

# Software Requirements Specification

Version 1.0

<<Annotated Version>>

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Jobs' Search Engine

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Submitted in Partial Fulfillment  
of the Requirements of  
Fourth Year Software Engineering  
Subject

<<Any comments inside double brackets such as these are *not* part of this SRS but are comments upon this SRS example to help the reader understand the point being made.

Refer to the SRS Template for details on the purpose and rules for each section of this document.

This work is based upon the submissions of the Spring 2004 CS 310. The students who submitted these team projects were Thomas Clay, Dustin Denney, Erjon Dervishaj, Tiffanie Dew, Blake Guice, Jonathan Medders, Marla Medders, Tammie Odom, Amro Shorbatli, Joseph Smith, Jay Snellen, Chase Tinney, and Stefanie Watts. >>

## **Table of Contents**

<<To Be Added(With The Index of The SRS) At Later SRS Updates As Required By The SE2 Teacher Along The Semester and Before Submission of The Jobs' Search Engine Application as a Fourth Year Project After The Semester's Exams are Finished>>



## **1.0. Introduction**

### ***1.1. Purpose***

The purpose of this document is to present a detailed description of the Jobs' Search Engine. It will explain the purpose and features of the Application, the interfaces of the system, what the system will do, the constraints under which it must operate and how the system will react to external stimuli. This document is intended for both the Teacher and the developers(Students) of the system and will be proposed to the Github Society and Miss Nahla for its approval.

### ***1.2. Scope of Project***

This system will be designed to maximize the people's productivity by providing tools to assist in finding and providing jobs' opportunities, which would otherwise have to be performed manually. By maximizing work efficiency and production the system will meet the normal citizen's needs while remaining easy to understand and use.

More specifically, this system is designed to allow the normal unemployed person to find a job in a post-war country using the benefits of the Internet through the pandemic of COVID-19 which forbade most people from going outside their homes and search for jobs by themselves while helping employers announce for openings in their companies or stores without the old "Wanted Employee" paper glued to walls all over the streets.

The software will facilitate communication between employers and Future employees via providing a contact us service. Preformatted reply forms are used in the applying process through the system to provide a uniform review process. the location of these forms is configurable via the application's maintenance options.

The system also contains a relational database containing a list of Available Jobs, Cities, Companies and Stores.

### ***1.3. Glossary***

<b>Term</b>	<b>Definition</b>
Job Offer	The document that is tracked by the system; it is a narrative that describes the job and its specifications.
Employer	Person submitting a job offer to be reviewed by probable employees, and examines a job application and has the ability to either accept or decline it.
Database	Collection of all the information monitored by this system.
Searcher	Person who searches for job offers, sends own application for review, and makes semi-final judgments for offers.
Field	A cell within a form.
Historical Society Database	The existing membership database (also HS database).
Member	A member of the Historical Society listed in the HS database.
Review	A written recommendation about the appropriateness of a searcher for approval; must include contact information.
Software Requirements Specification	A document that completely describes all of the functions of a proposed system and the constraints under which it must operate. For example, this document.
Stakeholder	Any person with an interest in the project who is not a developer.
User	Employer or Searcher.

#### ***1.4. References***

IEEE. *IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications*. IEEE Computer Society, 1998.

