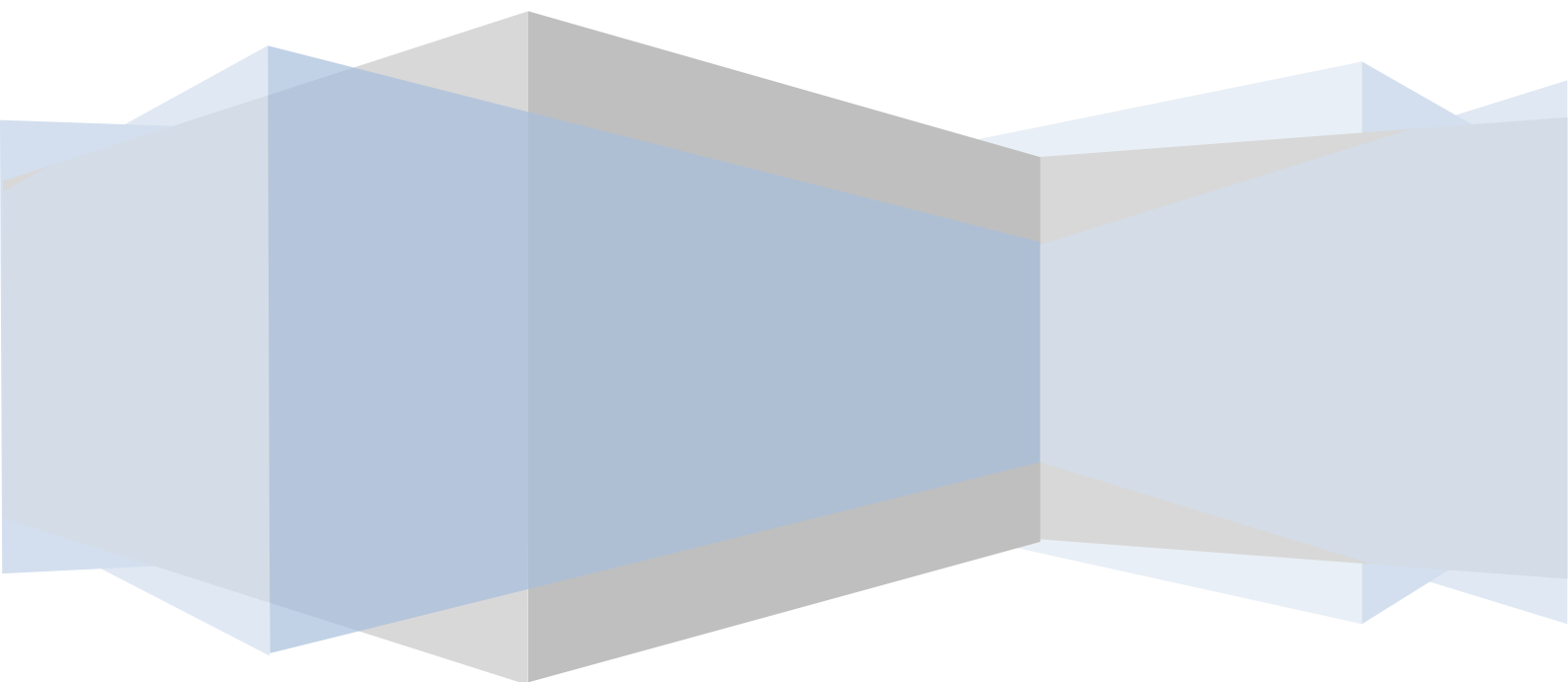




PseudoSoft

# CENG-491

## REQUIREMENT ANALYSIS REPORT



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## 1. GROUP MEMBERS

Name	Number	E-mail
Gülsüm Selcen Mülazımoğlu	1395276	<a href="mailto:selcen.mulazimoglu@gmail.com">selcen.mulazimoglu@gmail.com</a>
Ömer Nebil Yaveroğlu	1449248	<a href="mailto:omernebil@hotmail.com">omernebil@hotmail.com</a>
Mehmet Bahattin Yaşar	1395664	<a href="mailto:e1395664@ceng.metu.edu.tr">e1395664@ceng.metu.edu.tr</a>
Furkan Kürşat Danışmaz	1394881	<a href="mailto:k.furkan@gmail.com">k.furkan@gmail.com</a>

## 2. PROBLEM DEFINITION

In today's web world, there are many job seeking web sites. All these web sites serve to a common aim in the same way: finding an employee or a job. But the problem is that a user of these web sites should do the same things for every different site. For instance, someone, who looks for a job, should fill 90% similar forms to use different job seeking web sites. These forms are really long and this form filling process requires a great amount of time. This is a disturbing process for a basic job application.

On the other hand; because of the variety of this kind of web sites, the number of people who seeks a job or an employee is divided among these web sites. Therefore, the possibility of finding a match between an employee and a job is reduced. Also when a job seeker wants to see all the suitable jobs for him, he has to sign up to all the job seeking web sites and he needs to repeat the same search from all those web sites one by one.

From the side of employee seeker companies, it has a great cost to use all these web sites. This is because that these web sites require an amount of money to publish a job application. Each application is accepted after a payment. To reach more job seekers, these companies have to leave the job applications to different web sites. This increases the cost and workload of human resources while finding an employee.

Another problem is that, these web sites don't have direct information about each other's work. To give an example, there may be some job applications for which no match could be found for a long time and there may be suitable CV's for this unmatched job in the other job seeking web sites.

Also there are some control mechanisms (just like İş-kur) about the management of countries' human resources. These kinds of mechanisms require statistics about work and employee

requirements. Using the results of these statistics, the country defines human resources strategies. İş-kur is lack of this kind of statistical information.

### **3. REQUIREMENT SPECIFICATIONS**

#### **3.1 Functional Requirements**

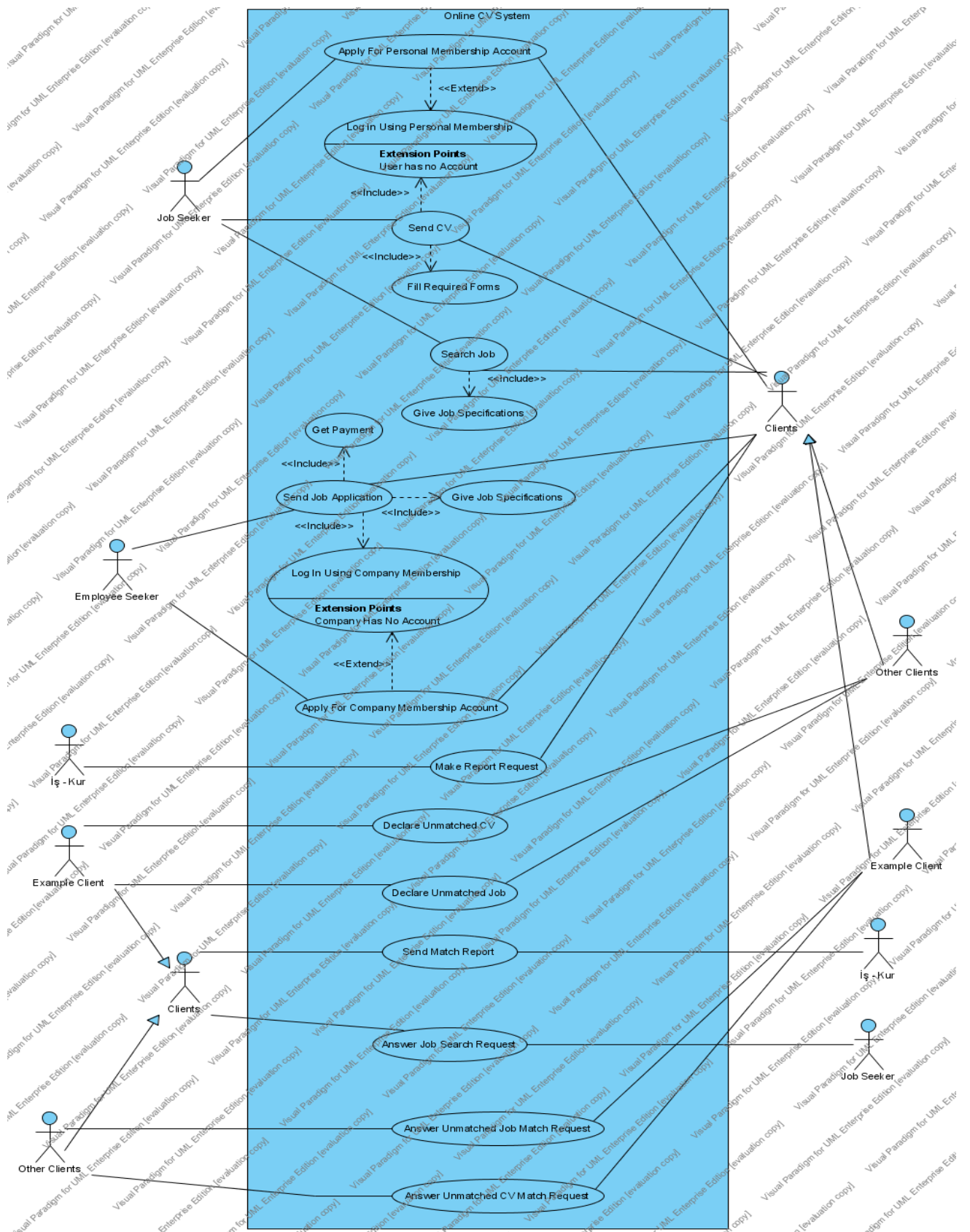
The name of our system is “Online CV System”. As it can be seen from the diagram (given in the next page), it is in between actors: Job Seeker, Employee Seeker, Clients which consists of Example Clients, Other Clients. These are the ones situated at the left side of our system as they are the activator actors which will cause the use cases start. At the right side of the system , it is seen the actors: Clients which includes Example Clients and Other Clients derived from the main one, Job Seeker, Control Client (which is “İş-kur” in our system) as it can be different from the main Clients , it is not derived from Clients. Because Clients are the web sites like Kariyer.Net, Yenibiris.com but Control Client is the web sites to which it will be reported the statistical data orderly. The main aim to put these actors to different sides of our system is that, left side is the one who sends the request but right side actors are the ones affected from this request through use case.

Starting from the topmost part of diagram, the actor Job Seeker sends the request to Send CV but as it is necessary to login to be able to send CV and filling the required forms, these are the included use cases. If the job seeker is not a member of a system then he has to create a user account so it is extended. If a job seeker searches for a job, he/she has to give job specifications by filling some fields in the form that will be given to him/her. So it is the included part here. From both the activities (sending CV and searching for a job) of the job seeker, clients will be affected.

