

# **SOFTWARE REQUIREMENT SPECIFICATION**

## **STUDENT MANAGEMENT SYSTEM**

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# 1.INTRODUCTION

A Student Management System (SMS) is a System that manages the records of student regarding admission and examination part. A Student Management System (SMS) is designed to help colleges for management of Engineering student. Extensive information is available at your fingertips through this System. Viewing student data, managing admission and reshuffling, managing seats, quota, board, semester, faculty, category and for examination, block allocation, subject management, scheduling exam, result and related issues are made simple and easy. There are custom search capabilities to aid in finding student information and working on student records. This can make the system easier to navigate and to use maximizing the effectiveness of time and other resources. SMS allows the keeping of personnel data in a form that can be easily accessed and analysed in a consistent way.

## 1.1 Purpose

This software package is developed from scratch exclusively

- To maintain/process complete details of Students about their personal, academic, sports and health domain.
- To enable students to view their marks and grades any time from their home. No need to meet professors personally.
- To enable professors to upload marks and submit grades from his/her office. No need to mail and wait it to be forwarded to all mailing groups.
- To enable Sports PTI to classify students in different categories and accordingly form their groups during any fest

## 1.2 Scope

The scope of the to-be-developed Student Management Portal software package is:

- i) To cater to ALL types of Courses offered by the administration of JNTUH to its students.
- ii) To cater to the need of a suitable interface for all students and instructors of an offered course.

## **1.3 Definitions**

The student management system is an automated version of manual Student Management System. It can handle all details about a student. The details include college details, subject details, student personnel details, academic details, exam details etc.

Our system has two type of accessing modes, administrator and user. Student management system is managed by an administrator. It is the job of the administrator to insert update and monitor the whole process. When a user log in to the system. He would only view details of the student. He can't perform any changes.

## **1.3 Overview**

Student Management System (SMS) is a web-based application that tracks current student's academic information. It maintains academic information for ready access by office staff, students, their faculty advisors, and committee members. Instead of tedious paper work, students will be able to submit required information electronically, and the departments will be able to evaluate the submissions with a much quicker turnaround.

The Student Management System has been modularized into following modules.

### **LOGIN MODULE:**

The purpose of this module is to provide entry to the system or website. Based on the type of login, the user is provided with various facilities and functionalities. The main function of this module is to allow the user to use SMS. This module provides two types of login — Admin login and Student login.

### **ADMINISTRATOR MODULE:**

In this module when the administrator will enter his/her user name and password, then he/she will enter in to the administrator page and this page consists of two following sub modules.

Student Addition/ Updation / Deletion: In SMS each Student is added, updated or deleted according to its branch.

Notice/Attendance/Result Generation: In SMS information about notice, attendance and Internal result is generated.

Fee Detail and Schedules: Fee information detail and schedule detail are managed.

### **STUDENT MODULE:**

In this module when a user enters his student id and password, then he can visit all the following pages.

**Profile View:** When the student clicks on this link he/she will get his/her information like student id, student name, password, father name, date of birth, nationality, city, address, country, phone number, mobile number, email. If he/she wants then he/she can change the profile.

**Notice View:** When the student clicks on this link, he can see latest notices released by the administrator.

**Attendance View:** When the student clicks on this one, the student can get his overall attendance percentage (present and absent).

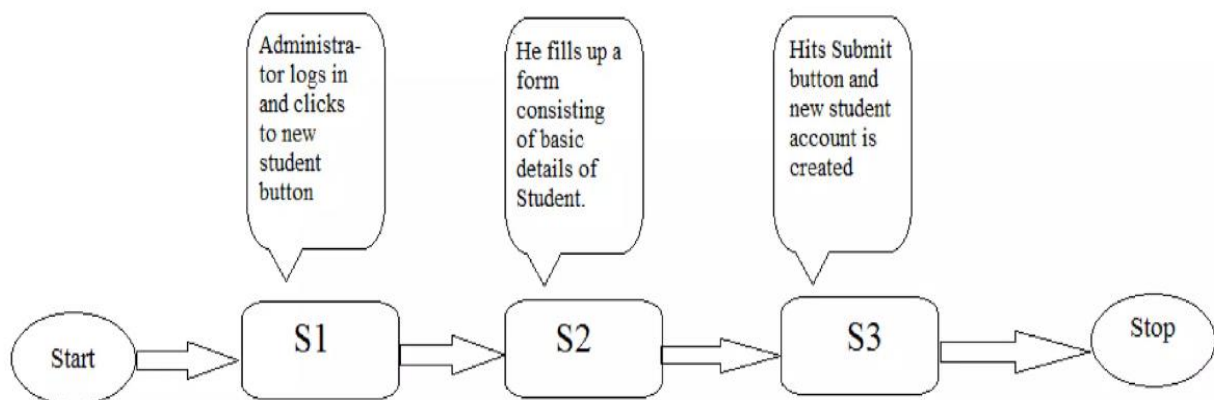
**Internal Results View:** When the student clicks on this, he/she will get the internals result in all the subjects. How much grade point he/she secure out of 20 he/she can know.