#### ***1.5. Overview of Document***

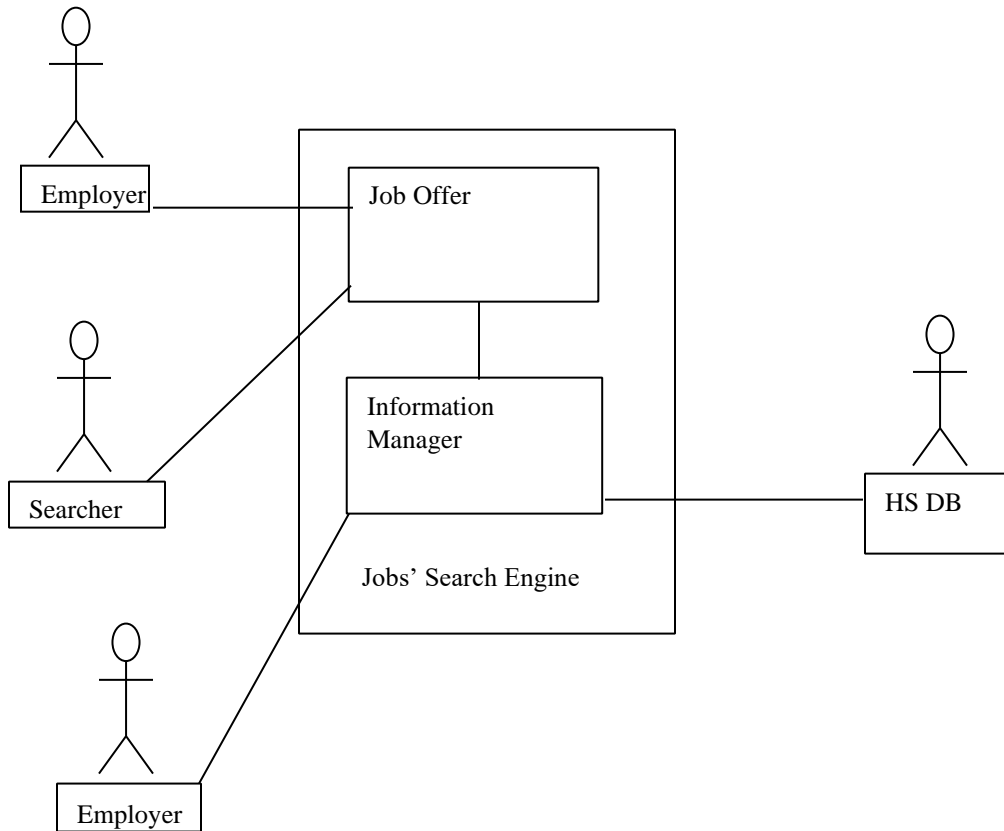
The next chapter, the Overall Description section, of this document gives an overview of the functionality of the product. It describes the informal requirements and is used to establish a context for the technical requirements specification in the next chapter.

The third chapter, Requirements Specification section, of this document is written primarily for the developers and describes in technical terms the details of the functionality of the product.

Both sections of the document describe the same software product in its entirety, but are intended for different audiences and thus use different language.

## 2.0. Overall Description

### 2.1 System Environment



**Figure 1 - System Environment**

The Jobs' Search Engine has two active actors and one cooperating system. The Employer, Searcher accesses the Job Offer through the Internet. There is no Employer-Searcher communication outside of the system before the response of the Employer to the Searcher's application is an "Accept". There is a link to the (existing) Historical Society.

<< Keeping the Jobs' Search Engine a one component as a whole, is an example of its simplicity and ease of use. >>



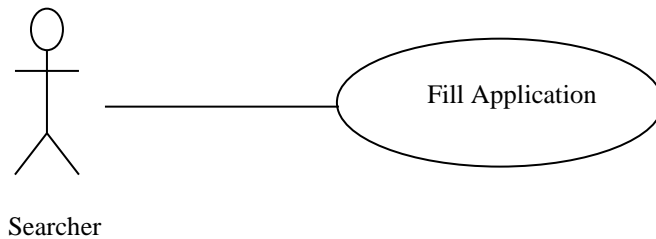
## 2.2 *Functional Requirements Specification*

This section outlines the use cases for each of the active readers separately. The employer and the searcher are main actors in this system.

### 2.2.1 Searcher Use Case

Use case: **Fill Job Application**

**Diagram:**



#### **Brief Description**

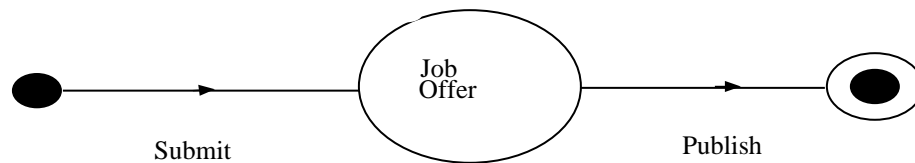
The Searcher accesses the System, searches for a job offer and fill a job application to send it to the Employer.

#### **Initial Step-By-Step Description**

Before this use case can be initiated, the Searcher has already created an account in the system.

1. The Searcher chooses to search by monthly salary, work location, work hours, job description and/or type of contract.
2. The system displays the choices to the Searcher.
3. The Searcher selects the offer desired.
4. The system presents an empty application form.
5. The Searcher fills with his/her own required information.
6. The system sends the application to the Employer awaiting approval.

