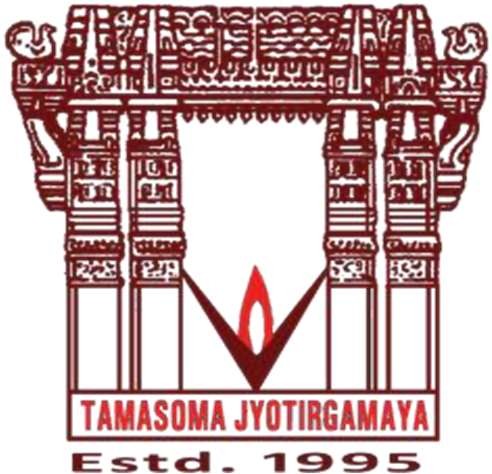
Software Requirements Specification

**On**

UG-PG INTERNSHIP MODULE



VNR Vignana Jyothi Institute of Engineering & Technology Bachupally, Nizampet (S.O), Hyderabad–90

Submitted By

Group Details*:*

G.ABHISHEK GOUD - 22071A0518

G.SAI SRUJITH - 22071A0521

V.PAVAN KUMAR - 22071A0559

Y.SAKETH - 22071A0550

**SOFTWARE REQUIREMENTS SPECIFICATION:**

**ABSTRACT:**

The UG/PG Internship Module is designed to streamline the process of managing and monitoring internships for undergraduate and postgraduate students. This module allows teachers to upload Excel sheets containing detailed information about students' internships. Upon uploading, the system generates a comprehensive overview of the internship details, providing insights into student placements, project progress, and mentorship effectiveness. The module aims to enhance the administrative efficiency of handling internships, ensure alignment between academic and industry experiences, and support the overall development of students through structured, real-world work engagements. By integrating these functionalities, the UG/PG Internship Module seeks to bridge the gap between classroom learning and practical industry experience, thereby preparing students for successful careers.

**1.INTRODUCTION**

In today's competitive job market, gaining practical experience through internships is crucial for students' career readiness. Internships bridge the gap between academic theory and real-world application, providing students with hands-on experience in their chosen fields. However, managing and monitoring these internships can be a complex task for educational institutions. Teachers are often overwhelmed with the administrative workload of tracking internship details, ensuring alignment with academic goals, and providing effective mentorship and feedback. The UG/PG Internship Module is designed to address these challenges by offering a streamlined solution that simplifies the management of internship data. By allowing teachers to upload Excel sheets containing students' internship information and generating comprehensive overviews, this module enhances administrative efficiency and supports students' professional development. Through this innovative approach, the UG/PG Internship Module aims to ensure that internships are valuable, well-organized experiences that significantly contribute to students' future career success.

**1.1 PURPOSE**

This document is intended for the following group of people:-

* Developers for the purpose of maintenance and new releases of the software.
* Documentation writers.
* Management of the bank.
* Testers

**1.2 SCOPE**

The UG/PG Internships Module offers a structured framework for seamlessly integrating internship opportunities into the academic curriculum. It provides diverse placements across industries, aligning activities with course objectives and offering preparatory resources to students. With structured assessment criteria, it evaluates students' performance and fosters partnerships with industry stakeholders for placements and mentorship. Professional development is emphasized through reflection and goal setting, while quality assurance measures ensure integrity and effectiveness. Ultimately, the module aims to prepare students for successful transitions to the workforce, contributing to their academic and professional growth.The software is expected to complete in duration of 1.5 month.

**1.3 DEFINITONS,ACRONYMS AND ABBREVATIONS**

* FSEA Faculty Skill Enhancement Activity
* FDP Faculty Development Programs
* AY Academic Year
* FSAR: Faculty Skill Enhancement Activity Records
* FRA: Faculty Reviewer Activity
* ECR: Electronic Contribution Report
* FDC: Faculty Development Committee
* SDB: Skill Development Bank
* ARS: Activity Reporting System
* AEP: Academic Engagement Profile

**1.4 REFERENCES**

The references for the above software are as follows:-

i. www.google.co.in

ii. [www.wikipedia.com](http://www.wikipedia.com)

iii. Files from college

**1.5 OVERVIEW**

Section 1.0 discusses the purpose and scope of the software.

Section 2.0 describes the overall functionalities and constraints of the software and user characteristics.

Section 3.0 and 4.0 details all the requirements needed to design the software.

**2. THE OVERALL DESCRIPTION**

**2.1 PRODUCT PERSPECTIVE**

The UG/PG Internships Module serves as an integral component within the academic institution's broader ecosystem, complementing existing curriculum structures and enhancing students' learning experiences. It interfaces with academic departments, faculty members, industry partners, and students to facilitate the seamless integration of internship opportunities into the academic curriculum.