From the aspect of Employee Seeker, he can send a job application to the clients, at this step, he/she must be a member and has to login to the system, has to pay the necessary payment, has to give the specifications of his/her job so those use cases must be included. If the Employee Seeker is not a member of our system, he/she has to apply for company membership. So it is the extended part.

Another service will be provided by us is Unmatched CV. If the actor, clients, which presents the client web sites (e.g. Kariyer.Net), could not find a suitable job for a CV in a specific period of time (say 30 days), it can send this CV to our web site, so we can search for a suitable job for this CV in all other clients. If we find a suitable job in other clients’ web sites, we will give information about this match

(which client and which CV in that client) to the requestor client. The Unmatched Job service has nearly identical purposes with the Unmatched CV, but the subject is job in this case.



Another service, we provide to the controller client (which is iş-kur) is that, all of the clients will report the matches they did in a specific period to our system. After we compose those reports from clients, we convert this data to statistical data, and we will present it to the controller client.

These are general aspects of our Use Case Diagram and services we provide.

### 3.2 Non-Functional Requirements

**Security:** User authentication is required to use functional operations in order to provide a secure environment for personal operations.

**Legacy:** Protection of the private data of members' operations.

**Usability:** A user interface as simple as possible.

**Portability:** Usage in different platforms should be satisfied.

**Modifiability:** The ease of adaptation of the system to the new job seeking web sites is an important concern.

**Operating Constraints:** A server which is available for 24 hours is required.

## 4. HARDWARE AND SOFTWARE REQUIREMENTS

There are three main groups that must meet the hardware and software requirements. The first one is the developer side, the second one is the server side, and the last one is the user side.

In the user side, the only hardware requirement is a computer with an internet connection, and the only software requirement is a JavaScript-enabled web browser. For the other sides, the requirements are as follows:

### 4.1 The Hardware Requirements for the Developer Side

During the development of the project, the developer side acts also as a server, so the hardware of the developer side must be as strong as the actual server side hardware. For fast and comfortable development, the minimum hardware requirements:

- a. P4 3.0 GHz or equivalent processor

- b. 1024 MB RAM
- c. 40 GB HDD
- d. Internet Connection

All members in our group have computers meeting these requirements.

#### **4.2 The Software Requirements for the Developer Side**

The software tools that we use in documentation and telecommunication:

- MS Office Word 2007
- MS Office Groove 2007
- MS Office Project Professional 2007
- Visual Paradigm for UML Enterprise Edition
- DBDesigner4 (for drawing ER diagrams)

The software tools that we use in development:

- JDK and JRE
- Apache Tomcat (Java Servlet and JSP Container)
- Eclipse and NetBeans (Java IDE)
- Software AG Application Composer
- PostgreSQL or MySQL (DBMS)
- Google Web Toolkit (Ajax Toolkit)

#### **4.3 The Hardware Requirements for the Server Side**

Since we put our portal and the web sites simulating real job seeking sites like “kariyer.net” to only one server, the server’s hardware requirements must be stronger than the developer side’ to respond fast. The minimum hardware requirements:

- Core2 DUO E6700 (2.66 GHz, 1066 MHz, 4MB Cache) or equivalent processor
- 2048 MB RAM



- 100 GB HDD (RAID recommended)
- Fast Internet Connection

#### **4.4 The Software Requirements for the Server Side**

- Apache Tomcat (Java Servlet and JSP Container)
- PostgreSQL or MySQL (DBMS)

### **5. LITERATURE SURVEY**

When Software AG company stuff came to our department to give information about the project, they said that you will develop a gateway portal for HR (Human Resource) companies and institutions by using web services. The important words in this sentence were “web services”. At first, the words “web services” did sound familiar to us, but after a little research, we recognized that we, actually don’t know anything about it. After a detailed research, we obtained a lot of information about web services and its competitor technologies, CORBA and DCOM. We investigated the weaknesses and strengths of these technologies, made a comparison between them. In the following paragraphs, at first, we will explain those technologies, and finally we will talk about a few web sites which use web services technology.

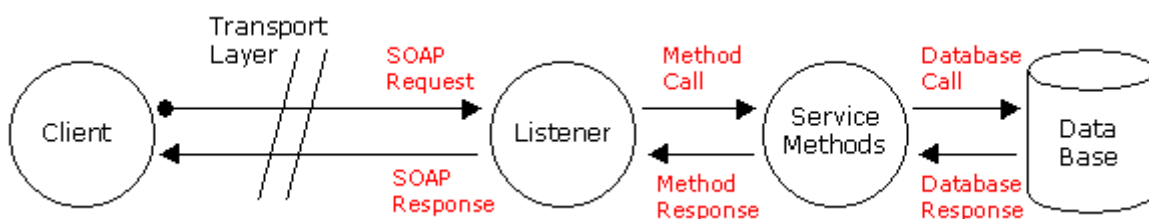
#### **5.1 Web Services**

SOA (Service-Oriented Architecture) is an approach to distribute computing on a network. In this approach, the software resources on the network are assumed as services. CORBA and DCOM are older SOA examples. However, those technologies are suffered from difficult problems such as platform-dependency (lack of interoperability), complexity in the standards, and too many standards. Web services are an evolutionary development that improves DCOM and CORBA's weaknesses. The new thing about “SOA built with web services” is that since web services relies upon universally accepted standards, such as XML and SOAP, the interoperability problem between different companies’ web services is removed almost completely. That is, hereafter, companies can implement web services without knowing anything about the consumers of those services, and vice versa. In addition, after a company implemented its web services as infrastructure, it can change the user

interface of its web site without changing any single line of code in its web services. Hence, designing modern looking web sites giving important services is not a big deal with web services technology. It also decreases the cost of development significantly because of the rapid and efficient development. Web Services have three basic platform elements: SOAP, WSDL, and UDDI.

### 5.1.1 SOAP

SOAP originally was an abbreviation for “Simple Object Access Protocol”, and after some time it became an abbreviation for “Service Oriented Architecture Protocol”, but now finally, it is not an abbreviation, it is just SOAP. SOAP is actually an XML-based messaging protocol which defines a set of rules for structuring messages. SOAP messages can be used as simply one-way messaging, or as request response dialogues (Remote Procedure Call style). SOAP does not depend on any particular transport protocol. (However, HTTP is popular.) It also does not depend on any particular OS, or programming languages. As long as clients and servers can generate and understand SOAP messages, they can communicate with each other without any constraints. The following figure shows a communication example.



In this messaging, the transport layer might be HTTP or any other protocols such as SMTP. When the SOAP message comes to the Listener, this incoming SOAP request is decoded and transformed into an invocation of a method call. When the method returns its response to the Listener, the Listener encodes it into a SOAP message, and sends it back to the client.

The main structure of a SOAP message:

```
<?xml version="1.0"?>
<soap:Envelope xmlns:soap="http://www.w3.org/2001/12/soap-envelope"
                soap:encodingStyle="http://www.w3.org/2001/12/soap-encoding">
  <soap:Header>
    ...
  </soap:Header>
  <soap:Body>
    ...
```

```
        <soap:Fault>
            ...
        </soap:Fault>
    </soap:Body>
</soap:Envelope>
```

### 5.1.2 WSDL

WSDL stands for Web Services Description Language. A WSDL document is an XML document that contains all the information that you need to contact a service, such as:

- The method calls of the web service
- The parameters of the method calls
- The structures of responses that the web service sends back
- The protocols that the web service can process
- The data format specifications it accepts
- The URLs for the service

The main structure of a WSDL document:

```
<definitions>
    <types>
        ...
    </types>
    <message>
        ...
    </message>

    <portType>
        ...
    </portType>

    <binding>
        ...
    </binding>
</definitions>
```

### 5.1.3 UDDI

The UDDI (Universal Description, Discovery, and Integration) specification describes a special type of registry that lists web services that you might potentially be interested in. It contains quite a bit of information which allows you to search its contents for a specific characteristic or feature. It uses special classification schemes, called taxonomies that categorize a web service in ways that are meaningful to potential clients. The registries can be of various types:

**Public:** A public registry is one that is open to the public for searching. Several major companies maintain public registries, including IBM and Microsoft. All the entries in the public registries are replicated in the other public registries so that a search performed against one registry will be able to access data about every publicly registered Web service.

**Private:** A private registry is one that exists behind the firewall of one company. The purpose of this registry might be to provide a way to search for internal web services. It might also contain entries to other software systems in the company that are not exposed yet as Web services.

**Restricted:** A restricted registry can only be accessed by certain organizations that have been granted permission to access it. Trading partners can use this information about each other's systems to find out how to interact with them better.

Before UDDI, there was no internet standard for businesses to reach their customers and partners with information about their products and services. Nor there was a method of how to integrate into each other's systems and processes. Problems the UDDI specification can help to solve:

- Making it possible to discover the right business from the millions currently online
- Defining how to enable commerce once the preferred business is discovered
- Reaching new customers and increasing access to current customers
- Expanding offerings and extending market reach
- Solving customer-driven need to remove barriers to allow for rapid participation in the global
- Internet economy

- Describing services and business processes programmatically in a single, open, and secure environment.

## 5.2 CORBA (Common Object Request Broker Architecture)

CORBA (Common Object Request Broker Architecture) was designed to provide a mechanism for building client/server applications in heterogeneous environments in the early 1990s. Some of the key features of CORBA are:

**Language Neutral:** CORBA was designed to work with any language. In order to bridge the gap between differing languages, an Interface Definition Language (IDL) is used to detail the structure of all objects that will be passed along the wire into a language-neutral format. Developers then take the IDL and run it through some form of code generator for the language used on each end of the transaction to get the corresponding language-specific stub or skeleton. By doing this, it is possible to write a Visual Basic client that talk to a Java server, using CORBA as the communication layer.

**Multiple Vendors:** Multiple vendors provide Object Request Brokers(ORBs). This allows users to pick and choose between vendors for the capabilities and costs that are right for them. Some ORB vendors only support certain languages as well.

Although CORBA would seem to be an excellent solution for heterogeneous client/server systems, it is not that in practice. Initial releases of the CORBA specification left many areas open to interpretation by the vendors. As a result, many vendors ORBs refused to work with each other, limiting the ability to mix and match.

The cross-language features of CORBA require the developers to learn IDL and specify all their interfaces and objects that are involved in the CORBA calls. There is also the performance penalty of converting an object from one language representation into the IDL representation, and then back into some other language. This time penalty can be deadly when used in a high-volume system.

