
Software Requirements Specification

for

Internship Web Management System

16/9/2020

Table of Contents

Table of Contents	1
Revision History	2
1. Introduction:	2
1.1 Purpose:.....	2
1.2 Document Conventions:.....	3
1.3 Project Scope	3
1.4 References.....	3
2. Overall Description.....	3
2.1 Product Perspective.....	3
2.2 User Classes and Characteristics.....	4
2.3 Operating Environment.....	4
2.4 Design and Implementation Constraints	4
2.5 Assumptions and Dependencies.....	4
3. System Features:	5
3.1 Import students from file:	5
3.2 Enter the students	5
3.3 Configure the schedule.....	6
4. Data Requirements:	7
4.1 Logical Data Model:	7
4.2 Data Dictionary	7
4.3 Reports:	8
4.4 Data Acquisition, Integrity, Retention, and Disposal	9
5. External Interface Requirements:	9
5.1 User Interfaces:.....	9
5.2 Software Interfaces:.....	9
5.3 Hardware Interfaces:	10
5.4 Communications Interfaces:	10
6. Quality Attributes:	10
6.1 Usability	10
6.2 Performance.....	10
6.3 Security.....	10
6.4 Safety.....	10
6.5 Availability	10
7) Internationalization and Localization Requirements:	11
8) Other Requirements:.....	11
Appendix A: Glossary.....	11
Appendix B: Analysis Models	11

Revision History

Name	Date	Reason for Changes	Version

1. Introduction:

Internship management system is designed as a web-based application system with multiple functionalities. It eliminate all the difficulties related to the manual system. An online internship management system works by allowing the university to deploy a web portal, to collect intern's presentation data, evaluate that data, make a feedback, and then provide the results with feedback to the presenter. It functions to interact easily with interns, employers, instructors, and dean office. The goal of the system is to automate the entire process; thereby eliminating a huge amount of paperwork, manual tasks and saves a lot of time of all the stake holders.

Internship Management Web System (IMWS) is a comprehensive tool for coordinating an internship class with the goal of facilitating continuous communication between the instructor and the interns. By using this system, students as well as instructors save a lot of time as the whole process and evaluation is done electronically

1.1) Purpose:

Purpose of this management system is to automate the conventional manual system using technology which will save the time from hours to few instants and reduction in paperwork. Easy to be used by all the stakeholders.

The purpose of this project is to design, build and implement an internship management system with anytime web-based access availability. All user and company information will be stored in a excel database. The main purpose of this project is to provide an easy-to-use interface for students and faculty members to interact with each other during the course of a student's internship program in which instructors/students can easily evaluate the progress of presenter.

Students can view their progress in real time and get the latest information every time they access the system. Moreover, the system offers the authorization function to make sure that students can access his/her records only and all the other information is kept discrete. The student's progress page gives read-only information to the student about his/her progress whereas the instructor can update the student's progress page. In the system, all the users can manage their own account information such as changing passwords or e-mail addresses. And furthermore, the users have the same login as their department login to help users remember their login information.

1.2) Document Conventions:

In writing this SRS Document for Internship Management System the Arial font is used with standard 12 font size and heading with 16 font size and subheading of 14 size to make it presentable and easy to be read. The document is made using standard conventions provided following IEEE standards

1.3) Project Scope

The application should be a browser-based system that allow for assigning students to sections and scheduling of sessions and presentation. This must have responsive design to adopt for devices layout and size according to respective device laptops, tablets, mobile phones. The results should be accurate and without flaws meeting the stake holders' requirements.

1.4) References

- https://www.academia.edu/31604577/Karl_Wiegers_Joy_Beatty_Software_Requirements?auto=download
- <https://scholarworks.lib.csusb.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=3592&context=etd-project>

2) Overall Description:

The web-based internship management system is designed specifically to reduce the paperwork and the time cost. It automates the manual presentation related tasks to automated digital system with its extra ordinary results. The system functions to assign students to section with their credentials. A student can sign of his presentation schedule if that time slot is available for him. There is a weekly report system and a feedback system after the end of his presentation he receives feedback reports. These are generated by the instructor as well as other fellow students. The attendance is marked on the system as well. It is designed to ease the communication between employer of the company (who hires interns in his company) and the dean office at university. It provides reports of student progress to the university at their internships and employers satisfaction with them.

2.1) Product Perspective

The conventional evaluation system of the paperwork was labour intensive. So, there was need to develop a digital system to cut off the lengthy paperwork. Therefore, this system was designed for the user ease and a better management of the records. In the initial phase the web based (html) application is designed and it will be tested in this phase later with the help of sponsors it can also be shaped into mobile application

2.2) User Classes and Characteristics

The users of this system are student interns, employer, instructors, and the dean office

The student's progress page gives read-only information to the student about his/her progress, the instructor can update the student's progress page and the employer can login and provide feedback about interns. In the system, all the users can manage their own account information such as changing passwords or e-mail addresses. Students can view their weekly report and the feedback. The students and instructor can provide their feedback about the presenter. The employer and the intern can also provide feedback about each other and the interns feedback about the employer will not be visible to him. Employer can interact with the dean office regarding the internship process.