**2.2 PRODUCT FUNCTIONS**

* Internship Management: The module facilitates the management of internship opportunities, including posting, application, selection, and placement processes.
* Curriculum Integration: It ensures alignment of internship activities with course objectives and academic standards, facilitating the awarding of academic credit.
* Student Support: The module provides resources and support services to assist students in preparing for and participating in internships, including resume writing, interview preparation, and mentorship.
* Assessment and Evaluation: It implements structured assessment criteria to evaluate students' performance during internships, ensuring learning outcomes are met and academic standards are maintained.
* Industry Collaboration: The module fosters partnerships with industry stakeholders to facilitate internship placements, mentorship opportunities, and collaborative projects.
* Reporting and Analysis: It generates reports and analyzes data to track internship placements, student outcomes, and program effectiveness, informing decision-making and continuous improvement effort
* Search Filter: Here we are going to implement some s. search filters which are helpful to faculty to get the student data easily. The functions we are including in this are according to academic year, according to company name, according to duration of internship and stipend provided.

**2.3 USER CHARACTERISTICS**

There are different kinds of users that will be interacting with the system. The intended users of the software are as follows:-

* **Faculty Members**: These educators, overseeing internships, manage opportunities and support student progress, utilizing the system to streamline administrative tasks and enhance student learning experiences.

**2.4 CONSTRAINTS**

The major constraints that the project has are as follows:-

The major constraints that the project has are as follows:-

* **Resource Constraints**: The availability of resources, including staff, funding, and technology infrastructure, may impose limitations on the scope and scale of internship opportunities offered within the module.
* **Time Constraints**: The duration of internships and academic semesters may impose constraints on the scheduling and coordination of internship activities.
* **Regulatory Constraints**: Compliance with institutional policies, academic regulations, and legal requirements may impose constraints on internship placements, assessment processes, and data privacy considerations.

4

**2.5 ASSUMPTIONS NAD DEPENDENCIES**

The requirements stated in the SRS could be affected by the following factors: Assumptions and Dependencies:

* **Industry Partnerships**: The success of the internships module depends on establishing and maintaining partnerships with industry stakeholders to provide diverse internship opportunities and support student learning.
* **Faculty Engagement**: The active participation of faculty members is essential for supervising, mentoring, and assessing student internships, ensuring the quality and effectiveness of the internship experiences.
* **Student Engagement**: The engagement and participation of students in internships are crucial for achieving learning outcomes, acquiring practical skills, and maximizing the benefits of the internship’s module.

**3. SYSTEM FEATURES**

**3.1 FUNCTIONAL REQUIREMENTS**

**1. Faculty Excel Upload**

* **Excel Upload**: Allow faculty to upload Excel sheets containing internship details. The system should validate and parse the data, ensuring it aligns with the expected format.
* **Data Validation**: Implement validation checks to ensure the uploaded data is consistent and free of errors. Notify users of any discrepancies or incorrect formats.
* **Bulk Data Handling**: Support large Excel sheets, allowing multiple internship records to be uploaded in a single operation.

**2. Faculty Dashboard**

* **Dashboard Overview:** Provide a personalized dashboard for faculty to view and manage internship data.
* **Internship Summary:** Display key information about internships, including student names, companies, durations, and internship statuses.
* **Filtering and Sorting:** Enable faculty to apply filters to find specific internship details and sort data based on various criteria like student name, company, or internship duration.
* **Data Analysis:** Allow faculty to generate summary reports on internships, such as overall statistics, trends, and other insights.

**3. Student Internship Information**

* **Internship Overview:** Allow faculty to view details about each student's internships, including company names, start and end dates, and internship statuses.
* **Internship Details**: Provide additional information about each internship, such as mentor details, internship objectives, tasks, and outcomes.

**Validity Checks**

Access to the system requires correct user ID and password, with limited login attempts to prevent unauthorized access. Exceeding the limit locks the account, requiring secure recovery methods like email verification. All sensitive data is encrypted, and secure session management prevents session hijacking. Administrators must enter their credentials for access to privileged functions, with role-based access control (RBAC) to manage permissions. Logs of all login attempts are kept for security monitoring. Optional multi-factor authentication (MFA) and robust password policies add extra layers of security..

**Sequencing Information**

The information about the users should be entered into the database prior to any of the backup be maintained for all account information.

