# SOFTWARE REQUIREMENTS SPECIFICATION

## <Educational Institute Governance System>

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# Contents

# 1 Introduction

## 1.1 Purpose

To manage the day-to-day affairs of the Educational Institute and provide them the best way to manage all the affairs under one framework. The database will help to store, retrieve, and update the details of students, teachers and all other details regarding the institute.

## 1.2 Intended Audience and Reading Suggestions

This SRS is for knowing the features and to visualize it, so that we as developer for this project get direct view on which step what to do as per waterfall Model. Also, this also give documentation of working of our project, so that normal user can also get direct view of how to use as a documentation.

## 1.3 Project Scope

The project is intended to provide services to the Educational Institute which will include managing data of students, configuring the details of the clubs, managing data of students, faculty and staff etc.
For admin : Library maintenance, Teacher and Staff information, Account section, Club maintenance
For student : Student personal information, Student Academic information

## 1.4 References

https://medium.com/@enisinanaj/writing-a-software-requirements-specification-document-97
https://www.geeksforgeeks.org/software-requirement-specification-srs-format/

# 2 Overall Description

## 2.1 Product Perspective

As there are many platforms available so it is becoming difficult for Educational Institutes to manage the day-to-day affairs of the Educational Institute. We provide them the best way to manage all the affairs under one framework. So that it will become easy for the Educational Institutes to manage all affairs easily.

## 2.2 Product Functions

**A.This framework will help institutes to effectively manage the following affairs :**
Library Management
Clubs management
Teacher and staff data management
Accounting management
**B.It also helps to store the following:**
Student personal information
Student academic information

Our database will help to store, retrieve, and update the details of students, teachers and all other details regarding the institute.

## 2.3 User Classes and Characteristics

There are two modes:
1)Admin : Can manage all the institute related affairs.
2)Student : Can only access their own information.

## 2.4 Operating Environment

VS CODE and other text editors
Ubuntu 20.04
Windows 10, 11
Project will work on other operating systems also.
Front End Tkinter module python
Back End Application Software's: - MySQL(database)

## 2.5 Design and Implementation Constraints

**Hardware Constraints:**

1. Regular desktop/PC
2. Minimum 4 GB RAM and decent CPU

**Software Constraints:**

1. Frontend

Tkinter

2. Backend

MySQL database

## 2.6 Assumptions and Dependencies

**Assumptions -**

1. The coding should be error free
2. The system should be user-friendly so that it is easy to use for the users
3. The data of the institute must be stored in the database and can be accessed easily
4. The system should provide fast access to the database
5. This management system will be running 24 hours a day

**Dependencies -**

1. The specific hardware and software due to which the product will be run.
2. Project will be developed on the basis of listing requirements and specification

# 3 External Interface Requirements

## 3.1 User Interfaces

The software provides good graphical interface for the user can operate on the system, performing the required related to efficient management of the institute.

Home Page:

Login page for the Admin of the Institute

Student login page for the Students of the Institute

Library Page:

• Admin can add details of the books, number of copies available in library

Clubs page:

• Admin will have the access to the details of all the clubs and can modify them

Teacher and Staff Page:

• Admin will have the details of teachers and staff in the institute

Student Page:

• Student can access their personal and academic information

## 3.2 Hardware Interfaces

As it is not hardware project, there is no need of dependency on hardware. But project will be totally dependent on particular operating system environment, like window configuration application should be able to run only in windows and not in Linux. RAM configuration with other hardware is also not dependent.

## 3.3 Software Interfaces

Software modules are inter-linked to each other. Here, the user interface provides us options to interacts software interface. On action, user hits some request to Software interface so that software one module interact with another software modules. And, most importantly hitting software interface can lead to call to database operation like insert, search, update and delete depending on which relational non-relational model used. As our data is non-relational as well as dynamic, so its best suits with database having not-relational characteristics.

## 3.4 Communications Interfaces

The frontend of this frameworks associate directly with the database using SQLite.This will help the framework to work faster as the association with the database is direct.

# 4 System Features

## 4.1 System Feature 1

1)Admin Access:

### 4.1.1 Description and Priority

Admin will have the most access to the framework and the database of the Institute.This is our highest priority feature which will help the Institute for there management.

### 4.1.2 Stimulus/Response Sequences

In this Feature the Institute will have the utmost reliability as the framework has highest priority of work for it.

### 4.1.3 Functional Requirements

Tkinter module of Python to manage the Front end of the Framework and SQLite for managing the Data of all the access of Admin.

## 4.2 System Feature 2

2)Student Access:

### 4.2.1 Description and Priority

Student will be having authority to access there Personal and Academics details.This is our Medium priority after the admin of the institute.

### 4.2.2 Stimulus/Response Sequences

In this Feature the Students will be able to track their information in their respective login.

### 4.2.3 Functional Requirements

Frontend(Tkinter) will help the student to retrieve their data from the Database(SQLite) easily.

# 5 Other Nonfunctional Requirements

## 5.1 Performance Requirements

We will try to follow Gantt chart as per deadline so that we can achieve our performance requirements in efficiency, effectiveness and productive way. Apart from this path of Gantt chart we need a performance requirement as skills, scope and stability for productive completion of project.

## 5.2 Safety Requirements

Here we need a safety requirements of device functional requirements, module functional requirements  operation maintenance requirements.

## 5.3 Security Requirements

We will be trying to protect the data of the user by enabling the encryption.We will be ensuring the Passwords and other login Methods are secure enough for both Admin and the Students. In working Framework, we will provide confidentiality and integrity so that our framework go in the right path.

## 5.4 Software Quality Attributes

As data update dynamically, we need to keep it consistence in database and so that we can operate concurrent function in very effective way.The maintenance of the framework will be easy as the Front end is designed in the effective manner to accompanied with the Database.

## 5.5 Business Rules

Our Framework will help all the educational Institute to plan their academic activities effectively.We can scale the Framework in Every college to provide Student as well as Institute to do their Planing Effectively.

# 6 Other Requirements

One another most requirement is database functional in concurrence and consistence ways. As data get update with every particular task done in database, we need to do proper management of database so that there is no occurrence of read-write, write-write conflict took place while doing operations in functional database.

## 6.1 Appendix A: Glossary

Tkinter:Module for FrontEnd in Python
SQLite:A server-less database and is self-contained.