**Requirements Document**

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# Client Software Product Overview

The Student Information Management System deals with all kinds of student details. The software system needs to store and retrieve students’ partial information in current semester and other basic information including Student’s Name, Student’s ID, registered course in current semester, each exam’s score in one course, and GPA calculation in the current semester.

The goal system has two types of accessing modes, administrator and user. An administrator can insert, update, and monitor student information. A user (student) can view details of the student but cannot perform any changes.

The software is expected to have a GUI which will allow for an administrator or student to log into the system. The GUI will display the student information as well as allow the user to interact with information given their specific permissions.

# Modification History

|  |  |  |
| --- | --- | --- |
| **DATE** | **WORKED ON** | **WHOM** |
| 06.20.17 | Student Use Case | Rick |
| 06.21.17 | Administrator Use Cases | O’Brian |
| 06.21.17 | Drafted first version of Requirements Document | Rick |
| 06.23.17 | Updated use case tables  Updated layout of Requirements Document  Added a Domain Knowledge section with a Glossary | O’Brian |
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# Domain Knowledge

## Glossary

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| --- | --- |
| **Term** | **Definition** |
| Student | Any person that is currently attending the University which utilizes the software |
| Administrator | Any person that is given authorization to create or update student records in the database |
| Record | A database entry that contains information about a specific Student. The entry *must* contain:   * Student Name * Student ID number   They entry may *additionally* contain:   * Currently registered courses * Exam scores * Student overall GPA |
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| **Acronym** | **Meaning** |
| GUI | Graphical User Interface; the part of the software that the user will interact with. |
| SIMS | Student Information Management System; the operational name of the software to be developed. |
| GPA | Grade Point Average; the average score of a Students completed courses |

# Use Cases

## Use Case 1 – Student Views Student Information

|  |  |
| --- | --- |
| **ACTOR** | Student |
| **GOALS OF ACTOR** | View their current record |
| **TASK** | The student logs into the system and views student information. |
| **PRECONDITIONS** | Student record must exist |
| **EXCEPTIONS** | Student does not have a record  Student does not know their ID number |
| **VARIATIONS** | None |
| **SYSTEM CHANGE/PRODUCTION** | System produces a report and displays it |

**Step-by-Step Description:**

1. Student logs into the SIMS.
2. System looks up the student’s ID number and pulls the records
3. System generates a report with the entire student record and displays it

## Use Case 2 – Administrator Inserts a New Record

|  |  |
| --- | --- |
| **ACTOR** | Administrator |
| **GOALS OF ACTOR** | Create a new record for a student |
| **TASK** | The administrator logs into the system and inserts a new record. |
| **PRECONDITIONS** | Student record must not exist  Student must have an ID number |
| **EXCEPTIONS** | Student already has a record  Student does not have an ID number |
| **VARIATIONS** | Administrator updates an existing record instead of creating a new one |
| **SYSTEM CHANGE/PRODUCTION** | System searches the database for an existing record, and if there is not one, creates one |

**Step-by-Step Description:**

1. Administrator logs into the SIMS.
2. Administrator selects the “Insert New Record” option.
3. Administrator fills out student information: Name and ID, with additional optional information.
4. Administrator selects the “Submit” option.
5. System creates a new student record.
6. System updates the database.

## Use Case 3 – Administrator Updates a Record

|  |  |
| --- | --- |
| **ACTOR** | Administrator |
| **GOALS OF ACTOR** | Update an existing record for a student |
| **TASK** | The Administrator logs into the system and updates a record with new information |
| **PRECONDITIONS** | Student record must exist |
| **EXCEPTIONS** | Student record does not exist |
| **VARIATIONS** | Administrator creates a new record instead of updating an existing record |
| **SYSTEM CHANGE/PRODUCTION** | System searches the database for an existing record, and if there is one, generates a form so the Administrator can update the information  System updates any fields that have changed |

**Step-by-Step Description:**

1. Administrator logs into the SIMS.
2. Administrator selects the “Update Record” option.
3. Administrator types in the Student ID number.
4. System retrieves the record and displays it.
5. Administrator changes or adds information regarding student registered courses, exam scores, r GPA.
6. Administrator selects the “Submit” option.
7. System updates the database with any changes made.

## Use Case 4 – Administrator Views Student Information

|  |  |
| --- | --- |
| **ACTOR** | Administrator |
| **GOALS OF ACTOR** | View the records of all students |
| **TASK** | The Administrator logs into the system and views a report that includes a list of every record for every student |
| **PRECONDITIONS** | Database must not be empty |
| **EXCEPTIONS** | No student records exist |
| **VARIATIONS** | None |
| **SYSTEM CHANGE/PRODUCTION** | System produces a report containing every available student record |

**Step-by-Step Description:**

1. Administrator logs into the SIMS.
2. Administrator selects the “View All Records” option.
3. System retrieves the entire database.
4. System generates a report and displays it.