2.3) Operating Environment

The platform will operate on the latest versions of Google Chrome (Chrome 2018), Mozilla Firefox (version 59.0.1), and Internet Explorer (version 11). Users will be able to use the platform using desktop/laptop computers, and mobile devices. The records of the interns will be stored and managed in cloud database of the server permit user access from the corporate intranet; from a VPN Internet connection; and by Android, iOS, and Windows smartphones and tablets.

2.4) Design and Implementation Constraints

The storage capacity should be at least 2 gb ram and 16 gb device storage android version 5.0 and above database used is cloud database and the programming language used in web system development is mixture of php and JavaScript and html and CSS is used for styling purposes.

2.5) Assumptions and Dependencies:

- All system users should have internet connection and internet browser.
- There will be no server latencies.
- The security attacks will be avoided as soon as possible.
- All governmental regulations will be considered by the system.
- Internship web management service providers will join to the system.

3) System Features:

3.1) Import the students from file:

3.1.1) Description:

A file of student lists is imported in section from the semester and section list.

3.1.2) Stimulus/Response Sequences

Start of the new semester stimulates this action so that students can be placed in sections.

3.1.3) Functional Requirements:

- **Import of the student name:**

A student name can be modified if entered wrong by mistake

- **Removal of the student name:**

A student's name can be removed from the allotted section list if he is meant to be added in some other section or expelled due to some reasons.

- **Notification that students already exist:**

When an instructor imports names of students when they are already existing in that section it generates a popup notification that these students already exist in that section.

3.2) Enter the students:

3.2.1 Description:

The student record is entered into assigned section from the list of student names with their credentials

3.2.2 Stimulus/Response Sequences

When the semester program of the student starts the students are to be placed in a particular section, so their names are to be fetched from a student names file to be entered in sections.

3.2.3) Functional Requirements:

- **Modification of student name:**

A student name can be modified if entered wrong by mistake

- **Removal of the student name:**

A student's name can be removed from the allotted section list if he is meant to be added in some other section or expelled due to some reasons.

- **Generation of student schedule that is to be opted:**

A schedule will be visible once the student's names are entered so that they can decide for their schedule by themselves

3.3) Configure Schedule:

3.3.1) Description:

Assign a start date and end date for the presentation schedule to configure the semester schedule for student.

The available slots during the whole semester for the presentations with respective times that can be taken are managed. Slots can be auto assigned to the students who have not selected any of them.

3.3.2) Stimulus/Response Sequences

With the start of semester, the 1st thing is to select the schedule according to the ones timetable

3.3.3) Functional Requirements:

- **Notification/Reminder for selecting dates:**

A reminder for the student so that he can decide his schedule before the deadline and a notification is generated when the scheduled is decided by the student

- **Auto assigning of slots:**

When a student does not decide his schedule in the deadline, the schedule is auto assigned by the system itself

- **Schedule locking:**

After a certain deadline, a schedule selection option is locked by itself and no further changes can be made in the schedule.

- **Adjust schedule:**

Instructor can adjust the schedules according to his needs and timetables and if there is clash in classes.

- **Remove session:**

Instructor can remove the session if he finds it unnecessary to conduct that section depending on the situation.

4) Data Requirements:

4.1) Logical Data Model:

Not applicable in this case

4.2) Data Dictionary

Data element	Description	Composition or data type	Length	Values
Student credentials	The student related details including their name, student id, roll no, contact	Alpha numeric	50	Hyphens and commas permitted
Instructor name	Name of the instructor who is evaluating presentations	Alphabetic	20	
Employer details	Employer name, contact and company details	Alpha numeric	40	
Student assigning	Assigning of student to a section	Alphanumeric	10	
Presentation date	Date of the presentation	Date (MM/DD/YY)	10	default = current date if the current date is available else next possible date
Students remarks	Remarks submitted by the other students about the presenter	Alphabetic	50	
Instructor remarks	Remarks submitted by	Alphabetic	50	Hyphens and

	the instructor about the presenter			commas permitted
Deviation of instructor/student marks	The deviation is to be calculated between the marks given by other students and instructor	Float	6	
Final evaluation	Final grades/marks of the student	Float	6	
Presentation time	Time of the student presentation	Time	10	default = next possible time available

4.3) Reports:

Report ID	RPT-1
Report Title	Student weekly evaluation report with feedback
Report Purpose	So that student should be informed of their weekly progress based on his performance and presentations.
Priority	Top priority
Report Users	Students
Data Sources	Database of the student records
Frequency and Disposition	Report is generated on weekly basis by a Patron. Data in the report is static. Report is displayed on user's web browser screen on a computer, tablet, or smartphone. It can be printed if the display device permits printing.
Latency	Complete report must be displayed to the student after every week.
Visual Layout	Landscape mode
Header and Footer	Report header shall contain the report title, Student's name, and date range specified. If printed, report footer shall show the page number.
Report Body	Feedbacks and marks assigned to them
End-of-Report Indicator	None
Interactivity	Students can see detailed marks and remarks by everyone.