**Xref:** Section 3.2.1, Fill Job Application



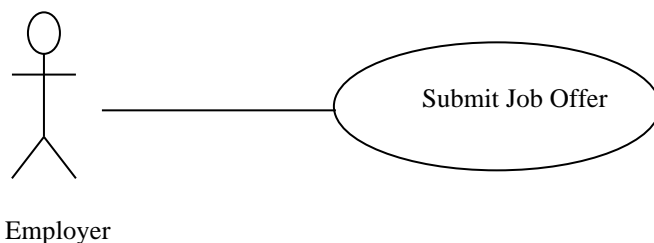
**Figure 2 --Job Offer Submission Process**

The *Job Offer Submission Process* state-transition diagram summarizes the use cases listed below. An Employer submits a job offer for searchers. The Searcher searches for it in the system and fills an application for it and sends it to the Employer. Either the Application is accepted or declined, If it is accepted, possibly after a revision , the Employer sends contact information of the company/store to the Searcher. Then The Searcher must contact the Employer to set an interview date for face-to-face evaluation.

### 2.2.2 Employer Use Case No Special Cases.

Use case: Submit Job Offer

**Diagram:**



#### **Brief Description**

The employer submits a job offer containing all the required details of the job.

#### **Initial Step-By-Step Description**

Before this use case can be initiated, the Employer has already connected to the System by Signing-up.

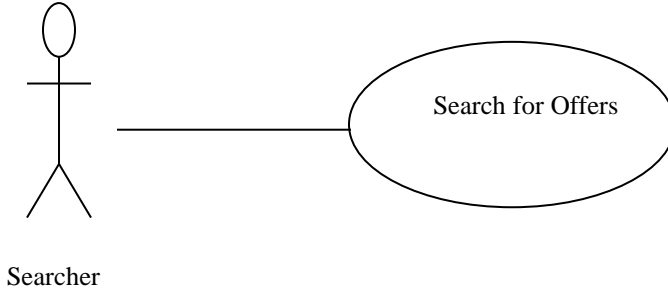
1. The Employer chooses the *Submit Offer* button.
2. The System uses the *insert* SQL statement to add the offer to the jobs' system database.
3. The Employer fills in the Job Description Form.
4. The System generates and sends an email acknowledgement to the Employer.

**Xref:** Section 3.2.2, Communicate

### 2.2.3 Searcher Use Case

Use case: Search for Offers

**Diagram:**



#### **Brief Description**

The searcher searches for available jobs using filtered search.

#### **Initial Step-By-Step Description**

Before this use case can be initiated, the Searcher has already connected to the System by Signing-up.

1. The Searcher selects the *Search* icon.
2. The System provides the interface to choose search filters from.
3. The Searcher selects his/her own job preferences and chooses the *Search* button.
4. The System scans the System's jobs' database for suitable offers.
5. The Searcher selects the desired offer.

**Xref:** Section 3.2.2, Communicate

## **2.3 User Characteristics**

The Searcher is expected to be able to use a search engine and to enter his information.

The main screen of the Jobs' Search Engine will have the sign in/up function.

The Employer and Searcher are expected to be Internet literate and to be able to use email.

The detailed look of these pages is discussed in section 3.2 below.

## 2.4 *Non-Functional Requirements*

The System's Database will be on a server with high speed Internet capability.

Access is already installed on mobile phones and is an Android or an IOS operating system.

## 3.0. Requirements Specification

### 3.1 *External Interface Requirements*

The only link to an external system is the link to the Historical Society (HS) Database to verify the membership of an Employer or a Searcher.

Systems are member's name, password, email address (an optional field for the HS Database), type of account (an Employer or a Searcher), and phone number.

The *Sort Results* use case sends the Selected Field to the HS Database and a Sorted List is returned ordering offers by the desired field. The *Apply* use case requests an application form to be filled and sent to the Employer. It returns an Interface of the form's empty template to the Searcher. The *Show Notifications* use case returns a list of job applications from various applicants to a certain offer. The *Review Application* use case returns the selected application to be reviewed and either accepted or rejected by the Employer.

