## National University of Computer & Emerging Sciences (FAST-NU)



**Done by Project Team:**

**Muhammad Taha Jawaid (21k-3881)**

## Project Test Plan

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# Purpose of Test-Plan

The main purpose of this Test Plan is to test and determine all the features of the Student Management System Project that all the features are performing as expected or not. Furthermore, to confirm that our Student Management System satisfies all the related standards, guidelines and the customer requirement. In Addition, the test Plan of this project recommended the responsibility of each feature.

# Features

## Admin

* + Add Student
  + Add Teacher
  + Add Course
  + Delete Student
  + Delete Teacher
  + Update Teacher Data
  + Update Student Data
  + Assign Course to Teacher

## Student

* + - View marks
    - View Attendances

## Teacher

* + - Upload Marks
    - Upload Attendances

# Approach

We use the system testing. We try to use the Proactive approach to achieve the high quality of the System. The test cases are written before the testing is performed. After the Completion of the Project we do the system testing. We have used Use case technique in testcases.

# Environment

1. Vs Code
2. Xampp Server
3. Strong Internet connection

# 5.Schedule

The Student Portal System takes time to complete around 10 days and the 2 days for Test-Plan and Test logs.

**6.Acceptance Criteria**

1. **Authentication:** Students, teachers and admin able to log in securely.
2. **Student Enrollment:** Ability to add new students, including their personal information, courses, grades.
3. **Attendance Tracking:** Recording and tracking student attendance for each course.
4. **User Interface and Experience**: The system is user-friendly, intuitive, and responsive across different devices.
5. **Integration and Compatibility**: Compatibility with various browsers, operating systems, and devices commonly used by students and faculty.

**7.Roles and Responsibilities**

We contributed in the project mutually. We put our excellence and our intelligence to towards this project.

**8.Tools**

* **Server:** Xampp
* **Operating System:** Windows 10
* **Compiler:** Vs Code
* **Language:** PHP

**Test cases:**

**Test case 01:**

|  |  |
| --- | --- |
| **Name** | TC-1 Login as Admin |
| **Requirement** | Database Should be present. |
| **Precondition** | Data Should be present in the database of the project |
| **Steps** | 1. Click on the menu. 2. Click on login as admin button. 3. Enter User id and Password. 4. Click on login button |
| **Expected Output** | The Admin menu screen will appear. Where we can see multiple options. |

**Alternative Test case 01:**

**Alt-1.1: (Input wrong user id)**

|  |  |
| --- | --- |
| **Name** | TC-1 Login as Admin |
| **Requirement** | Database Should be present. |
| **Precondition** | Data Should be present in the database of the project |
| **Steps** | 1. Click on the menu. 2. Click on login as admin button. 3. Enter Wrong User id and Correct Password. 4. Click on login button |
| **Expected Output** | Error message of invalid credentials will appear on the screen. |

**Alt-1.2: (Input wrong password)**

|  |  |
| --- | --- |
| **Name** | TC-1 Login as Admin |
| **Requirement** | Database Should be present. |
| **Precondition** | Data Should be present in the database of the project |
| **Steps** | 1. Click on the menu. 2. Click on login as admin button. 3. Enter User id and incorrect Password. 4. Click on login button |
| **Expected Output** | Error message of invalid credentials will appear on the screen. |

**Test case 02:**

|  |  |
| --- | --- |
| **Name** | TC-2 Login as Student |
| **Requirement** | Database Should be present. |
| **Precondition** | Data Should be present in the database of the project |
| **Steps** | 1. Click on the menu. 2. Click on login as a student button. 3. Enter User id and Password. 4. Click on login button |
| **Expected Output** | The Student menu screen will appear. |

**Alternative Test case 02:**

**Alt-2.1: (Input wrong user id)**

|  |  |
| --- | --- |
| **Name** | TC-2 Login as Student |
| **Requirement** | Database Should be present. |
| **Precondition** | Data Should be present in the database of the project |
| **Steps** | 1. Click on the menu. 2. Click on login as a student button. 3. Enter Wrong User id and Password. 4. Click on login button |
| **Expected Output** | Error message of invalid credentials will appear on the screen. |

**Alt-2.2: (Input wrong password)**

|  |  |
| --- | --- |
| **Name** | TC-2 Login as Student |
| **Requirement** | Database Should be present. |
| **Precondition** | Data Should be present in the database of the project |
| **Steps** | 1. Click on the menu. 2. Click on login as a student button. 3. Enter User id and wrong password. 4. Click on login button |
| **Expected Output** | Error message of invalid credentials will appear on the screen. |

