Software Requirements Specification

For

Online Training and Placement System

Version 1.0 approved

Prepared by

Dhaval Mehta, Shreya Monpara

Dharmsinh Desai University

04-10-2016

Table of Contents

Table of Contents ii

Revision History ii

1. Introduction 2

1.1 Purpose 2

1.2 Document Conventions 2

1.3 Intended Audience and Reading Suggestions 2

1.4 Product Scope 2

1.5 References 2

2. Overall Description 2

2.1 Product Perspective 2

2.2 Product Functions 2

2.3 User Classes and Characteristics 2

2.4 Operating Environment 2

2.5 Design and Implementation Constraints **Error! Bookmark not defined.**

2.6 User Documentation 2

2.7 Assumptions and Dependencies **Error! Bookmark not defined.**

3. External Interface Requirements 2

3.1 User Interfaces 2

3.2 Hardware Interfaces 2

3.3 Software Interfaces 2

3.4 Communications Interfaces 2

4. System Features 2

4.1 System Feature 1 **Error! Bookmark not defined.**

4.2 System Feature 2 (and so on) **Error! Bookmark not defined.**

5. Other Nonfunctional Requirements 2

5.1 Performance Requirements 2

5.2 Safety Requirements 2

5.3 Security Requirements 2

5.4 Software Quality Attributes 2

5.5 Business Rules **Error! Bookmark not defined.**

6. Other Requirements Error! Bookmark not defined.

Appendix A: Glossary 2

Appendix B: Analysis Models 2

Appendix C: To Be Determined List 2

Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
|  |  |  |  |
|  |  |  |  |

# Introduction

## Purpose

The purpose of this document is to present a detailed description of online training and placement system. It will explain the purpose and features of the system, the interfaces of the system, what the system will do, the constraints under which it must operate and how the system will react to the different users. This document is intended for users, developers, and stakeholders.

## Document Conventions

We have followed IEEE standard to prepare this document. This document is formatted in natural language sentence.

## Intended Audience and Reading Suggestions

This document can be referred by software developers, documentation writers, project manager and the users.

## Product Scope

This project will be developed to provide an online automated web application to the training and placement department of colleges. The system will be used by students, admin, and recruiters. Unlike other placement systems, this system provides the facility of automatic registration of students for placement. Admin can register, update or unregister students for placement activities. Admin can register and manage various companies coming for placement. The system will generate eligible students list and give it to the recruiters. The system will automatically send notifications about upcoming companies to the students. The system will also provide the facility to generate reports about placement activities. This system performs most of the features automatically, which would otherwise have to be performed manually.

## References

IEEE format to write Software Requirement Specification.

# Overall Description

## Product Perspective

Online Training and placement system is an independent*,* self-contained web application which provides an easy and reliable placement system to colleges. This product is intended to be a full replacement for the manual placement system. It will be used by the students, faculties and recruiters.

## Product Functions

* Authentication of the users.
* Student registration and management.
* Company registration and management.
* Shortlist students based on company’s criteria.
* Notify students about upcoming companies.
* Student registration for an interview.
* Placement activities management
* Report generation of current placement status.

## User Classes and Characteristics

The major User classes in the System would be:

1. Administrator users

* The Admin users are main users of the system. Training and placement officers will become admin users of the system.
* Admin users have all privileges.
* They will manage placement activities.

2. Student users

* Student users are students that study in college. Admin user will register them for the placement.
* Students can view and update their personal details also they can register them for the interviews.

3. Recruiter users

* These users are representatives of the company.
* Recruiter users can generate eligible students list by specifying criteria.

## Operating Environment

This is a web-based system and hence will require a graphical operating environment for a client and server both sides.

## Design and Implementation Constraints

There are no design and implementation constraints.

## User Documentation

A well-documented user manual will be provided after the completion of the project to delineate all the features of administration and other users account.

# External Interface Requirements

## User Interfaces

The website should work and be tested for Firefox, Google Chrome. The website will be fully compatible with any modern web browsers that support JavaScript.

## Hardware Interfaces

The device should be enabled with the Internet.

## Software Interfaces

**Server Side:**

* Operating system: Any operating system which has a graphical user interface
* Web Server: Tomcat 8 or higher version
* Database: MySQL 5.5 or higher version
* Programming Language: java 8 or higher version

**Client Side:**

* The user’s browser should support HTML5 and JavaScript and cookies must be enabled for a satisfactory user experience.

## Communications Interfaces

The system will require the HTTP + SSL protocol to provide a secure communication interface over the internet.

# System Features

## The system provides facility to authenticate users.

**Description and Priority**

The system will allow 3 types of users to access system.

1. Admin users
2. Student users
3. Recruiter users

Its priority scale is 10.

**Stimulus/Response Sequences**

(Stimulus) When a user sends request first time for the system will show the login page.

(Response) The system will authenticate the user. The system will redirect the user to his home page based on his user’s role in the system.

**Functional Requirements**

### The system will provide a login dialog box to the user.

### The system will validate the user.

Input: Login credentials

Output: home page, Error message

Processing: System will fetch user’s credentials from the database and verify with provided credentials. If both match, the system will redirect the user to the home page otherwise system will show an error message.

## The system provides facility to manage students’ details.

**Description and Priority**

The system will allow admin to create new student users. The system will take information of students in excel file and create users automatically. The system allows the admin users to update student’s details and to unregister student. The system will allow the admin user to change the password of users. Student users can update only personal information. Its priority scale is 9.