**4.EXTERNAL INTERFACE REQUIREMENTS**

**4.1.1 USER INTERFACE REQUIREMENTS**

* **Faculty Dashboard**: Provides personalized dashboards for faculty members, displaying activities such as seminars, workshops, and training sessions, with interactive visualizations for easy interpretation.
* **Data Upload Interface**: Offers a user-friendly interface for faculty to upload new data and certificates related to events they have conducted or participated in, with validation checks to ensure data integrity and compatibility.
* **Administrative View**: Provides administrators with a centralized interface to view data for each faculty member individually, featuring search and filtering capabilities for detailed examination.
* **Certificate Download**: Allows faculty members to download certificates for events they have conducted or participated in, supporting multiple formats such as PDF, and enables administrators to download certificates for verification or record-keeping.
* **Data Sorting and Filtering**: Includes sorting and filtering options for tabular data, enabling users to rearrange and filter information based on specific criteria, improving usability.

**4.1.2 Software Interface Requirements**

* Operating System Compatibility: Ensure compatibility with common operating systems like Windows, macOS, and Linux to cater to a wide range of users and environments.
* Web Browser Compatibility: Verify accessibility across popular web browsers such as Google Chrome, Mozilla Firefox, and Microsoft Edge to guarantee seamless user experience and maximize system usability.
* Database Management System (DBMS): Utilize a reliable relational database management system (RDBMS) like MySQL, PostgreSQL, or Microsoft SQL Server for efficient data storage and retrieval, ensuring scalability and performance.
* Programming Languages and Frameworks: Select appropriate front-end languages and frameworks (e.g., HTML, CSS, JavaScript) and back-end technologies (e.g., Node.js, Django, Spring Boot) to develop a robust and scalable system that meets project requirements.
* Authentication and Authorization Framework: Implement secure authentication and authorization mechanisms using industry-standard protocols like OAuth 2.0 or JSON Web Tokens (JWT) to protect user data and ensure secure access to system resources, maintaining the integrity and confidentiality of sensitive information.

**4.1.3 Communication Interface Requirements**

* Communication Interface Requirements outline the key tools and features needed to support effective communication within the UG/PG Internship Module, ensuring seamless interaction among faculty, admins, and support staff. If you would like further elaboration or additional suggestions, I'm here to help.
* This interface includes Internal Messaging System, Email Notifications, Feedback and Suggestions, User Access Controls.

**5. Other Non-functional Requirements**

* **Performance**: The system should respond to user interactions quickly, with dashboard loading, data retrieval, and report generation completing within acceptable timeframes. Performance should remain consistent, even during peak usage times or with large volumes of data.
* **Scalability**: The system must be scalable, capable of handling an increasing number of students, internships, faculty members, and associated data without impacting performance or system stability.
* **Security**: Robust security measures must be in place, including encryption for data in transit and at rest, role-based access controls, and protection against unauthorized access or data breaches. Implement mechanisms to detect and mitigate potential security threats.
* **Reliability**: The system should be highly reliable, with minimal downtime and robust backup procedures to prevent data loss. Redundancy and failover mechanisms should be in place to ensure uninterrupted access to critical functionalities.
* **Usability**: The user interface must be intuitive and user-friendly, designed to work across different devices and screen sizes. It should be accessible to users with varying levels of technical proficiency.
* **Accessibility**: The system must comply with accessibility standards (e.g., WCAG) to ensure equal access for users with disabilities. Features like screen reader support, keyboard navigation, and alternative text for images should be implemented..
  1. **Performance Requirements**

The following list provides a brief summary of the performance requirements for the software:

# **Capacity**

The app shall provide service to the users 24/7.

# **Dynamic requirements**

The Faculty Skill Enhancement Tracker website’s interface should be simple and user-friendly, catering to faculty in VNR VJIET. It should prioritize clear visuals and large buttons for easy navigation. The core functionalities should be readily accessible on the homepage.

# **Quality**

The primary objective is to produce quality software. As the quality of a piece of software is difficult to measure quantitatively, the following guidelines will be used when judging the quality of the software:

1. Consistency – All code will be consistent with respect to the style. (This is implied when adhering to the standard).
2. Test cases – All functionality will be thoroughly tested

# **Software System Attributes**

* + 1. **Reliability**

The data communication protocol shall be such that it ensures reliability and quality of data and transmission in a browser environment. The memory system shall be of non-volatile type.

# **Availability**

* The server will have a backup power supply in case of power failures. Any abnormal operations shall result in the users being given the wrong information.

# **Security**

* The communication with server shall be compatible with AIMS security standards. So that the data cannot be breached in any king of attack.
* User should give his/her phone number while giving a feedback in order to avoid multiple and false feedbacks.

# **Maintainability**

* + - * The system components i.e. modem, memory, disk, drives shall be easily serviceable.
      * The system should have the mechanism of self-monitoring periodically in order to detect any fault.
      * The system should inform the main branch automatically as soon as it detects any error. The kind of fault and the problem being encountered should also be mentioned by the system automatically.