**Alt-2.3: (keep field of user id or password empty)**

|  |  |
| --- | --- |
| **Name** | TC-2 Login as Student |
| **Requirement** | Database Should be present. |
| **Precondition** | Data Should be present in the database of the project |
| **Steps** | 1. Click on the menu. 2. Click on login as a student button. 3. Enter User id and keep password field empty.   OR   1. Enter Password and keep user id field empty. 2. Click on login button |
| **Expected Output** | A message of empty field will appear on screen. |

**Test case 03:**

|  |  |
| --- | --- |
| **Name** | TC-3 Login as Teacher |
| **Requirement** | Database Should be present. |
| **Precondition** | Data Should be present in the database of the project |
| **Steps** | 1. Click on the menu. 2. Click on login as the Teacher button. 3. Enter User id and Password. 4. Click on login button |
| **Expected Output** | The Teacher menu screen will appear. |

**Alternative Test case 03:**

**Alt-3.1: (Input wrong user id)**

|  |  |
| --- | --- |
| **Name** | TC-3 Login as Teacher |
| **Requirement** | Database Should be present. |
| **Precondition** | Data Should be present in the database of the project |
| **Steps** | 1. Click on the menu. 2. Click on login as the Teacher button. 3. Enter wrong User id and Password. 4. Click on login button |
| **Expected Output** | Error message of invalid credentials will appear on the screen. |

**Alt-3.2: (Input wrong password)**

|  |  |
| --- | --- |
| **Name** | TC-3 Login as Teacher |
| **Requirement** | Database Should be present. |
| **Precondition** | Data Should be present in the database of the project |
| **Steps** | 1. Click on the menu. 2. Click on login as the Teacher button. 3. Enter wrong User id and Password. 4. Click on login button |
| **Expected Output** | Error message of invalid credentials will appear on the screen. |

**Test case 04:**

|  |  |
| --- | --- |
| **Name** | TC-4 Add Student |
| **Requirement** | Student Id should be unique and not null. |
| **Precondition** | Should be login as Admin |
| **Steps** | 1. Click on the menu. 2. Insert all details of students. 3. Click on Save button |
| **Expected Output** | The Student has successfully added. |

**Alternative Test case 04:**

**Alt-4.1: (Input the user id which is already exist)**

|  |  |
| --- | --- |
| **Name** | TC-4 Add Student |
| **Requirement** | Add same Student’s user id which is already exist in database. |
| **Precondition** | Should be login as Admin |
| **Steps** | 1. Click on the menu. 2. Insert same user id for new student. 3. Click on Save button |
| **Expected Output** | The error message of “user id of student already exists in database” will appear. |

**Alt-4.2: (keep field of user id or password empty)**

|  |  |
| --- | --- |
| **Name** | TC-4 Add Student |
| **Requirement** | Student Id should be unique. |
| **Precondition** | Should be login as Admin |
| **Steps** | 1. Click on the menu. 2. Insert all details of students and make field of user id or password empty. 3. Click on Save button |
| **Expected Output** | A message of empty field will appear on screen. |

**Test case 05:**

|  |  |
| --- | --- |
| **Name** | TC-5 Add Teacher |
| **Requirement** | Teacher Id should be unique and not null. |
| **Precondition** | Should be login as Admin |
| **Steps** | 1. Click on the menu. 2. Insert same user id for new teacher. 3. Click on Save button |
| **Expected Output** | The Teacher has successfully created. |

**Alternative Test case 05:**

**Alt-5.1: (Input the user id which is already exist)**

|  |  |
| --- | --- |
| **Name** | TC-5 Add Teacher |
| **Requirement** | Add same Teacher’s user id which is already exist in database. |
| **Precondition** | Should be login as Admin |
| **Steps** | 1. Click on the menu. 2. Insert same user id for new teacher. 3. Click on Save button |
| **Expected Output** | The error message of “user id of teacher already exists in database” will appear. |

**Alt-5.2: (keep field of user id or password empty)**

|  |  |
| --- | --- |
| **Name** | TC-5 Add Teacher |
| **Requirement** | Teacher Id should be unique. |
| **Precondition** | Should be login as Admin |
| **Steps** | 1. Click on the menu. 2. Insert all details of teacher and make field of user id or password empty. 3. Click on Save button |
| **Expected Output** | A message of empty field will appear on screen. |