Security Access Restrictions	Students may retrieve only their own records and can't update their marks by themselves.
Report ID	RPT-2
Report Title	Final Course Report
Report Purpose	To provide students their final evaluation of progress made during their course
Priority	Top priority
Report Users	Students
Data Sources	Database of the student records
Frequency and Disposition	Report is generated at the end of course. Data in the report is static. Report is displayed on user's web browser screen on a computer, tablet, or smartphone. It can be printed if the display device permits printing.
Latency	Complete report must be displayed to the student after two days of the generation of final report.
Visual Layout	Landscape mode
Header and Footer	Report header shall contain the report title, Student's name, and date range specified. If printed, report footer shall show the page number.
Report Body	Feedbacks and marks assigned to them
End-of-Report Indicator	None
Interactivity	Students can see the whole course work marks.
Security Access Restrictions	Students may retrieve only their own records and can't update their marks by themselves.

4.4) Data Acquisition, Integrity, Retention, and Disposal

The system shall retain individual Student detailed records for 5 years after the completion of his internship program.

The system should create backups of the records so that they remain safe in case of the data loss.

5) External Interface Requirements:

5.1) User Interfaces:

- Inputs will be entered via standard web controls such as combo box, check box, text box, calendar, etc.
- University Logo and the disclosure text should be included in every page.
- Navigation and acceptance will be handled with buttons

5.2) Software Interfaces

- Internet browser: google chrome/ fire fox.
- Operating system: Windows7/8 or higher or Unix/Linux. (Red-Hat 7.2 or higher).
- Database: Cloud Database.
- Language: HTML 5 JavaScript / PHP 7.0 or higher.
- Database connector: ODBC.
- Web server: Apache 2.2 or higher.

The communication between the database and the platform consists of operation concerning both reading and modifying the data. Frameworks will be used for user Page. Profile information will be gathered using web forms. PHP will be used to access the database, to validate the input, and to retrieve/display the results.

5.3) Hardware Interfaces:

We require internet service for interacting with the cloud database. Web or mobile browsers will be used to access to the platform.

5.4) Communications Interfaces:

The system will use TCP/IP protocol for communication, SMTP protocol for email and HTTP protocol for website. User form data will be transferred using HTTP-POST method and search data will be transferred using HTTP-GET method. Password data will be encrypted. PIC number authorization will be made over PIC number API

6) Quality Attributes:

6.1) Usability

The user interface (UI) of the system should be kept as simple as possible so that user may not need to be trained for it .the system should be easy to use it should meet all of the user requirements without any complex actions to be performed

6.2) Performance

The system should be fast and responsive it should refresh in 0.5 seconds when reload button is pressed it should provide accurate results of marks and deviations without any errors. System should not be buggy and should work even on slow internet connection without lagging

6.3) Security

The system should be completely secure it must ensure all the student and company records should be kept safe it should maintain privacy only a relevant student can check his marks and the site should maintain security from the cyber attacks and should have backups maintained on weekly basis in case of data loss. It should send otp code to user email or cell phone to identify that he is the authorized user

6.4) Safety

Software shall provide error handling to support safety critical functions.it should provide fault containment mechanisms to prevent error propagation. Its termination should result in a safe system state. Site should be safe to use it must ensure that it does not contains any kind of viruses that can harm user's computer and it must save user data and keep records of the previous changes made

6.5) Availability:

Site should maintain the availability requirement it should ensure that it is available 24 /7 for the user service servers cannot be down at any time so that user can access the site whenever he wants

7) Internationalization and Localization Requirements:

The system developed is a universal system although it is developed for a particular university(local system) but it can be used globally in future if successful where English is used as a standard language it can operate it is British English based system however it will not have any impact as its functionality is simple that keeps student internship records only does not have English style issues it is a flexible system certain changes can be made in the system according to the user needs.

8) Other Requirements:

There is no additional requirement.

Appendix A: Glossary

SMTP: Simple Mail Transfer Protocol

HTTP: Hypertext Transfer Protocol

OTP: One time-password

Appendix B: Analysis Models

None
