Software Requirements Specification

for

course enrollment System

Version 1.0 approved

Prepared by

Muiez Arif(BSSE02153166)

Taimoor Mushtaq(BSSE02153139)

Haris Akmal(BSSE02153163)

Ali riaz(BSSE02153075)

Muhammad Damil(BSSE02153171)

Date: April 8,2018

**Course enrollment.**

**Software Requirements Specification document:**

**Table of contents:**

1. Introduction
2. Overall description
3. External interface requirements
4. System features
5. Non-functional requirements
6. Other requirements
7. **Introduction**
   1. **purpose:**

The course enrollment system v1 is a complete sub-system with is first release v1. It will integrate with the university management system.

It can allow students to enroll their courses, view their attendance, view their grades etc also from teacher’s aspect, teachers can upload, edit and delete records within constraints.

* 1. **Document convention:**

In this document arial font will be used and the font size for headings is kept fixed as 14 where the remaining stuff will be 12. Important areas are kept is inverted commas and be highlighted.

* 1. **Intended audience and reading suggestions:**

This document is mainly for the developers and the technical and academic staff of UOL and student representatives of the University.

* 1. **project scope:**

The system will capture information about student’s personal details lectures and the courses.Storing updating and retrieving in a fast and accurate way. The purpose of this is to guide developers in selecting a design that will be able to accommodate the full-scale application.

The system will be implemented in any college and university level.

1. **Overall description**

**2.2 product perspective:**

The system will be operate in university environment. This environment  
has another systems that will interact with this system so we need interfaces  
between this systems. The product will automate various tasks associated  
with handling student details and better organizing the stored information and optimum performance, thus helping the Colleges to ensure smooth working of these processes.

Student information system

Academic management system

Registration system

University management system

Database management system

**2.2 Product features:**

Our system has two types of accessing modes,

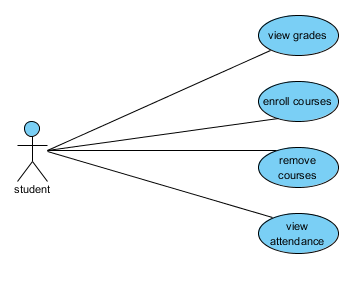
1. Administrator  
2. User  
 2.1 Teacher  
 2.2 Student

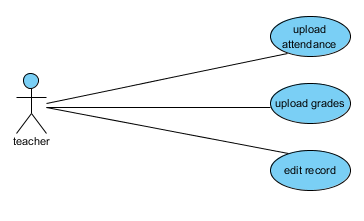
**i) Administrator:**

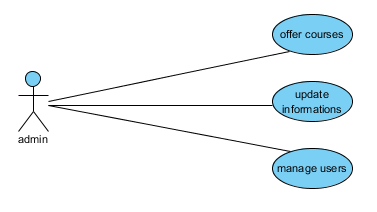
The system is managed by Administrator. Administrator has to update and monitor the registered student details, provide register number for all students, assign each  
student a course etc., Administrator can update his profile, and also can give help to the  
teachers and students.

The system must be able to perform the following functionalities.

* 1. The system allows students to enroll courses, remove courses, view grades and view their attendance.
  2. The system allows teachers to upload grades, attendance and able to modify it.







**2.3 user classes and characteristics:**

The **student** is expected to be Internet literate Once he/she can log in the  
system and navigate between WebPages he/she can use basic functionality of  
the system. **Instructor** expected to be internet literate and should be able use more complex functionality of the system.

**2.4 operating environment:**

* The system must run in windows operating system environment.

**2.5 design and implementation constraints:**

* The system must be run on corei7 or later technology for its better performance.
* The language will be English.
* The system must be delivered before December 30,2018.
* The maintenance within 3 months will be served for free.

**2.6 User Documentation:**

The source code is also provided to user along with the system and the system should also be integrated with the existing system.

**2.7 Assumptions and Dependencies:**

• We assume that the computers that will use the software will be part of the  
 college LAN.  
• Users with administrator access should be careful in deleting or modifying any  
 information knowingly or unknowingly which will lead to inconsistency of the  
 database.  
• The end users of this software are assumed to have basic level of computer  
 knowledge.

# 3.External Interface Requirements

## 3.1-User Interfaces

The student information system SIS will have following user friendly and menu driven interfaces:

* Student Login: To allow entry to authorized students only by validating the login is and password of the specific user.
* University Details: To maintain the university’s detail.
* Program details: To maintain program details.
* Course detail: To maintain courses detail of the program.
* Grade Detail: To maintain a grade for the respective course or associated course.
* Transcript detail:To maintain semester SGPA as well as overall course CGPA information.
* Faculty details: To maintain the faculty details of the program.
* Attendance: To maintain the record of attendance for the specific user.
* Teacher login: Different login for teachers.
* Grade upload: To make it easier for teachers to upload grade of specific student.
* Attendance upload:To make it easier for teacher to upload attendance of students.

