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# **Software Requirements Specification**

**for**

## **The Grade Translator**

**Version 0.4**

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## Revision History

Name	Date	Reason For Changes	Version
Hafsa, Karimdad, Ammar, Rumaisa	16 <sup>th</sup> February 2022	First Draft	0.1
Karimdad	17 <sup>th</sup> February 2022	Revisions made in Sections 2.4, 2.5, 2.6 and 2.7 as per meeting with professor.	0.2
Ammar, Rumaisa	17 <sup>th</sup> February	Minor Updates were done as Professor mentioned. Updates were made in sections 1.1, 1.4, 1.5, 2.2 and 2.3.	0.3
Hafsa Khurram	17 <sup>th</sup> February	Section 3.4 added.	0.4

# **1. Introduction**

## **1.1 Purpose**

This system will contain information regarding the students' grades involving a comparison with their section's overall performance i.e., the mean and median grade, their learning styles, their strengths and their weaknesses and strategies that will help them improve their academic performance. It will benefit parents to understand students' academic performance on each level.

## **1.2 Document Conventions**

The following documentation conventions are followed in preparing this SRS:

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

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

We will do a directed interview with the teachers to collect their input on the parameters that will be considered in the analysis and avenues to follow when it comes to their respective improvement strategies. An ethnographic study will be done with the parents to understand what they think should be a part of this tool and then to narrow down based on that information the aspects to include in the project.

## **1.4 Project Scope**

This system will allow administrators to input the student details and create a separate identity in the system. ~~Then~~ the teachers can ~~easily~~ upload the grades for every student by explaining the grades given. Parents will have 24/7 access to view their child's academic performance.

## **1.5 References**

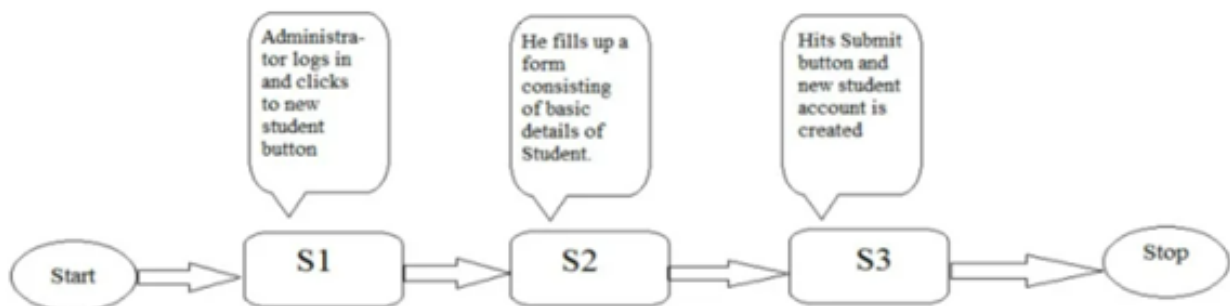
Several references are being considered but still working on them.

## 2. Overall Description

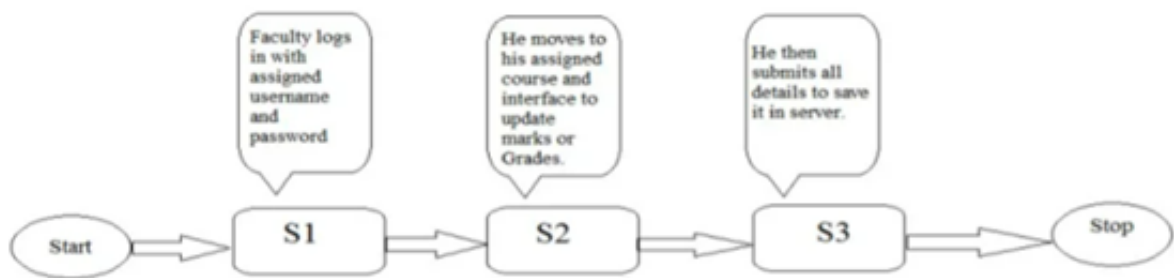
### 2.1 Product Perspective

The product revolves around administrators, students, teachers, and parents. There are three users; Administrator, Teacher, Parent. The Administrator user will create and maintain students' basic details and will be able to assign them to their required courses. The Administrator will also be able to assign the Teacher user some classes to teach. The Teacher user will create and update the students' assessment parameters. The Parent user will only be able to read the information provided by the Teacher user.

#### Creation and Maintenance of Student Details:



#### Creation and Maintenance of Student Grades:



## 2.2 Product Features

1. **For Administrator:**
  - a. To facilitate the maintenance of important records of students currently studying.
  - b. To maintain grade reports of any student and courses offered in any semester online.
2. **For Faculty:**
  - a. To keep track of improvement/decline in the performance of any student enrolled in their courses online.
3. **For Parents:**
  - a. They will be facilitated to view their child's performances through brief descriptions and reporting tools.