### 3.2 *Functional Requirements*

The Logical Structure of the Data is contained in Section 3.3.1.

#### 3.2.1 Search Job Offer

<b>Use Case Name</b>	Search Job Offer
<b>XRef</b>	Section 2.2.1, Search Job Offer SDD, Section 7.1
<b>Trigger</b>	The Searcher assesses the Job Offers; List

<b>Precondition</b>	The Web is displayed with grids for searching
<b>Basic Path</b>	<ol style="list-style-type: none"> <li>1. The Searcher chooses how to search the System. The filters are by Salary Range, Work Location, Work Field, Work Hours, Contract Type(Permanent or Temporary).</li> <li>2. If the search is wide search, the system creates and presents a list of job offers in the database. The list consists of offers each fulfills at least on of the selected filters' selections.</li> <li>3. The Searcher selects a job offer.</li> <li>4. The system creates and presents an application form.</li> <li>5. The Searcher fills in the form.</li> </ol>
	<ol style="list-style-type: none"> <li>6. The system displays the Full Application to the Searcher.</li> <li>7. The Searcher chooses to send or edit the form and then send it to the Employer.</li> </ol>
<b>Alternative Paths</b>	<p>In step 2, if the Searcher selects to search narrow search, the system creates and presents a list of job offers that each fulfills all the selected filters and requirements chosen by the Searcher in the database, Return to step 5.</p> <p>In step 2, if the Searcher selects to search an unfiltered search by Work Field(for example), the system presents a dialog box to enter the work field as a keyword.</p> <ol style="list-style-type: none"> <li>3. The Searcher enters a keyword.</li> <li>4. The system searches the Abstracts for all offers with that keyword and creates and presents a list of all such offers in the database. Return to step 5.</li> </ol>
<b>Postcondition</b>	The filled form is sent to the Employer's account's notification list.
<b>Exception Paths</b>	The Searcher may abandon the search at any time.
<b>Other</b>	The categories list is generated from the information provided when the offer is published and not predefined in the System.

### 3.2.3 Publish Job Offer

<b>Use Case Name</b>	Publish Job Offer
<b>XRef</b>	Section 2.2.4, Publish Job Offer SDD, Section 7.11
<b>Trigger</b>	The Employer selects to transfer a job offer to the system's database.
<b>Precondition</b>	The Employer has accessed the System's main screen.

<b>Basic Path</b>	<ol style="list-style-type: none"> <li>1. The system creates and presents a template of a job offer to be filled with the job's details by the Employer.</li> <li>2. The Editor fills the template to publish.</li> <li>3. The system accesses the Online Database and transfers the offer's information to the System's database.</li> <li>4. The offer is now available for Job Searchers to look up and review.</li> </ol>
<b>Alternative Paths</b>	None.
<b>Postcondition</b>	The offer is properly transferred.
<b>Exception Paths</b>	The Employer may abandon the operation at any time.
<b>Other</b>	None.

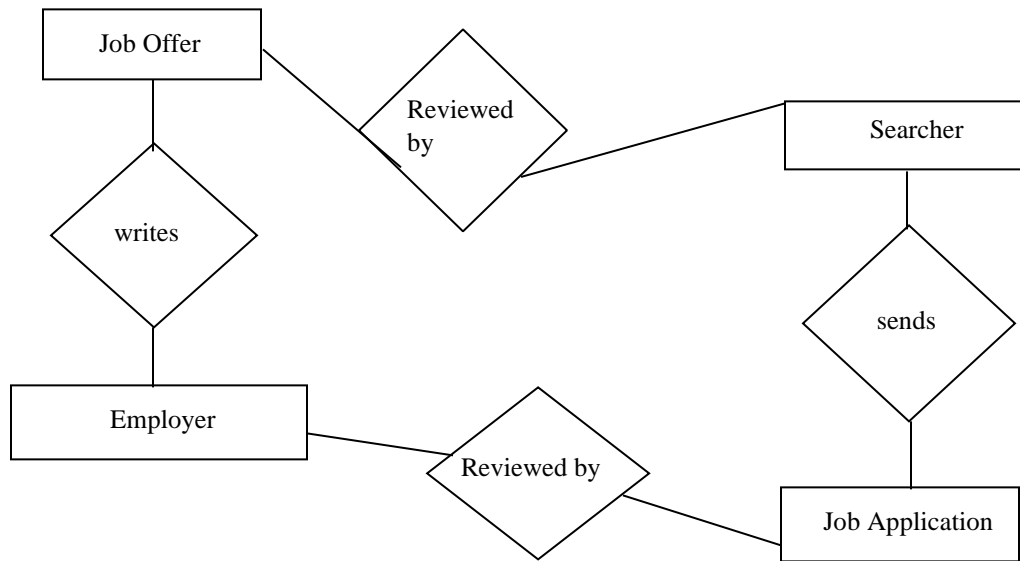
### 3.2.12 Accept Searcher's Application