CORBA requires the use of special ports on which the ORBs communicate and transfer the data. In many network environments, network administrators are reluctant to open ports to the outside world because these represent areas for possible attacks by hackers. This can sometimes limit a developer's ability to deploy systems based on CORBA. For systems communicating entirely within a

secure intranet, this isn't an issue, but for those bridging internal systems to the Internet, this is quite a security risk.

As a result, compared to web services, CORBA solutions:

- are nearly as capable for cross-platform and cross-language development.
- are harder to understand because CORBA relies on IDL to translate data; web services use XML, which is much more human readable. Most toolsets also create the WSDL for you.
- can handle higher transaction loads because they keep a persistent connection between clients and servers at the expense of servicing fewer clients per server.

### **5.3 DCOM (Distributed Common Object Model)**

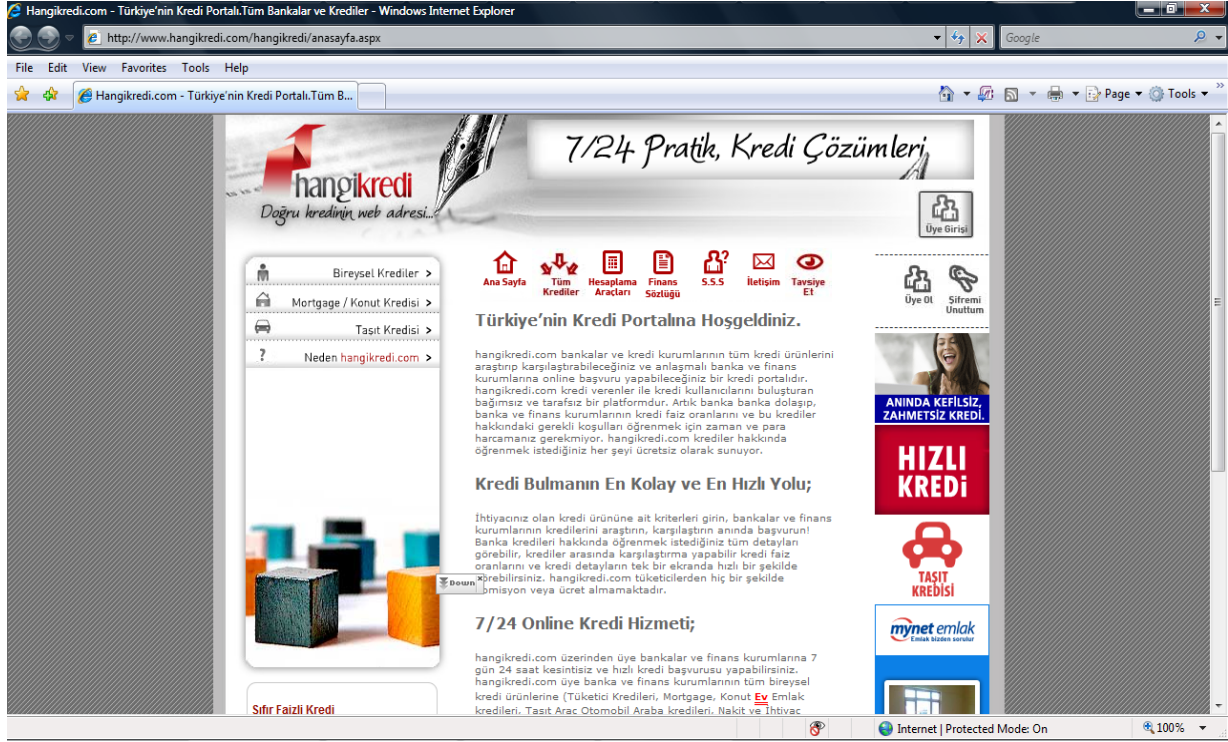
DCOM is the Microsoft's mechanism for performing remote calls. Objects are again converted into a wire-friendly format and converted back to language-specific representations at the endpoints of the communication.

Although DCOM can be built in several different languages (Visual C++, Visual Basic, C#, and so on), it only works on Microsoft platforms. As a result, if your business does not use Microsoft servers, DCOM does not help you. Both ends of the transaction (client and server) need to be Microsoft systems in order to use DCOM.

Although DCOM is supported by multiple languages, strong dependency on Microsoft means that web services are still better than DCOM in flexibility. Web services can be implemented with tools from many different vendors on various platforms.

## 6. EXISTING SYSTEMS ON THE MARKET

### 6.1 www.hangikredi.com



Hangikredi.com gives a great service about the bank-loans. Anyone can get information about bank-loans in any category given by any bank in Turkey and can choose the most advantageous loan for him. As you know there are lots of banks that gives loans to people and Hangikredi always gives up-to-date information. This is because, when a person wants to get information about a bank-loan specified by him, Hangikredi.com automatically send messages to the web-sites of the banks that it has agreement with on the background, and gets back a message that contains information about the loans that are in the category specified by the user who establishes the search, and finally presents the result.

When a person wants to see and compare the loans that different banks give, all he has to do is to choose a category ( like “Bireysel Kredi → Eğitim Kredisi” or “Mortgage / Konut Kredisi → İş Yeri, Office Kredisi” or “Taşıt Kredisi → İkinci El” ), specify the “amount”, “expiration” and “city” then press search. Here is a sample result page.

İhtiyaç Kredisi | Tüketici Kredileri | Bireysel Krediler | hangikredi.com - Windows Internet Explorer

http://www.hangikredi.com/hangikredi/ihityac.aspx

File Edit View Favorites Tools Help

İhtiyaç Kredisi | Tüketici Kredileri | Bireysel Krediler | h...

www.hangikredi.com

Doğru kredinin web adresi...

Üye Girişi

Bireysel Krediler >

Mortgage / Konut Kredisi >

Tasit Kredisi >

Neden hangikredi.com >

Ana Sayfa Tüm Krediler Hesaplama Araçları Finans Sözlüğü S.S.S İletişim Tavsiye Et Üye Ol Şifremi Unuttum

24 ay vadeli 10,000 YTL İhtiyaç Kredisi için 35 adet kredi seçeneği bulunmaktadır.

Kurum adına göre sırala Tekrar Ara

Kurum Adı	Faiz Oranı	Cevap Süresi	Taksit	Teminat	Açıklama
<input type="checkbox"/> Akbank	1.79	-	537,62	-	<a href="#">Detay</a>
<input type="checkbox"/> Albarakatürk	1.89	-	544,90	-	<a href="#">Detay</a>
<input type="checkbox"/> Bank Asya	1.99	-	552,23	-	<a href="#">Detay</a>
<input type="checkbox"/> Bankpozitif	1.99	-	552,23	-	<a href="#">Detay</a>
<input type="checkbox"/> Citibank	1.99	-	552,23	-	Kredi kartı müşterisine <a href="#">Detay</a>
<input type="checkbox"/> Citibank	1.89	-	544,90	-	<a href="#">Detay</a>
<input type="checkbox"/> Denizbank	1.85	24	541,98	Kefalet	<a href="#">Detay</a>
<input type="checkbox"/> Finansbank	1.89	48	544,90	-	<a href="#">Detay</a> <a href="#">Başvur</a>
<input type="checkbox"/> Fortisbank	1.79	-	537,62	-	<a href="#">Detay</a>
<input type="checkbox"/> Garanti Bankası	1.79	-	537,62	-	Dev maaş Kredisi <a href="#">Detay</a>
<input type="checkbox"/> Garanti Bankası	1.85	-	541,98	-	esnek ihtiyaç kredisi <a href="#">Detay</a>
<input type="checkbox"/> Garanti Bankası	1.88	-	544,17	-	<a href="#">Detay</a>

Done

Internet | Protected Mode: On

100%

After gathering information from the banks, result is presented. As you can see, the result page shows brief information about the loans that different banks give matching to the specifications that the user states. In every row of the result table, there is a button for giving more detailed information about the loan.

HANGİ KREDİ . Doğru Kredinin Web Adresi - Windows Internet Explorer

http://www.hangikredi.com/hangikredi/detay.aspx?ayliktaksit=122.664,00&myorand=334

mynet emlak Emlak bizi den soruyor

Satılık-Konut İst-Avrupa Büyükepece-2+1 Fiyatı:75.000 YTL

Satılık-Konut Aydın Kuşadası-5+2 Fiyatı:235.000 EURO

hangikredi.com

Kredi Detayları

Kurum Adı : Finansbank

Ana Para : 120.000 YTL

Vade : 1 Ay

Faiz Oranı : % 1,85

Aylık Taksit : 122.664,00 YTL

Faiz : 2.220,00 YTL

KKDF : 333,00 YTL

BSMV : 111,00 YTL

Toplam Tutar : 122.664,00 YTL

Teminat : -

Kefil Sayısı : 0

Güncellenme Tarihi : 02-11-2007

Ödeme Planı

Sayfa Yazdır

Kredilendirme Oranı:

100%

Internet | Protected Mode: On

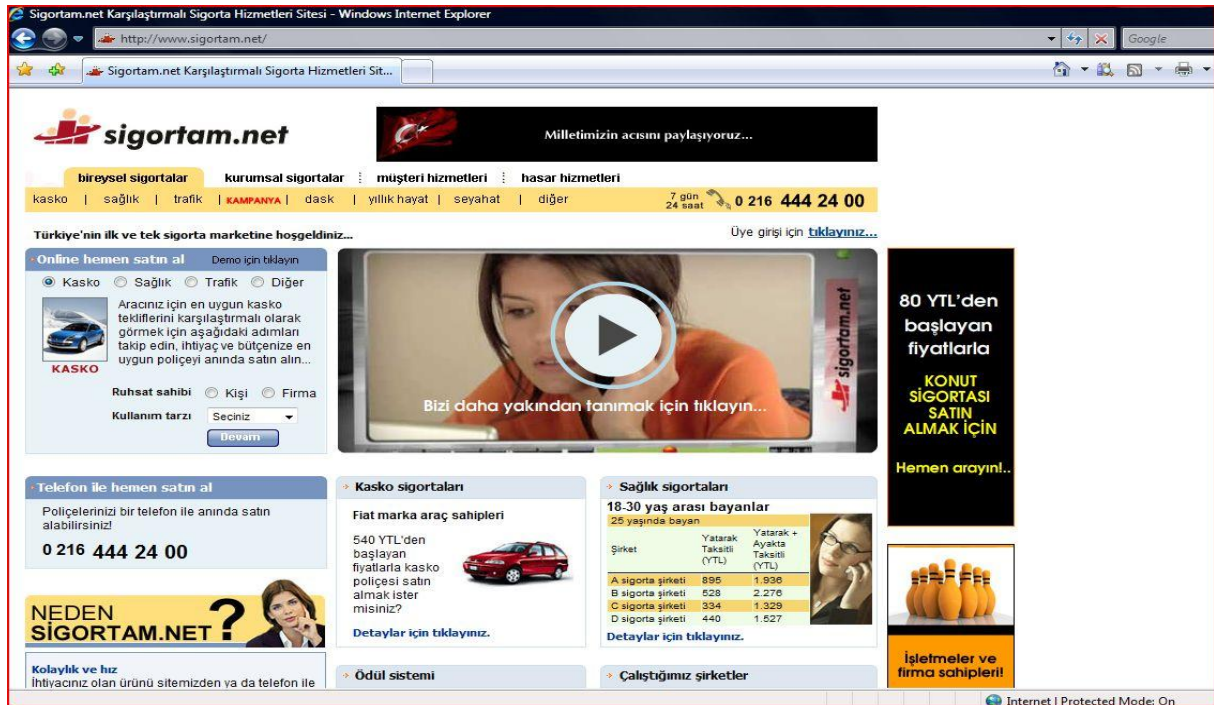
100%



Our aim is very much like the aim of Hangikredi. Hangikredi gathers information about bank-loans from the web sites of the banks; we will get information about people or jobs from the carrier web sites that we have agreement with.