**Stimulus/Response Sequences**

(Stimulus)The administrators will select branch, graduation program and excel file containing details of students. After selecting all details, administrator will click on “create” button.

(Response) The system inserts details of students to the database and shows no of users are created. The system will give pdf list of username and password list of generated user.

(Stimulus)The administrator will update information throw webform. After inserting all details, administrator will click on “update” button.

(Response) The system inserts details of students to the database and shows a confirmation message to admin.

**Functional Requirements**

### The system will provide the facility of automatic registration.

Input: Excel file containing students’ details

Output: Pdf file containing students’ username and password.

Processing: System will parse excel file and make an entry into the database. The system will generate unique username and password for each student. The system will give this information back to admin as a pdf file.

### The system will provide facility to update students’ details.

Input: Student details, student id

Output: A confirmation message

Processing: System will take student id from admin and shows students details. Admin will update it and the system will update information in the database.

### The system will provide the facility to unregister students.

Input: Student id

Output: A confirmation message

Processing: System will take student id from admin and delete it from the database.

## The system provides facility to manage companies’ details.

**Description and Priority**

The system will allow admin to register a new company for placement. The system will take information of company from admin and register company. The system will allow admin to modify company details and unregister company. Its priority scale is 9.

**Stimulus/Response Sequences**

(Stimulus) The administrator will fill information of the new company. After filling all details, the administrator will click on “register” button.

(Response) The system inserts details of the company into the database and generates unique company ID for it. System display company ID on screen.

(Stimulus) The administrator will insert new information of the company. After filling all details, the administrator will click on “update” button.

(Response) The system inserts details of the company into the database and gives a confirmation message.

**Functional Requirements**

### The system will provide the facility to register a company for placement.

Input: Company Details

Output: company ID

Processing: System will take information from admin and make an entry in the database. The system will generate a unique id for the company and shows it on screen.

### The system will provide the facility to update company’s information.

Input: company details

Output: A confirmation message

Processing: System will take company id from admin and shows company details. Admin will update it then the system will store information in the database.

### The system will provide the facility to unregister company for placement.

Input: Company id

Output: A confirmation message

Processing: The system will take company id from admin and delete it from the database.

## System provides facility to manage Placement activities.

**Description and Priority**

The system will show company list to users. Students can register for the upcoming company. Admin can add placed student’s details into the database. Its priority scale is 9.

**Stimulus/Response Sequences**

(Stimulus) The user will click on “view Companies” button. The system will fetch company list containing company’s name and company’s description from database.

(Response) The system will show a list of all company name and description. The system provides a button named “View Full Details”. Using that button, the user can read full information of the company.

(Stimulus) The user will click on “View Full Details” button. The system will fetch full details of the company.

(Response) The system will show a list of all company name and description. The system provides “View Full Details” button, using it the user can read full information of the company. The system gives registration button.

(Stimulus) Students will click on “Registration” button. The system will check the eligibility of student. If it is eligible for that company, then it will register the student.

(Response) The system will show a confirmation message.

(Stimulus) The system will give form to insert placement information. Admin will fill the form and submit it.

(Response) The system inserts placement information to the database and shows a confirmation message.

**Functional Requirements**

### The system will provide the facility to view upcoming companies.

Input: view company list request

Output: company list

Processing: System will fetch company list containing company’s name and company’s description from database.

### The system will provide the facility to view Company’s full details

Input: company ID

Output: company details

Processing: System will fetch company’s full details from the database.

### The system will provide to the facility to students to register them for an interview.

Input: registration request

Output: A confirmation message

Processing: System will verify student eligibility for the company and in company’s full details from the database.

### The system will provide to the facility to insert placement details.

### Input: Placed student’s details

Output: A confirmation message

Processing: System will insert student’s placement information into the database.

## The system provides facility to generate reports.

**Description and Priority**

The system will allow admin to generate a report regarding placement.

**Stimulus/Response Sequences**

(Stimulus) The administrator will insert criteria through web-form.

(Response) System will give pdf file containing student placement information

**Functional Requirements**

### The system provides facility to generate reports.

Input: selection criteria

Output: student details who fulfill given criteria in pdf format.

Processing: System will fetch records who fulfill all criteria and generate pdf file containing these records.

# Other Non-functional Requirements

## Performance Requirements

The website should be hosted on a server that can provide adequate response time. College students tend to have short attentions spans, so a slow server would not be satisfactory for this application. The website must serve at least 50 simultaneous users under normal operating conditions.

## Safety Requirements

Information transmission should be securely transmitted to the server without any changes in information.

## Security Requirements

* The software, i.e. the website should be strong enough to avoid hacking through XSS or SQL vulnerability.
* Nobody should be allowed to tamper with data. It should be made sure that only users who are given specific rights can access data.

## Software Quality Attributes

* **Availability:** If the internet service gets disrupted while sending information to the server, the information can be sent again.
* **Scalability**: If the number of users of the system increases, it must not affect system performance.
* **Reliability:** As the system deals with confidential and important information of college and students, it must be made sure that the system is reliable in its operations and for securing the sensitive details.

Appendix A: Glossary

* T.P.O – Training and placement officer

Appendix B: Analysis Models

<Optionally, include any pertinent analysis models, such as data flow diagrams, class diagrams, state transition diagrams, or entity-relationship diagrams.>

Appendix C: To Be Determined List

<Collect a numbered list of the TBD (to be determined) references that remain in the SRS so they can be tracked to closure.>