## 3.2Hardware Interfaces

# Screen resolution of at least 640x480 or above.

# Support for printer (dot-matrix, desk-jet, laser-jet ).

# Computer system will be in networked environment as it is a multi-user system.

## 3.3-Software Interfaces

* Any Operating system such as Windows, linux, android, ios, etc.
* HTML5,BOOTSTRAP,JQuery,AngularJS for designing front-end.
* SQL server 2015 for maintaining the records for users.
* PLATFORM: PHP LARAVEL Framework.
* IDE: Sublime text 3.

## 3.4-Communications Interfaces

FTP Filezilla will be used to send the files of the web based portal to the server which is registered by the customer.

**4. System features:**

There are some of the system features required in our system. Some of them are defined below

1. **Attendance**

*Description and priority:*

Attendance can be uploaded by the teacher and viewed by the student. The priority of attendance feature would be high so that it could be more important and good for users and mostly used. I'll recommend it 30 percent.

*Stimulus:*

The main cause of attendance feature is to have an idea of students presence in class and the allowance to sit in paper or not depends upon the attendance.

*Functional requirements:*

* Teacher upload attendance on site.
* Student can view attendance on the site.
* Attendance should be locked in last week of semester.

1. **Enrollment**

*Description and priority:*

Main use of this feature is to get student enrolled in new semester. I'll give it 30 percent priority because it's also very much usable feature

*Stimulus*:

Main cause is to get admin and university know that what student wants to study in next semester.

*Functional requirements:*

* Student get enŕolled
* Selection of sections
* Clash between course timings
* Check pre post requisite.

1. **Marks**

*Description and priority:*

Teacher can upload marks and student can view marks. I will rate its priority to 20 percent as per client requirement.

*Stimulus:*

Main use of this feature is to get the record save against every enrolled student to gather a finalized result.

*Functional requirements:*

* Marks upload by teacher.
* Student view marks uploaded by teacher.
* Send result to admin to get it locked.

1. **Transcript**

*Description and priority:*

Main use is to get the result of whole degree program till present on a single click.

*Stimulus* :

To get the final result of the student.

*Functional requirements:*

* Get result from admin approved by hod
* Show credit hours
* No others just detailed result.

1. **Academic calendar**

*Description and priority:*

To get the information of whole semester on a single click.

*Stimulus*:

A pre planned whole semester.

*Functional requirements:*

* Show calendar approved by admin
* No other requirements.
  1. **Performance requirements:**

The system must be interactive and the delays involved must be less .So in every action-response of the system, there are no immediate delays. In case of opening forms, of popping error messages and saving the settings or sessions there is delay much below 2 seconds, In case of opening databases, sorting questions and evaluation there are no delays and the operation is performed in less than 2 seconds for opening ,sorting, computing, posting > 95% of the files. Also when connecting to the server the delay is based editing on the distance of the 2 systems and the configuration between them so there is high probability that there will be or not a successful connection in less than 20 seconds for sake of good communication.

* 1. **Safety requirements:**

Information transmission should be securely transmitted to server without any changes in information. All the data should be secured so that the user could depend and believe in our system. Only the specific users or allowed person could be able to access the system data. Students could not be able to access teacher account and view. On other hand teacher can also access student attendance and result only.

* 1. **Security requirements:**

The main security concern is for users account hence proper login mechanism should be used to avoid hacking. The tablet id registration is way to spam check for increasing the security. Hence, security is provided from unwanted use of recognition software. Encoding decoding technique should be used where required so that there could be maximum security for our users.

* 1. **Software quality attributes :**

### Availability

If the internet service gets disrupted while sending information to the server, the information can be send again for verification. User should be asked about that and if user don’t want so get him logout.

### Security

The main security concern is for users account hence proper login mechanism should be used to avoid hacking. The tablet id registration is way to spam check for increasing the security. Hence, security is provided from unwanted use of recognition software.

### Usability

As the system is easy to handle and navigates in the most expected way with no delays. In that case the system program reacts accordingly and transverses quickly between its states.

**Flexibility:**

System should be easy to use and should be interactive to the user. Easier for the user so that he could depend and use our system.

**Robustness:**

System should take less time to recover from some error or some issues where it is stuck, more the time taken less would be usability and interaction.

**Reusability:**

System should be reusable so that it could be reused by the team of ours in coming future.

* 1. **Business rules:**

Customer believes that a typical employee or consumer should be granted default privileges only. A limited number of administrative users should be created to manage the paint data updates. Administrative users can give other users administrative access up to their own access level only.

**Other requirements:**

* It holds other requirements such as database requirements which leads to srs completion as
* Course enrollment system should have all idenfication record of courses
* Course enrolment system shall cover all fields of courses and retrieve data from database
* Database management system shall be oracle version 5.0 for query purpose.
* internationalization requirements, holds the adapting computer software to different languages, regional differences and technical requirements of a target locale.
* It holds the language compatibility with such as course enrollment system will be in chinese ,English ,japanesse and other languages as per demand.
* Legal requirements explains below:
* students are advised to check the curricular recommendations and **registration** updates frequently during the **registration** process for **course** updates.
* Courses enrolled will be up to the mark by hec.
* No duplicate course allocation.
* Only 6 courses at a time enrolled by act of university code of conduct.
* Copyrights of degree issues only selected courses to respective field within due degree time.