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# **Software Requirements Specification**

**for**

## **STUDENT INFORMATION MANAGEMENT SYSTEM**

**Version 1.0**

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## Revision History

Name	Date	Reason For Changes	Version

# **1. Introduction**

## **1.1 Purpose**

This software package is developed from scratch exclusively for NITK, Surathkal in order to,

- 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 medical officer and admin staffs to view student's medical history and medical status in any case of emergency.

## **1.2 Document Conventions**

The following documentation conventions are followed in preparing this SRS:

- All key-words related to the academics are formatted in italics.
- SRS-Software Requirement Specification

## **1.3 Intended Audience and Reading Suggestions**

This document is created for,

- The Instructors of the course "Software Engineering" for their review and monitoring progress of the project.
- The software development team for their use in analyzing the requirements

## **1.4 Product 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 NITK to its students.
- ii) To cater to the need of a suitable interface for all students and instructors of an offered course.
- iii) To facilitate medical officer to know student's medical history and fill up any details.
- iv) To facilitate administration to view any details of student quickly.

## **1.5 References**

The following references are used in preparing this SRS:

- The SRS Template and Sample
- Wikipedia.

## **2. Overall Description**

### **2.1 Product Perspective**

The high-level business process of the Student Management functions of nitk are:  
The Student Management Functions Creation and Maintenance of Student Details; Creation and Maintenance of Grade Details of Students; Creation and Maintenance and Modifying Student Details.

Thus the system aims to take in account the various steps followed for these processes and replicate them as an easy to use application.

### **2.2 Product Functions**

This software package is expected to offer the following services:

1. for Administrators of NITK:
  - a) To facilitate the maintenance of important records of students currently studying in nitk.
  - b) To maintain grade reports of any student and courses offered in any semester online.
2. for Faculties of NITK:
  - 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 of NITK:
  - 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.

### **2.3 User 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 Design and Implementation 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.

## **2.6 User Documentation**

a) This software package will come with a user's manual as a guide to its interface actions. b) The details of the (i) Analysis, (ii) Design and (iii) Test Cases of this software package will be delivered along with this software.

## **2.7 Assumptions and Dependencies**

There are no assumptions made.

# **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 and medical details of a student and edit those.

## **3.2 Hardware Interfaces**

NIL

## **3.3 Software Interfaces**

NIL

## **3.4 Communications Interfaces**

This software package should be securely accessible through intranet communication channels (wired or wireless)

## 4. System Features

The requirements of this software package are described per each category of User:

- i) All requirements of the MIS Portal for Administrative Staffs
- ii) All requirements of the MIS Portal for Student.
- iii) All requirements of the MIS Portal for Faculty.

### 4.1 Adding Student and Faculty Details in The Database

#### 4.1.1 Description and Priority

The TBD (to-be-developed) software package should facilitate Administrative staff to,

- i) To add a new Student's Personal details, Academic details, Financial details, Medical details and Sports Activity details in the MIS Database.
- ii) Assigning user name and password to each Student.
- iii) Viewing and Modifying Personal details, Academic details, Financial details, Medical details and Sports Activity details in the MIS Database.
- iv) Adding Faculty information and course in the MIS Database.
- v) Assigning user name and password to faculty.

### 4.2 Viewing and Editing Information from Student Portal

#### 4.2.1 Description and Priority

The TBD (to-be-developed) software package should facilitate the MIS Portal for Student to,

- i) View his/her Personal details, Academic details, Financial details, Medical details and Sporting Activities in the MIS Database.
- ii) Students are authorized only to edit Mobile Number, Email –id, Residential Address.

### 4.3 All the Requirements of The MIS Portal for Faculty

#### 4.3.1 Description and Priority

The TBD (to-be-developed) software package should facilitate the MIS Portal for Faculty to,

- i) View his/her list of courses assigned in the current semester.
- ii) Faculty are authorized to edit his/her details such as: Name, Phone Number, Room Number, Mobile Number, Email -id.
- iii) Faculty gets list of all the courses assigned to him/her.
- iv) On selecting particular course will get a list of student registered for that course.
- v) Faculty can give/edit the marks of midsems, Endsem, 8 quizzes of any student assigned to his/her course.

- vi) Faculty are allowed to enter grades of each student at the end of semester.

## **5. Other Nonfunctional Requirements**

### **5.1 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.

### **5.2 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. All important details should be maintained in hard copy as well.

### **5.3 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.

### **5.4 Software Quality Attributes**

NIL

### **5.5 Business Rules**

No such business rules

## **6. Other Requirements**

NIL

## **Appendix A: Glossary**

NIL

## **Appendix B: Analysis Models**

NIL

## **Appendix C: To Be Determined List**

NIL