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# 1. Introduction

This section will define the purpose, scope and intended audience for this document. It also outlines the domain specific definitions, acronyms and abbreviations used in this document.

## 1.1 Purpose

The purpose of this document is to specify detailed requirements for “**Job Portal**”. This is the first version of this SRS i.e. v1.0 and has not been revised yet. This document gives an overall description of the Job Portal and also describes its functionalities, constraints, assumptions that are necessary for the Job Portal to have. This document could be used as cross reference to verify the end product.

The intended readers of this document are the system analyst & designer, project developer, project panel, system owners. The system analyst & designer can use this document for his cross reference to verify his future work. Project developer can use this document for traceability of the functions implemented. Project panel can use this document to verify the quantity and quality of the end product, finally this document can help bridge-up the gaps between the project stakeholders i.e. analysts, designers, developers, system users and the system owners to help them understand what functionalities this Job Portal will have and what not.

## 1.2 Project Scope

The aim of this project is to design and develop a Job portal, on which End users can search jobs & apply online for a specific job. Companies can also post their jobs to find employees for their company.

This portal will benefit companies and job seekers. This portal will be specified only for jobs. Online business on this portal is beyond the scope of this project. Job seekers can search and apply online for jobs related to their fields within specific area and salary. Similarly, companies can post their jobs on this portal with specific information for applicant. This portal will maintain the database of jobs (posted by companies) as well as jobs applications (posted by job seekers).



### 1.3 Definitions, Acronyms and Abbreviations

- **Stakeholders**

*“Stakeholder is any person who has an interest in an existing or proposed information system. Stakeholders may include both technical and nontechnical workers they may also include both internal and external workers.” [2].*

- **SRS (Software Requirements Specification)**

*“SRS is a complete description of the behavior of the system to be developed. It includes a set of functional requirements that describe all of the interactions that the users will have with the software. In addition to functional requirement, the SRS also contains nonfunctional (or supplementary) requirements.” [5].*

- **DBMS (Database Management System)**

*“DBMS is a sophisticated software package that controls and manages the access to the databases.” [1].*

- **PHP (PHP Hypertext Preprocessor)**

*“Also known as personal home page, a scripting language used to create dynamic Web pages. With syntax from C, Java and Perl, PHP code is embedded within HTML pages for server side execution.” [3].*

- **MySQL**

*“MySQL is a multithreaded, multi-user SQL database management system (DBMS) which has, according to MySQL AB, more than 10 million installations. MySQL is owned and sponsored by a single for-profit firm, the Swedish company MySQL AB.” [3].*

- **AJAX**

*“Ajax, or AJAX, (Asynchronous JavaScript And XML) is a web development technique used for creating interactive web applications. The intent is to make web pages feel more responsive by exchanging small amounts of data with the server behind the scenes, so that the entire web page does not have to be*



*reloaded each time the user requests a change. This is intended to increase the web page's interactivity, speed, functionality, and usability.” [5].*

- **JavaScript**

*“A popular scripting language that is widely supported in Web browsers and other Web tools. It adds interactive functions to HTML pages, which are otherwise static, since HTML is a display language, not a programming language. JavaScript is easier to use than Java, but not as powerful and deals mainly with the elements on the Web page. On the client, JavaScript is maintained as source code embedded into an HTML page. On the server, it is compiled into bytecode (intermediate language), similar to Java programs.” [5].*

- **Apache**

The Apache is a HTTP Server; it is a web server that is used to host web applications.

- **XAMPP**

*“It is an Apache distribution containing MySQL, PHP and Perl and Mercury Mail Transport System and is free of charge.” [4].*

- **HTTP (Hypertext Transfer Protocol)**

*“It is a communications protocol used to transfer or convey information on the World Wide Web. Its original purpose was to provide a way to publish and retrieve HTML hypertext pages.” [3].*

- **SMTP (Simple Mail Transfer Protocol)**

*“Simple Mail Transfer Protocol (SMTP) is the de facto standard for e-mail transmissions across the Internet.” [3].*

- **TCP/IP**

*“The Internet protocol suite is the set of communications protocols that implements the protocol stack on which the Internet and many commercial networks run. It is part of the TCP/IP protocol suite, which is named after two*



*of the most important protocols in it: the Transmission Control Protocol (TCP) and the Internet Protocol (IP).” [3].*

- **RAM (Random Access Memory)**

RAM stands for Random Access Memory. It is a type storage used in computers to store data temporarily.