**Fee Detail View:** When the student clicks this link he/she can get all the fees structure semester wise and annual fee.

## 2.OVERALL DESCRIPTION

### 2.1 Product Perspective

The following diagram describes the high-level business process of the Student Management functions of the JNTUH:



## 2.2 Product Functions

This software package is expected to offer the following services:

### 1. FOR ADMINISTRATORS:

a) To facilitate the maintenance of important records of students currently studying in JNTUH.

b) To maintain grade reports of any student and courses offered in any semester online.

### 2. for Faculties:

a) To keep track of improvement/decline in the performance of any student enrolled in their courses online.

b) To provide their contact details to students and acquire students' contact details when needed.

### 3. for Students :

a) Facility to go through their course progress and the grades and marks of various fields in the course.

b) Facility to view their personal details and view some of them.

### 4. for Physical Trainer:

a) Facility to access sports achievement details of all students.

b) Facility to classify students into different levels of competence, thus easing team selection during any fest/tournament.

## 2.3 Users Classes and Characteristics

### a) Faculty:

These users will fill the marks of the students that are enrolled in the course, and will calculate the grades of a student and publish them.

### b) Administrator:

In the aspect of the student, this user will create profile for a new student; assign him/her the courses in which he/she has been enrolled. Admin can modify the details related to the registered student. And in the aspect of faculty, Admin can allot them courses to teach according to the particular session.

### c) Student:

This user can see his profile and progress in particular or current curriculum via viewing his grades uploaded by the faculty on his profile and can contact to the faculty if there are any issues related to it.

## **2.4 Operating Environment**

This software package is expected to work in the following atmosphere:

- i) Microsoft stack consisting of
  - a) OS - Windows 7, XP
  - b) Eclipse IDE
  - c) Java, PHP, JQuery, HTML, Java Applets
  - d) MySQL for RDBMS on Apache server.

## **2.5 General Constraints**

The design time constraints are:

- a) The software package should be designed so as to handle the access by ~20 Instructors/staff, 1 Admin and ~150 students concurrently.

## **3.EXTERNAL INTERFACE REQUIREMENTS**

### **3.1 User Interfaces**

The set of User Interfaces consists of

- a) To log in to their respective accounts by users.
- b) To Add and Modify courses, Add fields to a course such as Quizzes, Attendance, Midsem, Endsem and define their respective weightages in the course, save and publish the various data stored in the fields.
- c) To read the „published“ data, by the students/Admin according to the permission of their respective accounts.
- d) To generate the grade sheet by the admin for the particular semester for each student.
- e) To view sports details of a student and edit those.

### **3.2 Hardware Interfaces**

All components able to be executed on personal computers with Windows OS platforms and other platforms like Linux, Unix.

### **3.3 Software Interfaces**

All the interfaces will be ASPX pages running within the internet browser. The SMS must integrate with Db through SQL interface. The system will be hosted in a web server running on Windows Server.

### **3.4 Communication Interfaces**

This software package should be securely accessible through intranet communication channels.

## **4. OTHER NON-FUNCTIONAL REQUIREMENTS**

### **4.1 Performance Requirements**

This software should be able to handle the following tasks:

- a) At least 20 instructors/staff can log in on an average of four hours a day for five days a week.
- b) At least 100 students can log into their accounts for 3 hours for 5 days of the week.
- c) It should be able to handle the MYSQL database of 100 instructors and 1500 students.

### **4.2 Security Requirements**

This software will

- a) Authenticate each user, who logs in
- b) When the user performs any action, authorize him/her to perform the actions allowed for the user and displays an error message if found to be unauthorized.

### **4.3 Safety Requirements**

This software will ease the process of student grading. At the end of every semester each student will receive a grade sheet generated by the administration using the data uploaded by the course instructor on this software.



## **5.ABBREVIATIONS**

SRS: Software Requirements Specification.

HTML: Hypertext Markup Language. The formatting of text to be viewed on the Internet.

JavaScript: A computer programming language designed to run on any computer running a JavaScript capable browser.

URL: Universal Resource Locator. Commonly called an Internet address, a link to another web page or file.

WWW: World Wide Web. A subset of the Internet designed to handle graphics and other visually appealing material.

Course: A subject suitable for teaching which could be found in the Class Catalog.

Class: An instance of a course.

## **6.REFERENCES**

1. 'Software Engineering' by K.K.Agarwal & Yogesh singh, New Age Publishing House, 2nd Ed.
2. IEEE Recommended Practice for Software Requirement specifications - IEEE Std 830-1998