## 2.3 User Classes and Characteristics

1. **Faculty:**
  - a. This user will fill in the students' marks for their respective courses.
  - b. This user will calculate their grades and publish them.
2. **Administrator:**
  - a. **For Student:**
    - i. This user will create new student profiles.
    - ii. This user will assign students to the courses they are enrolled in.
    - iii. This user can modify the students' details.
  - b. **For Faculty:**
    - i. This user can assign courses to Faculty for them to teach.
3. **Parents:**
  - a. This user can see through their portal, particularly the students' progress.

## 2.4 Operating Environment

The product will be compatible with the following web browsers.

1. Google Chrome version 61+
2. Safari version 10.1+

## **2.5 Design and Implementation Constraints**

1. The database needs to correctly implement bulk and cascade delete operations when administrators want to delete entire classes and their student's information to avoid deletion errors such as incomplete deletes and/or failed deletes resulting from key constraints.
2. Student privacy will have to be ensured to prevent their information from being revealed to other parents.

## **2.6 User Documentation**

The target audience for this software are the institutions teachers and the enrolled students' parents. A Registration Guide and a User Manual will be provided.

## **2.7 Assumptions and Dependencies**

### **Assumptions:**

1. The user must be versed in the English Language.
2. They must have a stable internet connection.
3. Parents have already logged in and are using the app.

### **Dependencies:**

1. A browser which supports HTML5 features.

# **3. System Features**

## **3.1 Grades Translator**

### **3.1.1 Description and Priority**

This is the main function of the software and is of high priority. Within this feature, the grades provided along with other additional information will be processed to provide the parents an understanding of the scores their children receive this will allow the parents in turn to help their child in the most efficient way.

### **3.1.2 Stimulus/Response Sequences**

The user will simply have to log in and access grades to receive this information. This information will be provided in a text format. This information will also be available to the faculty when they log in.

### 3.1.3 Functional Requirements

REQ-1: Access the grades provided by faculty.

REQ-2: Process those grades along with other background information like attendance etc.

REQ-3: Provide a description of said data.

## 3.2 Administration Initialization

### 3.2.1 Description and Priority

This feature will enable all other features to be activated. By this method, the faculty will add students and their basic information to the system, enabling faculty to then add grades and other information like attendance.

### 3.2.2 Stimulus/Response Sequences

The user (i.e., The administration officer) will login with their credentials. Then they will be given a form to create a new classroom or add people to existing classrooms, they will also be able to delete classrooms and students.

### 3.2.3 Functional Requirements

REQ-1: The admin should be able to log in with their pre-determined credentials (i.e. Password and username),

REQ-2: The admin should be able to add classrooms to the system, they should then also be able to delete said classroom,

REQ-3: The admin should be able to access said classroom records and individual student records but they should not be able to delete them,

REQ-4: The admin should be able to add students to individual classrooms and delete said students from the classrooms;

## 3.3 Faculty Inputs

### 3.3.1 Description and Priority

This feature will allow the faculty to input critical data to ensure that the calculations are accurate and reflect all assignments in a more holistic way. This will include listing the testing styles, a particular topic, student attendance, and the score achieved.

### 3.3.2 Stimulus/Response Sequences

The user (i.e., The faculty) will log in using the credentials provided to them by the admin. They will then be able to add a new quiz, assignment, or assessment along with other details about it like a topic, testing style, and scores. They will also be able to add other relevant information like attendance and class participation.

### 3.3.3 Functional Requirements

REQ-1: The faculty should be able to log in with their ~~pre-determined~~ credentials provided by the administration (i.e. Password and username),

REQ-2: The faculty should be able to access each classroom they are assigned to,

REQ-3: The faculty should be able to add the scores, testing style, topic for an assignment, quiz, or assessment they create.

## 3.4 Parents Viewing

### 3.3.1 Description and Priority

This feature allows parents to be able to access the main output i.e., the translation of the grades. This will include reasons like low attendance, difficulty with MCQs, difficulty with long answers, and difficulty with a particular topic.

### 3.3.2 Stimulus/Response Sequences

The user (i.e., The parent) will log in using the credentials provided to them by the admin. They will then be able to view the grades of their child along with the translation of said grades. This software will not allow parents to delete, add or edit the report in any form.

### 3.3.3 Functional Requirements

REQ-1: The Parents should be able to log in with their pre-determined credentials provided by the administration (i.e., Password and username)

REQ-2: The Parents should be able to access their child's grades and translation of said grade.

## 4. External Interface Requirements

### 4.1 Hardware Interfaces

Our product is limited to desktop browsers of the types mentioned in Section 2.4.