## 6.2 www.sigortam.net

[www.sigortam.net](http://www.sigortam.net) is a web site which enables users get information about different insurance policies. By the use of web services, sigortam.net compares different insurance companies and gives price and feature comparison to the users. Now we want to show some screenshots from this web site.



As you can see sigortam.net has a simple user interface. It provides policies for health, traffic and automobile insurance services. They have agreements with almost every insurance company in Turkey. When you choose one of the types of insurances, a fill form appears. When you fill and submit the form, a comparison is created and the link is sent to you by e-mail. In the sent link, the names, properties and prices of policies are shortly mentioned. For detailed information, links are given. A sample result page is as follows:

Sigortam.net - Sağlık - Kişisel Özellikler - Windows Internet Explorer

https://www.sigortam.net/health/8.asp

Sigortam.net - Sağlık - Kişisel Özellikler

Yatarak tedavi  
Detaylı karşılaştırma

Yatarak ve ayakta tedavi  
Detaylı karşılaştırma

Seçiniz	Sigorta Şirketi	Ürün adı	Teminat Kapsamı	Yatarak Tedavi Teminatı Taksitli Fiyatı	Yatarak ve Ayakta Tedavi Teminatı Taksitli Fiyatı
<input type="checkbox"/>	ACIBADEM SIGORTA	3A Yeni İş	<a href="#">Teminat detayı...</a>	908,10 YTL (%25,00 peşin+ 5 taksit)	1.962,00 YTL (%25,00 peşin+ 5 taksit)
<input type="checkbox"/>	ACIBADEM SIGORTA	2A Yeni İş	<a href="#">Teminat detayı...</a>	680,40 YTL (%25,00 peşin+ 5 taksit)	1.471,50 YTL (%25,00 peşin+ 5 taksit)
<input type="checkbox"/>	ACIBADEM SIGORTA	Özel Yeni İş	<a href="#">Teminat detayı...</a>	769,50 YTL (%25,00 peşin+ 5 taksit)	1.665,00 YTL (%25,00 peşin+ 5 taksit)
<input type="checkbox"/>	ANADOLU SIGORTA	Paket 4	<a href="#">Teminat detayı...</a>	473,50 YTL (%20,00 peşin+ 4 taksit)	1.408,00 YTL (%20,00 peşin+ 4 taksit)
<input type="checkbox"/>	ANADOLU SIGORTA	Paket 3	<a href="#">Teminat detayı...</a>	Yok	1.092,00 YTL (%20,00 peşin+ 4 taksit)
<input type="checkbox"/>	ANADOLU SIGORTA	Paket 4 Eko	<a href="#">Teminat detayı...</a>	379,00 YTL (%20,00 peşin+ 4 taksit)	1.127,00 YTL (%20,00 peşin+ 4 taksit)
<input type="checkbox"/>	BAŞAK SIGORTA	Plan E Yeni İş	<a href="#">Teminat detayı...</a>	Yok	1.153,28 YTL (%20,00 peşin+ 5 taksit)
<input type="checkbox"/>	GÜNEŞ SIGORTA	Güneş Sağlık	<a href="#">Teminat detayı...</a>	281,35 USD (331,74 YTL)* (%25,00 peşin+ 5 taksit)	615,40 USD (725,62 YTL)* (%25,00 peşin+ 5 taksit)
<input type="checkbox"/>	AXA OYAK			TEKLİFİNİZİ ÖĞRENMEK İÇİN Hemen arayın yardımcı olalım! 0216 444 24 00	
<input type="checkbox"/>	Koç Allianz			TEKLİFİNİZİ ÖĞRENMEK İÇİN Hemen arayın yardımcı olalım! 0216 444 24 00	
<input type="checkbox"/>	YapıKredi Sigorta			TEKLİFİNİZİ ÖĞRENMEK İÇİN Hemen arayın yardımcı olalım! 0216 444 24 00	

Ürünlerin detaylarını ve fiyatlarını karşılaştırmak olarak görmek veya satın almak için en fazla üç şirket seçerek yandaki butona tıklayınız...

Yatarak tedavi  
Detaylı karşılaştırma

Yatarak ve ayakta tedavi  
Detaylı karşılaştırma

Merhaba,  
Police satın alma işlemlerinizi  
size yardımcı olmamızı  
isterseniz hemen arayın.  
0216 468 11 05

Internet | Protected Mode: On

As you can see, the insurance companies allowing web service routines have price and detailed information. For other companies, you have to call the “call center” of sigortam.net to get information. When you decide on one of the policies, you are allowed to buy insurance in a secure environment. You can also follow your payment information online and you can inform the insurance company about any damages in your car.

In fact, the subject of this web site is not our concern. What we are really interested in is the effect of web services. Sigortam.net project started to be built in 2001. Since 2001, Sigortam.net became one and only insurance comparison web site. They have been a finalist in “IV. Technology Awards” which is supported by TUBITAK, TTGV and TUSIAD. They also have been third in “Altın Örümcek Yarışması” in “Banking, Finance, and Insurance Web Sites” category. They were also in top 10 web sites list in the race. They have 6.6 million YTL of paid stock and have a tendency to improve in the next years. These awards show us how web service usage is important and how bright the idea of comparing similar products is. People want to reach information faster and easier. Our project, OnlineCV, provides this requirement.

### 6.3 www.akakce.com

This is the general explanation about the “akakce”, one of the web sites that use web services for communication with other websites.

Akakçe aims to provide the best conditions for a consumer. It provides a very simple user interface for a user for shopping. A user can search for any product or a group of products and akakçe shows the information that it gathered from different shopping web sites. Therefore, the get any information about the products, compare the prices of them in different shops.

Here the main aspect is that, searching is accomplished by collecting information from different web sites. Sometimes the information is gathered from the web sites of the shops, sometimes from the other shopping web sites like "gittigidiyor". As the result is the combination of all the searches, ease of finding product by using one site is offered to the consumer.

In the figure below, the features are shown.

**akakce.com**

[Ana Sayfa](#) [Sık Kullanılanlara Ekle](#) [Hakkımızda](#) [Sık Sorulan Sorular](#) [Reklam](#) [İnternet Mağazaları](#)

**Bilgisayar-Dizüstü**  
Taşınabilir Bilgisayar, Notebook, Laptop

[Bilgisayar-Donanım grubuna dönün](#)

Başka bir kategori seçin:  
Bilgisayar-Dizüstü  
Bilgisayar-Dizüstü

[Sibermarket'te bu ürün distribütör garantili, üstelik peşin fiyatına 12 ay taksitle](#) [SiberMarket](#)  
[Sibermarket'te bu ürün distribütör garantili, üstelik peşin fiyatına 12 ay taksitle](#) [SiberMarket](#)

**Markalar**  
Tümü  
Acer  
Apple  
Asus  
BenQ  
Casper  
Datron  
Dell  
Exper  
Fujitsu Siemens  
HP  
Lenovo (IBM)  
LG

**Ürün Listesi**  
Toplam 161 adet bilgisayar-dizüstü var. Tümü gösteriliyor. [Sayfalandırarak göster.](#)  
Sayfa: 1 / 1

**Ürün Adı**  
Toshiba A200-1AH Duo 2.00GHz 2048MB 160GB 15.4" Win Vista Premium  
Acer TM5310 Cel. M520 1.6GHz 512MB 80GB 15.4" Linux  
Asus F3SC Duo 2.0GHz 2048MB 160GB 15.4" Win Vista Premium

**Sıralama:**  
En pahalı en  
Ürün adına göre  
En popüler en üstte  
En ucuz en üstte  
En pahalı en üstte  
Mağaza sayısına göre  
2.109,58 YTL  
653,97 YTL  
1.736,69 YTL

**Satıldığı Mağaza Sayısı**  
1  
1

**Red Annotations:**  
- The most popular searches  
- All of the brands that exist  
- The list of the found products  
- The name and features of product  
- The prices of these products  
- Exist categories for products  
- The features to put in order the found results  
- The found shop number for this product

## 7. QUESTIONNAIRE

USER SURVEY ABOUT JOB SEEKING WEB SITES	
Name:	Surname:
<input type="text"/>	<input type="text"/>
Department	
<hr/>	
Occupation:	TEL:
<input type="text"/>	<input type="text"/>
<b>QUESTIONNAIRE:</b>	
1) Do you have a membership in one of the job seeking web sites ? If it is yes , which one/ones?	
<input type="radio"/> Yes <input type="radio"/> No	
<input type="checkbox"/> kariyer.net <input type="checkbox"/> yenibiris.com <input type="checkbox"/> secretev.com <input type="checkbox"/> Other .....	
2) Do you need being a member of more than one of these web sites?	
If your answer is yes, why?	
<input type="radio"/> Yes <input type="radio"/> No	
<input type="checkbox"/> Since there is more chance to find a job in more than one , I wanted to increase my chance.	
<input type="checkbox"/> I have a limited time to wait for a job, so I applied more than one web sites to make the job searches in parallel.	
<input type="checkbox"/> Other .....	
If your answer is no, why?	
<input type="checkbox"/> I have a limited time to login every time one by one.	
<input type="checkbox"/> Only one of them is enough	
<input type="checkbox"/> Other .....	
3) What is your expectations from a job searching web site ?	
<input type="checkbox"/> Variety of Applications	
<input type="checkbox"/> High Matching percentage	
<input type="checkbox"/> Good user interface	
<input type="checkbox"/> Some activities about carrier.	
<input type="checkbox"/> Other .....	