- **Server**

It is a computer with special hardware, which fulfills the request made by the client.

- **Web Server**

Special software that runs on server is called Web Server. It allows the servers to respond to the requests of Clients and accepts data and information from the Clients.

- **Internet**

*“Internet is an interconnected system of networks that connects computers around the world via the TCP/IP protocol.” [5].*

- **Software**

*“Software is a set of instructions that cause a computer to perform one or more tasks. The set of instructions is often called a program or, if the set is particularly large and complex, a system.” [5].*

- **Hardware**

*“A computer and the associated physical equipment directly involved in the performance of data-processing or communications functions.” [5].*

- **UPS**

UPS stands for Uninterruptible Power Supply; it is used as battery backup system for the electronic equipment.



## 1.4 References

[1] Catherine Ricardo, Iona College New Rochelle, New York, *Database Systems Principles, Design, and Implementation*, New York: Maxwell Macmillan, 1990.

[2] Jeffery L. Whitten, Lonnie D. Bentley, Kevin C. Dittman, Purdue University, West Lafayette, IN, *Systems Analysis and Design Methods*, 6<sup>th</sup> edition, New York: McGraw-Hill/Irwin, 2004.

[3] Wikipedia website URL:<http://en.wikipedia.org>

[4] Information on the XAMPP is available at Apachefriends website  
URL:<http://www.apachefriends.org/en/xampp.html>

[5] Answers website URL:<http://www.answers.com>



## 1.5 Overview

The following sections of this specification document will give general description related to the product under discussion. It will provide information about the specific requirements including detailed functional, nonfunctional and logical database requirements. The rest of the document is organized as follows:

- 1- The general factors that affect the product under discussion, product interfaces, constraints, assumptions and dependencies will be described under the heading “Overall Description”.
- 2- In the next section which is named as “Specific Requirements“, detailed functional requirements, design constraints and product attributes will be discussed.

## 2. Overall Description

This section of the specification document will provide the background of the specific requirements which are defined in detail later in this document and makes them easier to understand.

### 2.1 Product Perspective

The software which is to be developed will work independently and is not to be integrated into any other larger system/software. A DBMS will be running behind the Web Server (on which the software that is to be developed will be running as web application) to manage the database of companies and employees, further details are provided later in this document.

#### 2.1.1 System Interfaces

##### 2.1.1.1 Software Interfaces

A Web Server and DBMS will be required for this software to run. MySQL will be used as a DBMS. Apache will be used as Web Server. Operating system running on server side will be Windows 2000 Server/Windows XP Server or Linux





Server. XAMPP will be used, it is an Apache distribution containing MySQL, PHP and Perl and Mercury Mail Transport System and is free of charge.

On the Client Side any browsers like Internet Explorer v6/7 or Firefox v2.0/v3.0 would be fine to access the web application. The basic purpose of the browser would be to request a web page from Web Server. On client side operating system should be Windows 2000, Windows XP, Windows Vista or Linux.

#### ***2.1.1.2 Communications Interfaces***

As Job Portal is an Intranet based system, therefore it will require some standard networking protocols for communication. These protocols are usually installed automatically by the operating system running on the server or the client. Few of these protocols are:

**TCP/IP:** It is a protocol used to communicate data all around the Internet/Intranet.

**HTTP (Hyper Text Transfer Protocol):** It is a protocol used by the WWW (World Wide Web) service to make communication possible between a web server and a Web browser.

**SMTP (Simple Mail Transfer Protocol):** It is a de facto standard for e-mail transmissions across the Internet.

#### ***2.1.1.3 Memory***

##### **Primary Memory:**

The minimum proposed RAM for running the Web Server is 128MB and recommended is 256MB but if there is a higher load of users accessing the web application it should be more than 512MB. The minimum proposed RAM for the DBMS is 64MB and recommended is 128MB or more.

