Requirements for CourseManager, a Course Scheduling and Grade Management System

**UC1: Logging In**

1.1 Preconditions

The account with the pertinent user type (student, instructor, coordinator) has been set up in the system.

1.2 Main flow

The user inputs their username [S1] and is greeted with a list of possible actions [S2][S3][S4].

1.3 Subflows

* [S1] The system is able to display the proper menus for the user type associated with the given username [E1]. We will not enforce passwords in this system.
* [S2] A coordinator has the ability to view their account details, modify courses, and modify other users.
* [S3] An instructor has the ability to view their account details and modify grades.
* [S4] A student has the ability to view their account details, view their course schedule, and view their grades.

1.4 Alternate flows

* [E1] If no account has been set up in the system, the user is not allowed to log in.

1.5 Logging

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Transaction code | Description | Logged in username | Secondary user | Transaction type |
| 100 | Failed login | IP address | N/A | Other |
| 101 | Successful login | user | N/A | Other |
| 102 | Logged out | user | N/A | Other |

1.6 Data Format

|  |  |
| --- | --- |
| Field | Format |
| User name | Between 6 and 20 alpha characters and symbols - or \_ |

**UC2: Viewing Account Details**

2.1 Preconditions

The active user has an account set up with the system and has logged in

2.2 Main flow

No matter what user type, users can see their username, id number, and full name [S1]. Instructors can see their course schedule and course rosters [S2]. Students can see their course schedule and GPA [S3]. Coordinator can see information about all students and instructors.

2.3 Subflows

* [S1] No user can modify account details.
* [S2] Instructors cannot add their own courses.
* [S3] Course grades are set for students by instructors and can be null.

2.5 Logging

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Transaction code | Description | Logged in username | Secondary user | Transaction type |
| 200 | View options | user | N/A | View |

**UC3: Course Modification**

3.1 Preconditions

A coordinator has an account in the system and has logged in

3.2 Main flow

Coordinators can add courses [S1], and remove courses [S2]. Coordinators can enroll students in courses [S3].

3.3 Subflows

* [S1] Coordinators add courses by specifying a course name, day, time range, and instructor [E1].
* [S2] Coordinators can select a course to remove from a list of existing courses.
* [S3] Coordinators can add a student to a course after it has been created by entering the student’s username [E2] [E3].

3.4 Alternate flows

* [E1] A course addition is denied for a nonexistent instructor.
* [E2] A student addition is denied for a nonexistent student.
* [E3] A student cannot be enrolled more than once in the same course.

3.5 Logging

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Transaction code | Description | Logged in username | Secondary user | Transaction type |
| 300 | Successful add course | coordinator | N/A | Add |
| 301 | Successful delete course | coordinator | N/A | Delete |
| 302 | Successful add student | coordinator | student | Add |
| 303 | Failed add student | coordinator | N/A | Other |

3.6 Data Format

|  |  |
| --- | --- |
| Field | Format |
| courseName | Between 6 and 20 alpha characters |
| day | Between 1 and 6 day initials (M,T,W,Th,F,S) |
| time | HH:MM |
| instructor | Between 6 and 20 alpha characters and symbols - or \_ |
| student | Between 6 and 20 alpha characters and symbols - or \_ |

**UC4: User Modification**

4.1 Preconditions

A coordinator has an account in the system and has logged in

4.2 Main flow

Coordinators can add users [S1], and remove users [S2].

4.3 Subflows

* [S1] Coordinators add users by specifying a user type, username [E1], and full name. Id numbers will be assigned by the system.
* [S2] Coordinators can specify a username to remove from a list of existing users.

4.4 Alternate flows

* [E1] Coordinators cannot add users with duplicate usernames.

4.5 Logging

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Transaction code | Description | Logged in username | Secondary user | Transaction type |
| 400 | Successful add user | coordinator | user | Add |
| 401 | Successful delete user | coordinator | user | Delete |
| 402 | Failed add user | coordinator | user | Add |

4.6 Data Format

|  |  |
| --- | --- |
| Field | Format |
| userType | Student/ Instructor |
| username | Between 6 and 20 alpha characters and symbols - or \_ |
| name | Between 6 and 40 alpha characters and symbols - or \_ |

**UC5: Grade/ Roster Modification**

5.1 Preconditions

An instructor has an account set up with the system, has been added to a course with an enrolled student, and has logged in.

5.2 Main flow

Instructors can select a student from any course and modify their grade [S1]. Instructors can select a course and remove a certain student from their roster [S2].

5.3 Subflows

* [S1] Grades are stored for each student-course pair as a floating-point number between 0 and 4 [E1].
* [S2] Instructor can see a roster for each course he is assigned. He can select the option to delete/ remove a student by their username [E2].

5.4 Alternate flows

* [E1] It could be empty if none of the courses have been graded yet.
* [E2] The specified username is not on the roster.

5.5 Logging

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Transaction code | Description | Logged in username | Secondary user | Transaction type |
| 500 | Successful add/ change grade | coordinator | student | Add |
| 501 | Successful delete student | coordinator | student | Delete |

5.6 Data Format

|  |  |
| --- | --- |
| Field | Format |
| grade | Float value between 0 and 4 |
| username | Between 6 and 20 alpha characters and symbols - or \_ |

**UC6: Viewing Course Schedule**

6.1 Preconditions

A student or instructor has an account with the system, has logged in, and has been added to a course.

6.2 Main flow

The user can see their schedule for the week [S1]. Students see the grades associated with their class [S2] and instructors have the option to navigate to the roster for each class [S3].

6.3 Subflows

* [S1] The user can see their schedule for the upcoming week.
* [S2] If the user is a student, their grade is displayed next to the course [E1].
* [S3] If the user is an instructor, they can just select their course and be shown the course roster.

6.4 Alternate flows

* [E1] It could be empty if none of the courses have been graded yet.

6.5 Logging

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Transaction code | Description | Logged in username | Secondary user | Transaction type |
| 400 | Successful see schedule | coordinator/ student | N/A | View |
| 401 | Successful see roster | coordinator | N/A | View |
| 402 | Successful see grade | student | N/A | View |

###### **UC7: View access logs**

7.1 Preconditions

A user is a registered user of the Course Manager system. The user has authenticated himself or herself into the system.

7.2 Main Flow

A user can add data or request data. Every transaction will be logged so the coordinator can track any illegal access.

7.5 Logging

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Transaction code | Description | Logged in username | Secondary user | Transaction type |
| 700 | Access logs viewed | coordinator | N/A | View |