4) Which services do you use frequently ?

☐ Job Search

☐ CV Creation

☐ Getting Tactical Information About Human Resources

☐ Other .....

5) Which features do you want to add to these sites? Please specify below.

.....

To have a better idea about the job seeking web sites from the users' perspective, we have decided to do a survey. We get eight different people's idea working in different departments.

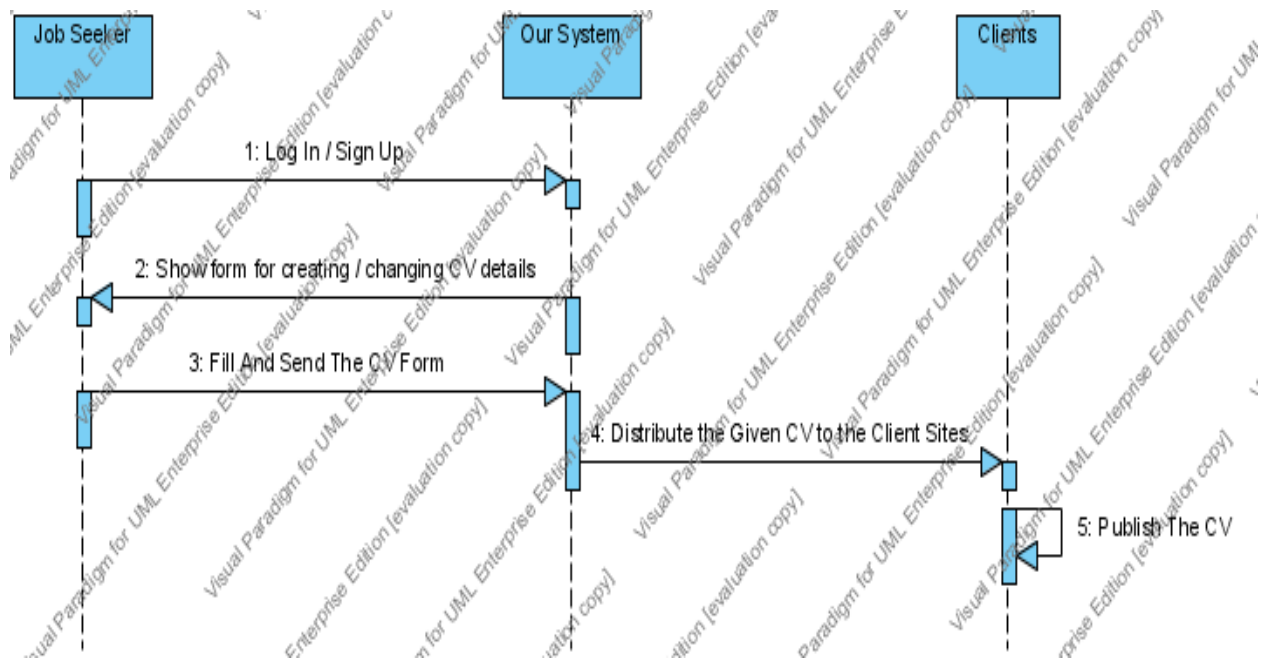
As all of them are highly educated, they think job search through web is much easier and efficient. Most of them have a membership in more than one job seeking web site like "Kariyer.net". The key idea here is that "they want to be aware of different job opportunities". On the other hand, two of them stated that sometimes although they have their job, they continue searching for a better one. Being a member to more than one job seeking web site may bring a higher chance. The common expectation from a new job seeking web page is high matching percentage to the specifications given by the person who establishes the search, in other words finding more suitable jobs. The newly graduate students also have a tendency to create their CV and get information about human resources, however, more experienced ones generally use the job seeking part.

## 8. SOFTWARE DEVELOPMENT MODEL

We have decided to follow the "Iterative, Incremental Model". We have decided on the main aspects of the project and we have some idea about how to complete this project. This means we have gone over the Inception and Elaboration phases of the Iterative, Incremental Model. We should have some simulator client web sites at the beginning. We have to implement these simulator web sites first. This process creates some mini projects and these mini projects all have to pass over Analysis, Design, Coding, Testing steps. These steps are also required for creating our portal and combining our final project. These steps are similar to the construction phase of the Iterative, Incremental Model. The project in our mind matches with the general aspect of Iterative, Incremental Model.

## 9. PROCESS DESCRIPTION

**CV Distribution Diagram:** A job seeker wants to leave his/her CV.

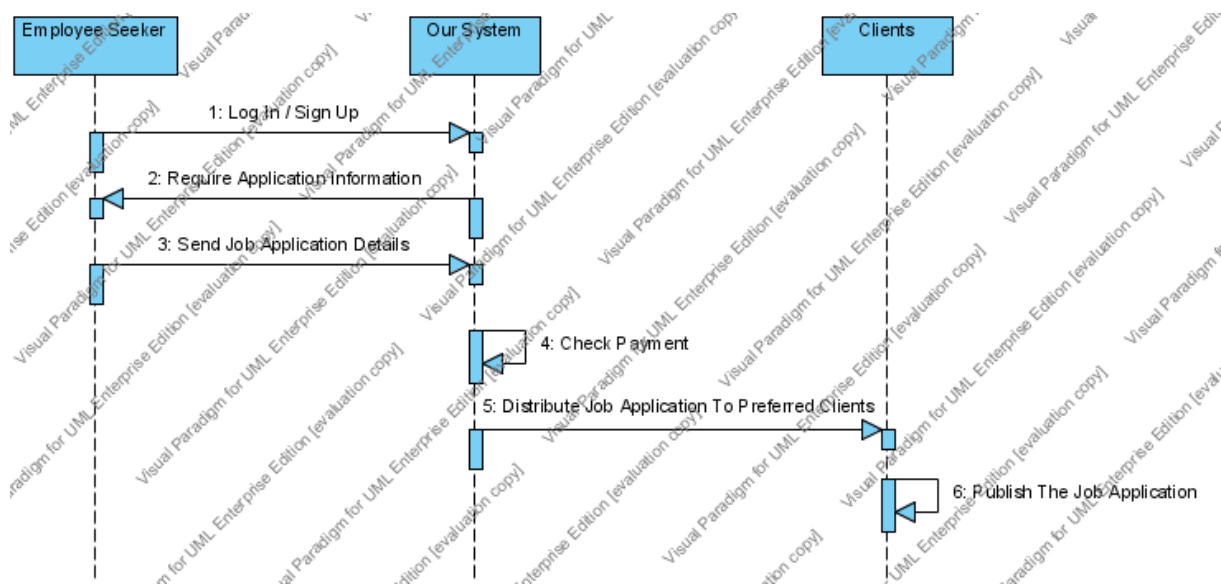


First our system has to identify the person who wants to leave CV. Therefore, a “Log In” process is required and if the person has not registered to our system yet, then he/she has to sign up. Then our site will show a menu from where people can create their CV or can make changes on their CV that they have created before.

After the job seeker fills the form, our portal will distribute the newly created or updated CV to all the Clients.

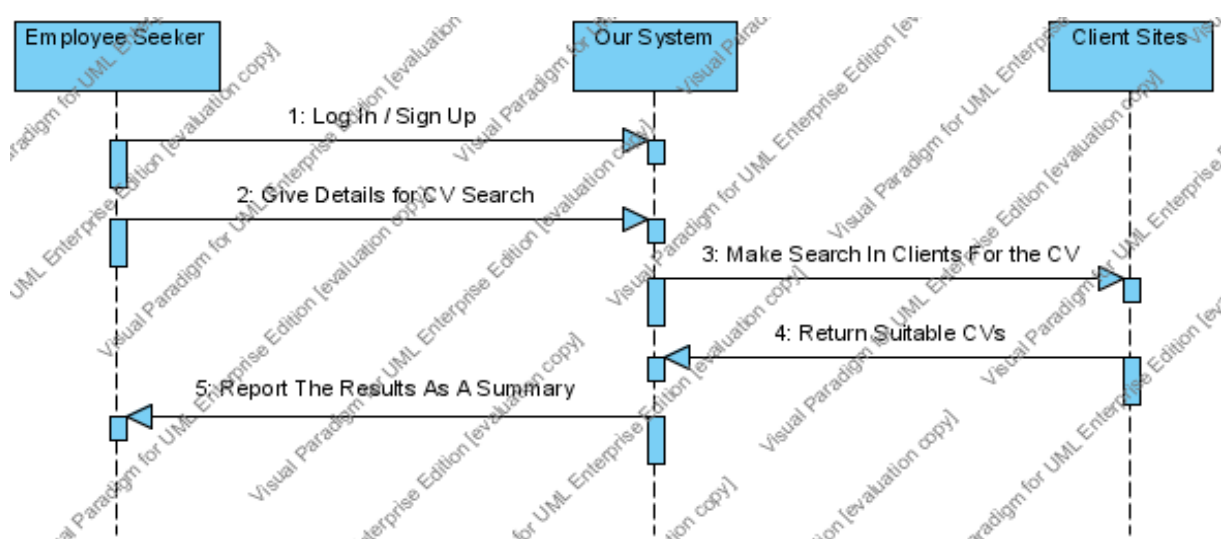
**Sending Job Announcements:** A person, who needs employees, wants to make an announcement about a job.