##### **Secondary Memory:**

Proposed hard disk required for Web Server installation is 100MB to 120MB and for DBMS installation 95MB to 270MB. Additional data storage will be required for Databases, also the size the Databases may increase after each year according to the requirements, maintaining the backup will also take space.



### 2.1.2 Product Functions

The main functions of a product are listed below:

1. Job with details could be stored.
2. C.V of job seekers could be stored.
3. Job search could be performed by job seekers.
4. Employee search could be performed by job providers.
5. Cover letter could be provided to job seekers for applying job.
6. Job seekers could upload C.V in PDF and doc format.
7. PDF and doc format file could be searched.
8. Job applicant could have a profile.

### 2.1.3 User Characteristics

There are four categories of users accessing this system. We will differentiate these users on the basis of their roles and access rights.

**Employee:** Employee means job seeker who is interested to have a job. They must have their login account on this portal.

**Employer:** Employer means job provider who is interested to find employees. They also must have their login account on this portal.

**Job Portal Administrator:** The person, who is responsible for the management, maintenance and administration of this portal.

**Visitors:** The person who is just visiting this portal. He/She can just only search available jobs. He/She can neither apply for jobs nor post jobs.

### 2.1.4 Constraints

The followings constraints are present in this System:

1. Any person is allowed to create his/her login account and register himself/herself on this portal.
2. Only registered persons can apply for jobs. The persons who don't have any account on this portal can only see the posted jobs.
3. Any company can't post their job on this portal that is not registered to this portal.



4. No one have rights to change the information of someone else account on this portal.
5. No file except PDF and doc format can be uploaded on this portal.
6. Once an employee apply for a job. He can't apply again for this job. (Because he has already applied for this job).
7. No one can maintain and manage this portal except the administrator of this portal.
8. Any user who likes to register him/her on this portal must have an email address (like yahoo, hotmail, gmail or etc.). Because alert messages will be sent to that mail box.

### **2.1.5 Assumptions and Dependencies**

The assumptions and dependencies for this system are:

#### ***Website Administrator:***

There should be at least one website administrator who can manage and maintain this website.

#### ***Server based software:***

The software will be installed on server. So it will be client independent i.e. software needs not to be installed on each client machine.

#### ***Software on client end:***

The only software needed on the client end is the web browser. If a client doesn't have a web browser he can't get benefit from this job portal.

#### ***Internet based:***

As this software is an internet based i.e. the organization or any employee that is going to use this job portal, must have an internet connection.



### 3. Specific Requirements

In this section the specific requirements will be stated that are required to satisfy users so that they should be incorporated in the software product.

#### 3.1 Functional requirements

The functional requirements for job portal are explained below.

##### 3.1.1 Job Seeker

###### 3.1.1.1 New Job Seeker Registration

Any job seeker is allowed to create his/her account on this portal if constraints are met. The use case diagram is given in figure 1.

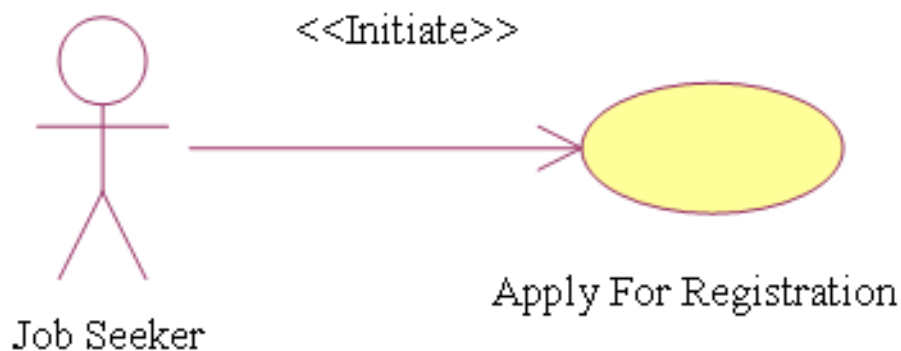


Figure 1: Use case diagram of new job seeker registration

The job seeker will open this portal and click on signup to create his/her account. He/She will add the following information for the registration.

