page: User can either look for an album or another user in this page. Results of the search leads user to an album page or a user profile page. This page is reachable from any other pages in the application.

4.2. Hardware Interfaces

Android based smart phone with internet connection ability is the hardware interface of this system.

4.3. Software Interfaces

MOBCOLL is an Android application and it runs on all Android based smart phones of which version is 2.2 or higher. Internet connection of smart phone is also required.

4.4. Communications Interfaces

MOBCOLL is a web service based application, so the network communication is always necessary for application to run. Since all the information, i.e. user information, album information, messages, etc. of the system is kept in a server and all the processing is done on the server side network communication is vital for MOBCOLL application.

5. Other Non-functional Requirements

5.1. Performance Requirements

MOBCOLL is an application that needs a few system resources to work. This is designed not to delay the system from other key processes. The response time of the program is direct and the application is considered real-time.

5.2. Safety Requirements

The application must ensure that it leaves untouched the input image files. No modification is allowed to these files.

Moreover, the application should function even in cases of wrong data insertion or wrong settings. In case of erroneous situation in any page the application should provide users with appropriate help messages.

5.3. Security Requirements

Information given by users at the registration page is kept in the system database. This information can not be reached by other users or external threats. The users in the application are all equal so there is not the need of any identity management level.

5.4. Software Quality Attribute

This application provides a pleasant and user friendly graphical interface with relatively simple functions. Any user should be able to use MOBCOLL without any specific knowledge or experience. Users only need to provide some image files or searching criteria and with just a few clicks they can perform desired action.