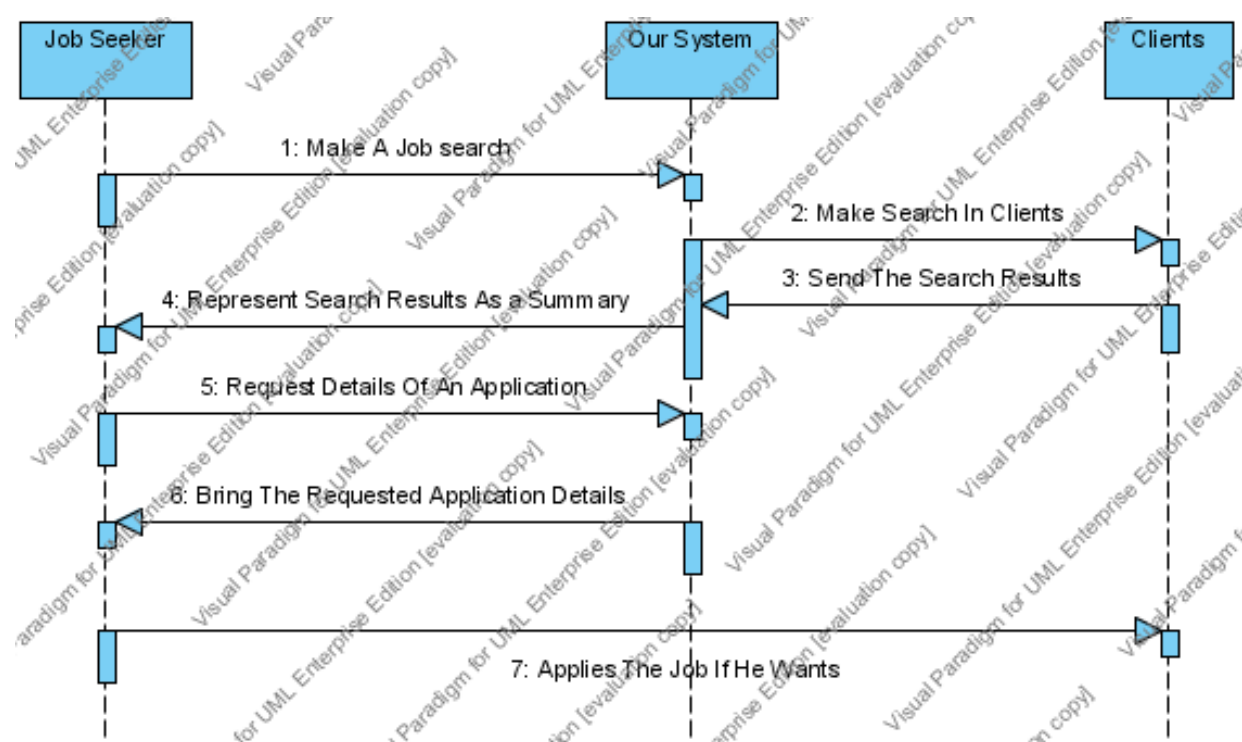
Employee Seeker has to log in to our system. And the ones who enters into our system for the first time, has to sign up. Our system will request detailed information about that job. After the employee seeker sends the details to us, our system will check the payment and if there is no problem about it, our portal will send the job application to all the clients that the employee seeker have chosen for publishing.

**Searching for CVs:** A person wants to search for CVs matching to some specialties that he/she looks for.



Employee seeker again has to log in to our system (or sign up). Then he/she gives the details of the person whom he seeks for and our portal will send request information for the CVs matching to the specifications given by the employee seeker. The clients will search their own database and send back the result to us and we will present the result.

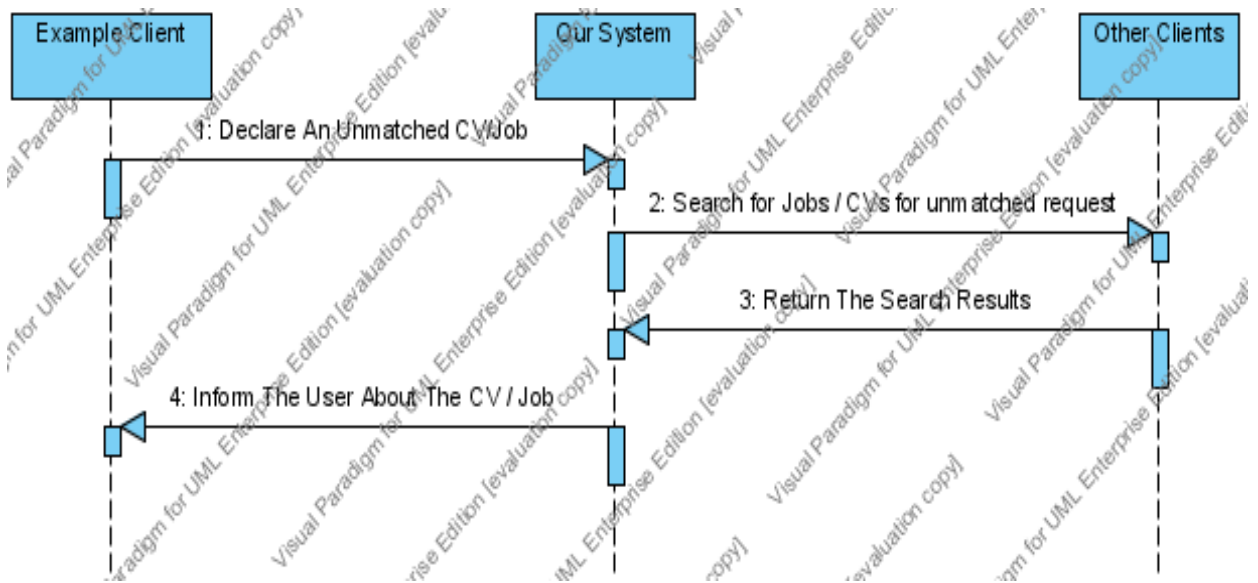
**Searching For Jobs:** A person looks for a job suitable for him/her.



Job seeker can search for jobs without logging into our system. When a person requests for a job search, our portal will send a message to the clients including the specifications of the job to be searched. The web services of the clients will send us back their search results and we will combine them and present to the user. User will be able to see the detailed information about any job in the result table and will be able to apply if he/she wants.

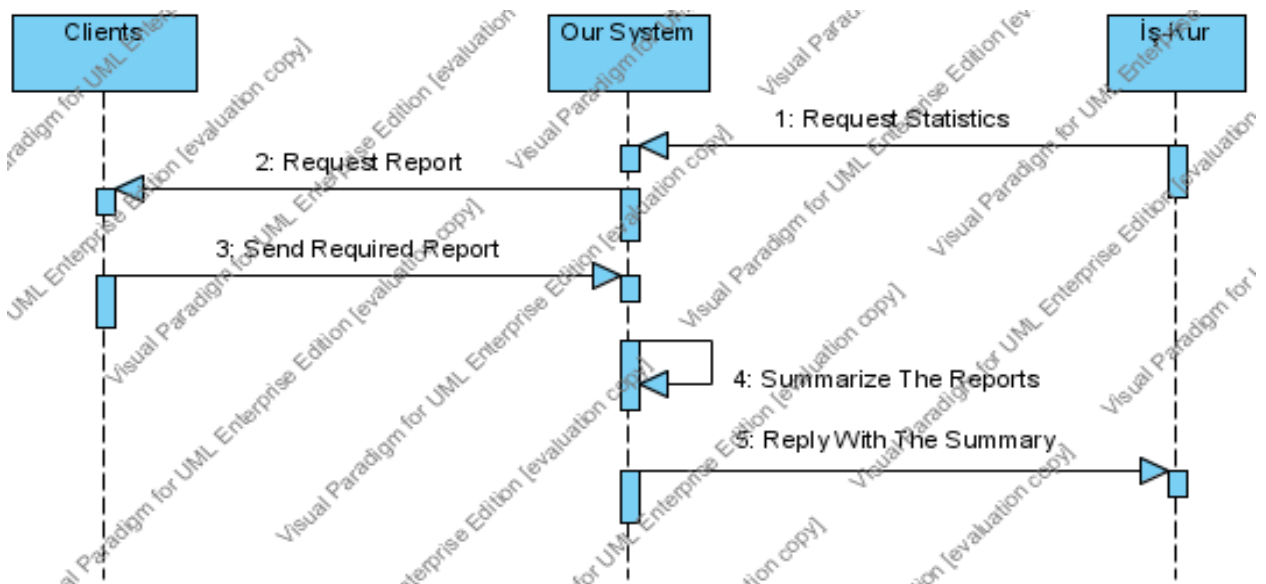
**Unmatched CV/JOB Declaration:** A client wants to send us unmatched CVs or Jobs to us so we can search from other clients to match them.





Clients declare us an unmatched CV or Job. Then we send request to other clients so that they search their database and send us their result. Finally, we inform the client about result.

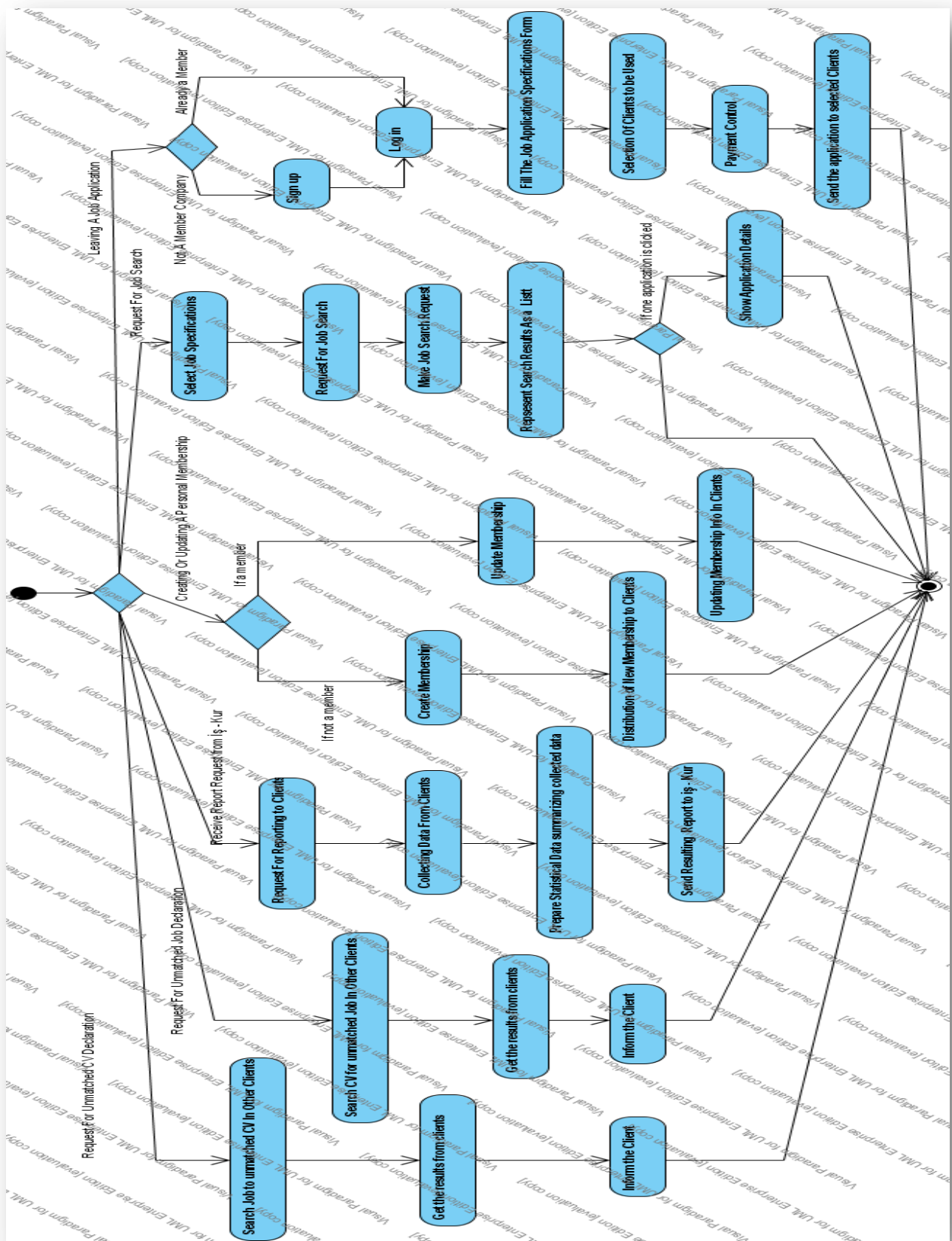
**Report Generation:** İş-kur requests statistics from us about matching CVs and jobs.