- His/Her Full name.
- His/Her qualification.
- His/Her Gender.
- His/Her complete Address including City, Street No., House No. and etc.
- His/Her Phone no. if any.



- His/Her E-mail address (because whenever a new job is posted he/she will get an email.).
- Upload his/her C.V in PDF and doc format (this is optional at the time of creating account because an employee may not have his C.V at that particular time).
- He/She can upload more than one C.V with different title.
- He/She can also create online C.V
- His/Her area of interest.

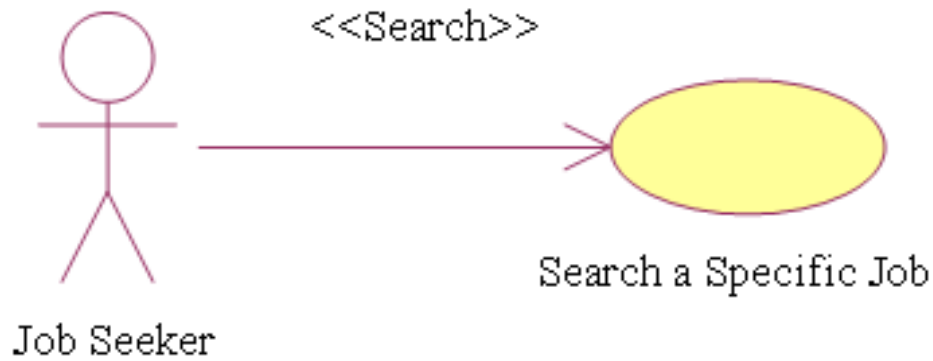
After filling in the required information the login account of employee will be created.

#### **3.1.1.2 Job Searching By Job Seeker**

The information needed to search a job is as follows.

- Search job by title (keywords).
- Search by selecting occupation (a dropdown list will be provided to select occupation).
- Search by location.
- Search by company name.
- Search by company salary.
- Search by qualification.
- Search part time job.
- Search full time job.
- Search internship.





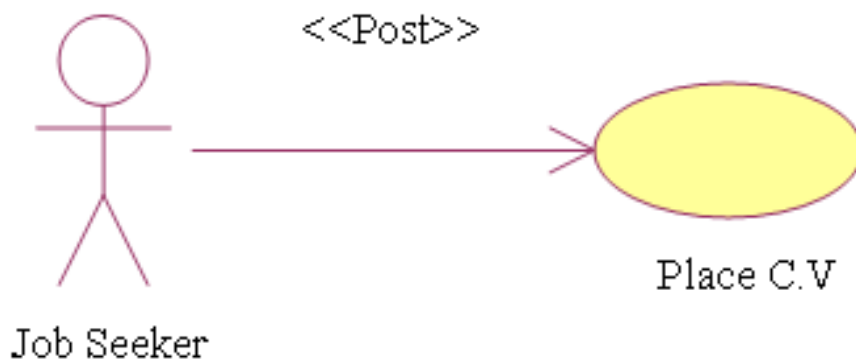
**Figure 2: Use case diagram of searching a job by job seeker**

#### **3.1.1.3 C.V Management**

The C.V of job seeker can be managed in following ways.

- He/She can create online C.V
- He/She can copy and paste text while creating online C.V.
- He/She can upload C.V in PDF and doc format.

The use case diagram is shown below.