<b>Use Case Name</b>	Accept Searcher's Application
<b>XRef</b>	Section 2.2.4, Accept Searcher's Application SDD, Section 7.12
<b>Trigger</b>	The Employer selects to accept an application offer from the Searcher.
<b>Precondition</b>	The Employer has accessed the account's notification screen.
<b>Basic Path</b>	<ol style="list-style-type: none"> <li>1. The system provides a list of all job applications provided for this offer ordered from oldest to newest.</li> <li>2. The Employer selects an application.</li> <li>3. The system displays the application with the information entered by the searcher and requires that the Employer confirm the acceptance or rejection.</li> <li>4. The Employer confirms the acceptance.</li> </ol>
<b>Alternative Paths</b>	None.
<b>Postcondition</b>	The offer is removed from the database and a response is sent to the Searcher.
<b>Exception Paths</b>	The Employer may abandon the operation at any time.
<b>Other</b>	Find out from the Employer to see if the response needs any additional details.

## 3.3 Detailed Non-Functional Requirements

### 3.3.1 Logical Structure of the Data

The logical structure of the data to be stored in the internal Article Manager database is given below.



**Figure 4 - Logical Structure of the Job Offer Data**

The data descriptions of each of these data entities is as follows:

#### **Employer Data Entity**

<b>Data Item</b>	<b>Type</b>	<b>Description</b>	<b>Comment</b>
Name	Text	Name of Employer	
Email Address	Text	Internet address	
Password	Text	A unique password	
Company Name	Text		
Type of Business	Text		
Location	Text	Governate, City	
Offer	Pointer	Offer entity	May be several
Account Type	Category	Employer or Searcher	Only the Two

#### **Searcher Data Entity**

<b>Data Item</b>	<b>Type</b>	<b>Description</b>	<b>Comment</b>
Name	Text	Name of Searcher	
Phone Number	Integer	phone number of The member	
Password	Text	A unique password	
Email Address	Text	Internet address	
Offer	Pointer	Offer entity of	May be several

Application	Pointer	Application entity	Information of the Searcher
Criminal History	Text	Comments on past legal Problems	
Account Type	Category	Employer or Searcher	Only the Two
Special Skills	Text	i.e. Photoshop, another languages.	
Educational Achievement	Category	Bachelor, College.	Includes Major.
Car Type	Category	Pick-up, Taxi or a truck.	May not Have a Car.

#### **Application Data Entity**

<b>Data Item</b>	<b>Type</b>	<b>Description</b>	<b>Comment</b>
Job Offer	Pointer	Offer entity	
Searcher	Pointer	Searcher entity	Single Searcher
Date Sent	Date	Date sent to Employer	
Returned	Text	Either Accepted or Rejected.	When Accepted Can Include Review Date and Further Notes.

#### **Offer Data Entity**

<b>Data Item</b>	<b>Type</b>	<b>Description</b>	<b>Comment</b>
Position	Text	Position of Job	
Employer	Pointer	Employer entity	Name of Employer
Company	Text	Name of Company	Not a pointer to an Employer entity
Location	Text	Governate, City.	
Minimum Salary	Double	Minimum Salary of Job Position.	
Maximum Salary	Double	Minimum Salary of Job Position.	
Category	Text	Area of content	May be several
Contract Type	Category	Permanent or Temporary.	
Work Hours	Text	Start and Finishing Time Daily.	Less than 12 Hours a day



### 3.3.2 Security

The server on which the System's Database resides will have its own security to prevent unauthorized *write/delete* access. There is no restriction on *read* access. The use of email by an Employer or Searcher is on the client systems and thus is external to the system.