We request reports about matching CVs and jobs from all the clients of us and they send us their reports. We summarize them and return the summary to İş-Kur.

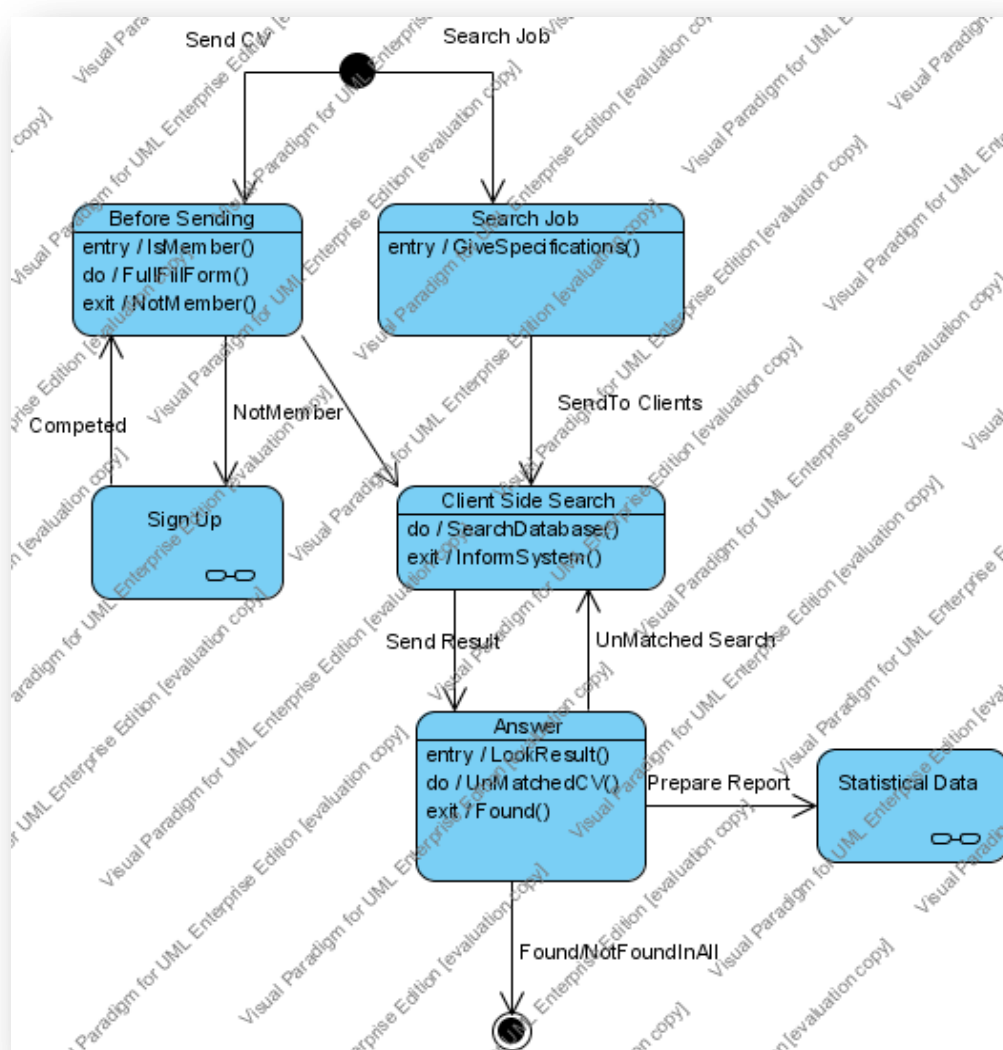
## 10. CONTROL SPECIFICATION and BEHAVIORAL MODELING

### 10.1 Control Specification



By using activity diagram, we mainly tried to show the activities and control points of our system. From a start point to an end point we have shown the main steps of the operations we are planning to define for our system. The two left most operations are the ones related to unmatched job and CV services. The third operation show what happens when İş-kur makes a request for a statistical report. The fourth operation is about membership creation and update. The fifth operation shows what happens when a job seeker makes a job search from our web site. The sixth and last step of the diagram shows the steps of leaving a job application as a company. We think that the diagram is quite clear. We don't mean that these are done in parallel. Our aim to put a decision point at the beginning is showing the activity diagram as a total. This is because that all these operations are done in our system so there is a need for showing these operations as a total.

## 10.2 Behavioral Modeling

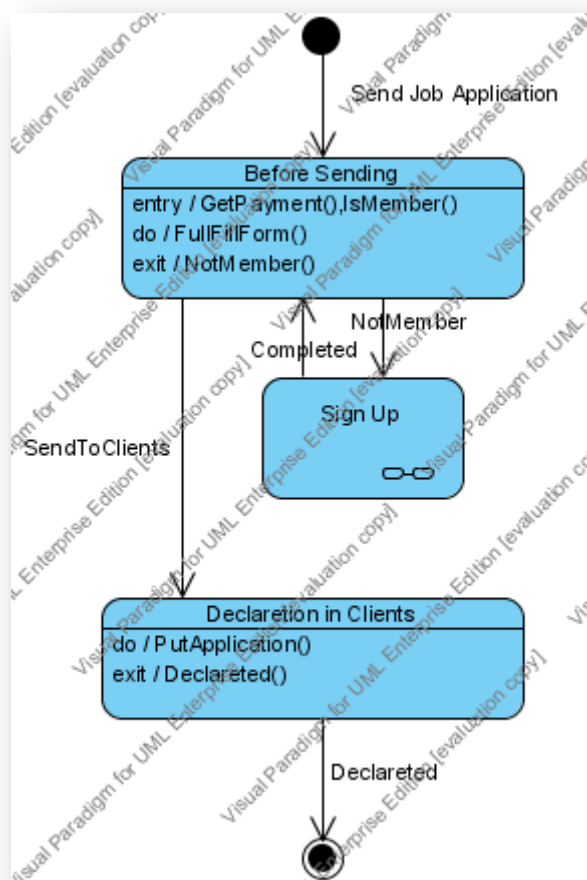


First state diagram is based on the services “Send CV” and “Search Job”. These are the services are for job seekers. This state diagram shows that:

If a job seeker wants to send a CV to clients through our portal, first he has to be our member. Then he will full fill the form for CV and it will be distributed to the clients. On the other hand, to search a job, he has to give the specifications and then according to these specifications, it will be searched in the databases of the clients. Looking at job and CV matches, it can be prepared statistical report to İş-Kur which desires such report .If a CV is not matched in its’ own site then it will be in the status of an unmatched. Then it will be searched in the other sites. This system is also valid for the unmatched job.

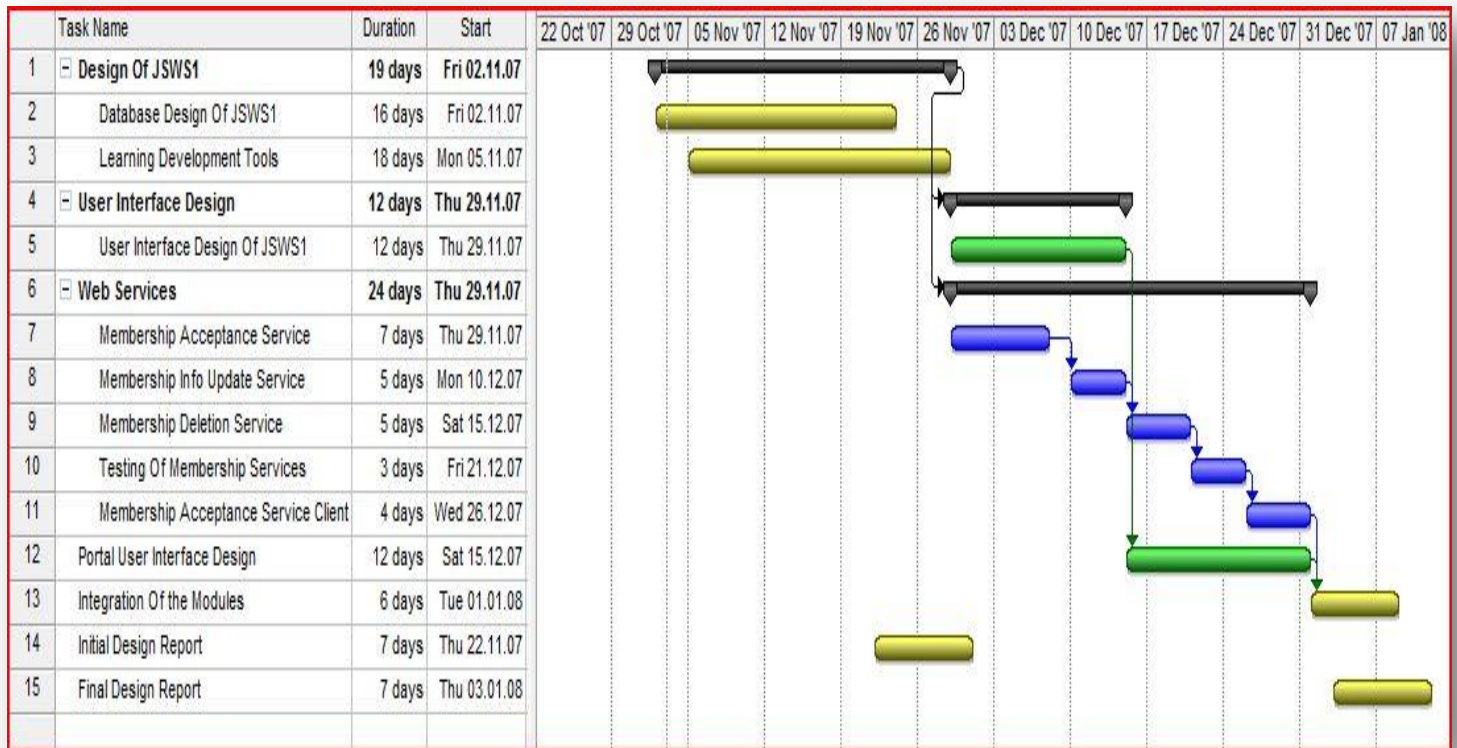
Second state diagram is based on the service “Send Job Application” for the employee seeker. Employee seeker must be a member of the system and he has to give the payment before sending the job application. If he is not a member, he has to be sign up the system. After completion of the sign up operation, he can return to the sending job application. During the state “before sending”, he has to full fill the job application form. This form will be sent to all the clients. At the state “Declaration in Clients”, it will be put all the job applications to all of the clients .After this operation completed it will be finish.