**Figure 3: Use case diagram of managing a C.V by Job Seeker**

#### **3.1.1.4 Application for Job**

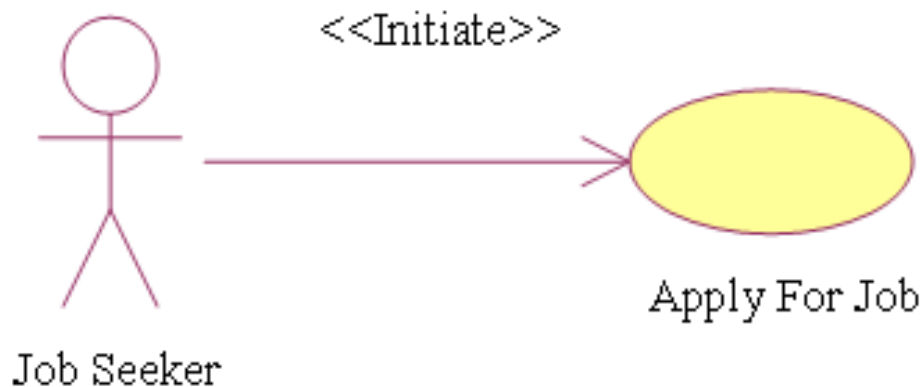
The employee can apply job in following steps.

- He/She will search a job.
- He/She will select a job.



- He/She will press a button “Apply for this job”. The employee C.V will be automatically sent to this job.
- Cover letters are available for employees to apply for a job.
- Employee will also have an option i.e. “Quick Apply”. By enabling this option, the C.V of that employee will be automatically sent to related job as it is posted by any job provider.
- Once an employee apply for a job. He/She can not apply again for that particular job.

The use case diagram is given as:



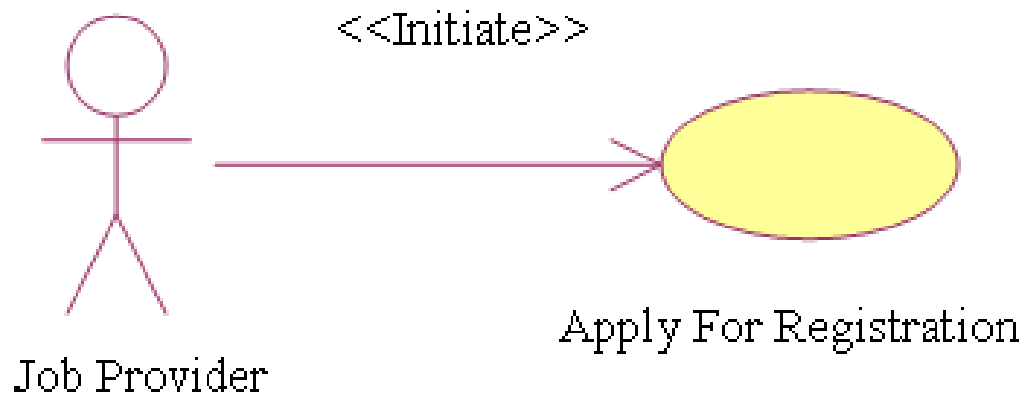
**Figure 4: Use case diagram of applying for job by Job Seeker**

### 3.1.2 Job Provider

#### 3.1.2.1 New Job provider Registration

Any job provider is allowed to create his/her account on this portal if constraints are met. The use case diagram is given in figure 5.





**Figure 5: Use case diagram of new job provider registration**

The job provider will open this portal and click on signup to create his/her company account. He/She will add the following information for the registration.

- Employer name.
- Employer post/designation e.g. HR Manager, Director, CEO and etc.
- Company name
- Company full address including location.
- Type of business (i.e. either this is some Govt. company, some military company, some private company and etc).
- Available Departments of company like accounting development and etc.
- Total number of employees.
- Working/Aim of company.
- Company contact information (Like phone No., e-mail address, web page and etc.).

### ***3.1.2.2 New Job posted by job provider (company)***

Following information are needed to post a job on the portal.

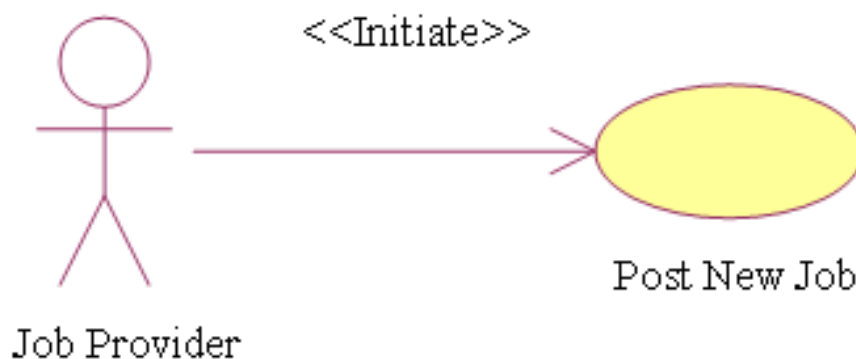
- Provide job category (i.e. the job is full time, part time, internship or etc.).
- Provide job title.
- Provide salary upper/lower limit.





- Job timings.
- Traveling (like for marketing jobs, the job provider can provide the locations to visit for marketing or in some jobs employees can go outside the city for office work. So company can provide these locations).
- Provide the city/location of the job (i.e. in which city the employee will do job after selection).
- Provide required qualification of applicant.
- Provide the experience of applicant.
- Provide description about job.

The use case diagram is given below.



**Figure 6: Use case diagram of new job posting by job provider**

### **3.1.2.3 Searching employee by job provider (company)**

Job provider can also search employees for his/her company. Following information is needed to search an employee.

- Search by specific area.
- Search by specific degree.
- Search by qualification.
- Search by experience.

The use case diagram is given as:



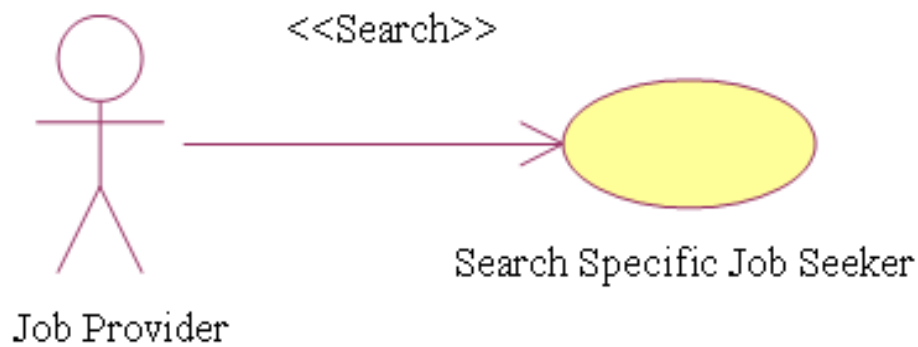


Figure 7: Use case diagram of searching employee by job provider

## 3.2 Logical Database Requirements

The database requirements will be elaborated in the design phase. In this document only general information related to the database requirements are given below:

### 3.2.1 Types of Information

The basic information stored in the databases will be in the form of tables containing information about all the employees and employers.

### 3.2.2 Frequency of Use

The DBMS will be used frequently 24 hours in a day.

### 3.2.3 Accessing Capabilities

Every one is allowed to see the jobs posted on the job portal. But only those people can apply for job that has login account on this portal. Similarly, only those companies are allowed to post jobs that have login account on this portal.

### 3.2.4 Data Entities and their relationships

The Entities and the relations among them will be designed in the design phase.

### 3.2.5 Integrity Constraints



DBMS will store the data in compatible formats, data will be logically connected. The Database Administrator will define various records integrity constraints.

### **3.3 Software System Attributes**

The nonfunctional attributes of the system are described below:

#### **3.3.1 Reliability**

The system should be reliable. This software should not crash frequently.

#### **3.3.2 Availability**

The system shall be available to all users 24/7.

#### **3.3.3 Security**

The Security is major issue; the application software should be secure. Security is important because the application software is web based. Security will be provided through Access Control Mechanism. The application software will have secure password authentication and will prevent illegal access to Members accounts.

#### **3.3.4 Maintainability**

The Job Portal will be designed in such a way that it can be maintained in future.

#### **3.3.5 Usability**

User interface is not much of concern because only the basic information is required to use this portal. E-mail Alerts will be sent to users who will subscribe to it so that they can remain up to date with the system.

#### **3.3.6 Scalability**

The system scope is limited only for jobs so scalability in software scope is not a big issue.



### **3.3.7 Cost Effective**

System will be client independent so there is no need to install this system at each client machine rather this system will be installed at server and every user will be able to access it, but there may be some expenditure on company advertisement on this portal.