Second state diagram is given below.



## 11. TIME ESTIMATION

### 11.1 Gantt Chart For The First Semester



### 11.2 Some Explanations about Gantt Charts




First of all, we have to explain what JSW and JSWS are. In the Gantt chart, the name “Job Seeking Website” takes too much place in a row, therefore we wanted to give an acronym (JSW) for it. And “JSWS” stands for JSW Simulator. “JSWS Web Services” are the Web services that will run on a JSWS and JSWS Web Services will run on our portal.

Another thing that we need to explain is the following. Our project design will be Service Oriented. In other words, our project will be composed of different services (we will use “Web Services”) that are minimally dependent to each other. Each web service has its own client called “Web Service Client”. Therefore, we gave the same name to clients as their services only with the attachment “client” to their tail.

For example, “Membership Acceptance Service Client” is the client of the “Membership Acceptance Service”. In this case, our portal will send information about a person that want to register to a JSW (Job Seeking Website) via Membership Acceptance Service Client and Membership Acceptance Service that run on the corresponding JSW will accept the registration request and send back an acknowledgement.

On the other hand, sometimes we will implement a web service with its client concurrently. For those cases we wrote “Service / Client” to indicate we will implement them concurrently. For example, “CV Acceptance Service / Client” means we will implement CV Acceptance Web Service and its Client in the same time interval.

### 11.2.1 Meanings of the Colors

	:	All members of the group
	:	Furkan & Bahattin
	:	Ömer & Selcen

### 11.2.2 Explanation of the Time Line

Before beginning to the implementation of the project, we need to design everything. We decided to begin with the database design of a Job Seeking Website because any web service we will implement will need a database of a JSW to do its job. Designing the databases of the JSWSs is the basis for our project and all the other parts are somehow related to this design. Therefore, we gave a long period (16 days) for designing the databases to make it elegant. We will discuss this topic when we come together within those 16 days. Mean while, everyone will continue to search and learn related topics such as SOA concept and design, Web Services, Tomcat and JSP (Java Server Page) and development tools.

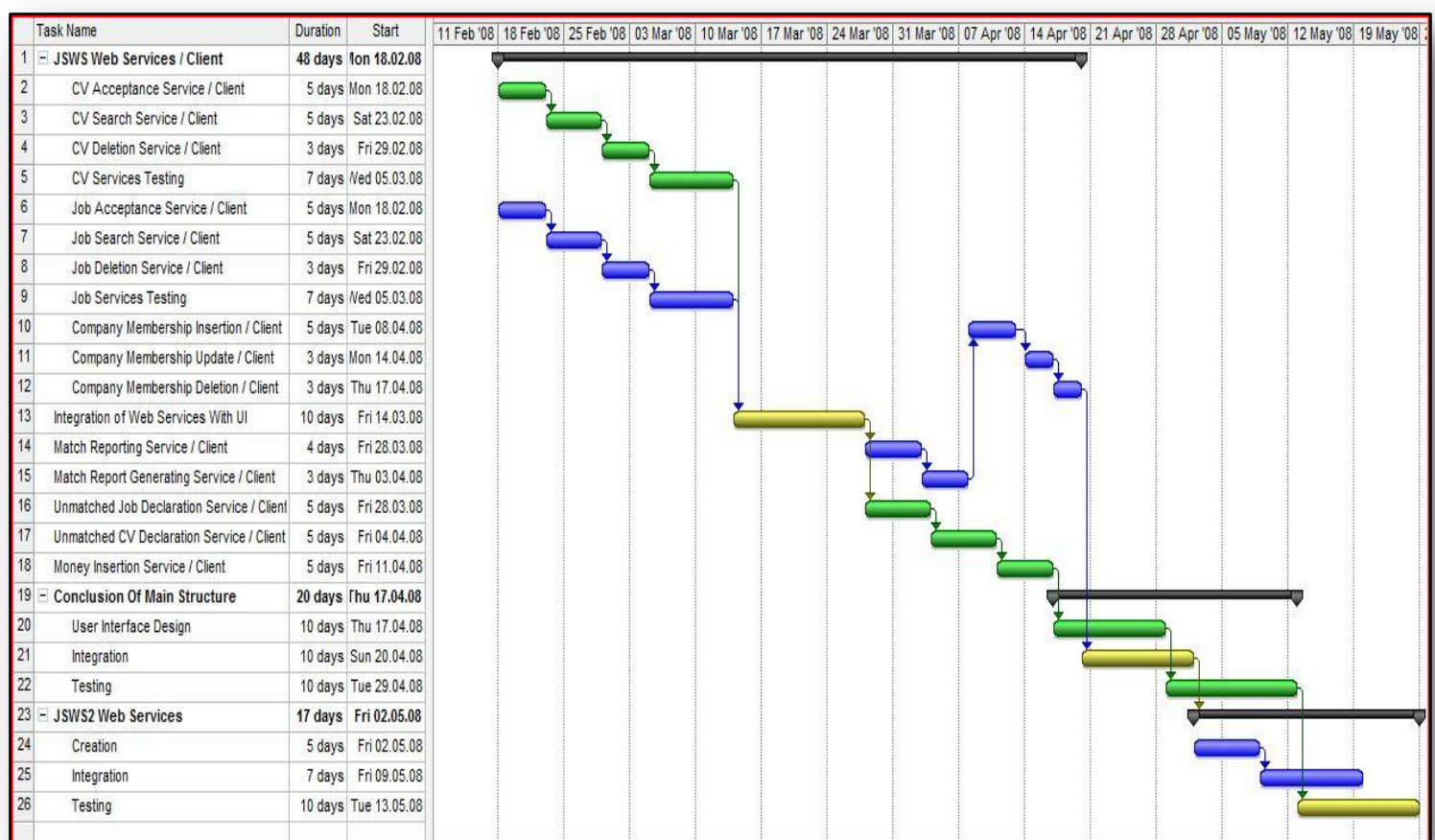
After we finish the design of the databases Selcen and Ömer will begin to design a User Interface for our JSWS that we designed a database for. Meanwhile Furkan and Bahattin will begin to



implement some web services like “Membership Acceptance Service”, “Membership Information Update Service”, and “Membership Deletion Service”. After they complete the implementation of these web services, they will test them. In this testing stage, our JSW will not be able to receive any message from outside world because we won’t have finished our portal by that time. Because of this, we will give the messages to those web services by hand. Mean while, Selcen and Ömer will have finished the user interface design of the JSWS-1 and will begin to the design of the user interface and database of our portal. As soon as Bahattin and Furkan finish the testing of web services they have implemented, they will begin to implement the client of the Membership Acceptance Service.

By the 1<sup>st</sup> of January 2008, a JSW, some JSW web services and their clients, and our portal will be ready. The next thing we need to do is to integrate all these and test. After we finish integration and testing, we will have a prototype of our project. All we have to do in the second term is to implement the other web services and integrate them into the system. This is exactly the advantage of Service Oriented Architecture. We will implement and integrate new services into our without changing any part.

### 11.3 Gantt Chart For The Second Semester



## 12. RISK PLAN

Risks	Probability	Impact	RMMM
The workload of other courses	75%	2	rescheduling group member's tasks to meet other courses' stuff
The Usage and Adaptation Problems with the tools we use	50%	3	searching for visual materials and documents on the internet and consulting an experienced person
Unrealistic Time Scheduling	60%	2	spending more time to meet the schedule
Health Problems	25%	2	assigning the task of the ill person to other members
Disagreement in the group	40%	3	consulting an experienced person to decide on the issue

<u>Impact</u>	<u>Meaning</u>
1	-> Disaster
2	-> Critical
3	-> Intermediate
4	-> Trivial
5	-> Negligible

## 13. TEST PLAN

In the first semester, as soon as we finish building the membership acceptance, membership info update and membership deletion services, we will make tests about those web services. This test is very critical for us, because if our system passes this test easily, then we can build other services by following the same procedures in the first three ones. If our system cannot pass the first test, then we will think about all processes again that those three web services pass through. The first thing we control will be the last process those web services pass through, which is the deployment of the services to the server program (Apache Tomcat) because it is the most probable step that a problem can occur. There are a lot of XML files about web services and deployment of them. We will control all those XML files individually, that is, we will control all files twice. If we cannot find any problem about deployment process, then we will look for a problem in coding step. We will use a java debugger tool in this step. If there is no problem in coding, then we will look for a database design problem. We will control our database ER diagrams to find a possible ambiguity or inconsistency.



When we integrate our modules, we also make tests but by following a slightly different way. Firstly, we make tests about every individual service by following the steps described above. After we are sure about all services work correctly, we integrate two related services, then we will test them as a whole. After that, we will add one more related service to the previous integration, and test again. By this way, we will finish the integration of all web services we build.

Finally, after we build all web services and design user interfaces of our portal and other job seeking web sites, we will make general tests to our system by all members in our group during 10 days.

Although our time line can be seen similar to the “Waterfall Software Development model” from our Gantt charts, our testing phases will break this similarity. In testing steps, we will turn back, and analyze the system, and reconsider the processes. Moreover, we may rearrange the time line according to those testing results. Therefore, our software development model will be actually like “Iterative, Incremental Model”.