**Test case 06:**

|  |  |
| --- | --- |
| **Name** | TC-6 Add New Course |
| **Requirement** | Course Id should be unique and not null. |
| **Precondition** | Should be login as Admin |
| **Steps** | 1. Click on the menu. 2. Insert details. 3. Click on Save button |
| **Expected Output** | The Course has successfully been created. |

**Alternative Test case 06:**

**Alt-6.1: (Input the course id which is already exist)**

|  |  |
| --- | --- |
| **Name** | TC-6 Add New Course |
| **Requirement** | Add same Course id which is already exist in database. |
| **Precondition** | Should be login as Admin |
| **Steps** | 1. Click on the menu. 2. Insert same course id for new course. 3. Click on Save button |
| **Expected Output** | The error message of “course id already exists in database” will appear. |

**Alt-6.2: (keep field of course id or course name empty)**

|  |  |
| --- | --- |
| **Name** | TC-6 Add New Course |
| **Requirement** | Course Id should be unique. |
| **Precondition** | Should be login as Admin |
| **Steps** | 1. Click on the menu. 2. Insert details of course and make field of course id or course name empty. 3. Click on Save button |
| **Expected Output** | A message of empty field will appear on screen. |

**Test case 07:**

|  |  |
| --- | --- |
| **Name** | TC-7 Delete Student |
| **Requirement** | Students Id should be present in the database. |
| **Precondition** | Should be login as Admin |
| **Steps** | 1. Click on the menu. 2. Select Delete students. 3. Enter Student Id. 4. Click on delete button |
| **Expected Output** | The Student has successfully Deleted. |

**Alternative Test case 07:**

**Alt-7.1: Input the course id which does not exist in database:**

|  |  |
| --- | --- |
| **Name** | TC-7 Delete Student |
| **Requirement** | Students Id should be present in the database. |
| **Precondition** | Should be login as Admin |
| **Steps** | 1. Click on the menu. 2. Select Delete students. 3. Enter Student Id which is not present in database. 4. Click on delete button |
| **Expected Output** | The error message of “student id not found in the database” will appear on screen. |

**Test case 08:**

|  |  |
| --- | --- |
| **Name** | TC-8 Delete Teacher |
| **Requirement** | Teacher Id should be present in the database. |
| **Precondition** | Should be login as Admin |
| **Steps** | 1. Click on the menu. 2. Select Delete teachers.   3. Enter Teacher Id which is not present in database.   1. Click on delete button |
| **Expected Output** | The Teacher has successfully Deleted. |

**Alternative Test case 08:**

**Alt-8.1: Input the course id which does not exist in database:**

|  |  |
| --- | --- |
| **Name** | TC-8 Delete Teacher |
| **Requirement** | Teacher Id should be present in the database. |
| **Precondition** | Should be login as Admin |
| **Steps** | 1. Click on the menu. 2. Select Delete teachers. 3. Enter Teacher Id. 4. Click on delete button |
| **Expected Output** | The error message of “teacher id not found in the database” will appear on screen. |

**Test case 09:**

|  |  |
| --- | --- |
| **Name** | TC-9 View Attendances |
| **Requirement** | Data of students are available in the database. |
| **Precondition** | Should be login as Student |
| **Steps** | 1. Click on the menu. 2. Click View Attendance. |
| **Expected Output** | All the Attendance will be presented. |

**Test case 10:**

|  |  |
| --- | --- |
| **Name** | TC-10 View Marks |
| **Requirement** | Data of students are available in the database. |
| **Precondition** | Should be login as Teacher |
| **Steps** | 1. Click on the menu. 2. Click View Marks. |
| **Expected Output** | All the Marks will be presented. |

**Test case 11:**

|  |  |
| --- | --- |
| **Name** | TC-11 Add Attendances |
| **Requirement** | Student id and course id should be valid |
| **Precondition** | Should be login as Teacher |
| **Steps** | 1. Click on the menu. 2. Insert all details. 3. Mark Attendance 4. Click on Save button |
| **Expected Output** | Attendance Save Successful. |

**Alternative Test case 11:**

**Alt 11.1: Input student id which is not enroll in particular course**

|  |  |
| --- | --- |
| **Name** | TC-11 Add Attendances |
| **Requirement** | Student id and course id should be valid |
| **Precondition** | Should be login as Teacher |
| **Steps** | 1. Click on the menu. 2. Insert all details and insert student id which is not enroll in particular course. 3. Mark Attendance 4. Click on Save button |
| **Expected Output** | The error message of wrong student id will appear. |

**Test Suites:**

**TS-01: Add Student**

1. TC-01: Login as Admin
2. Alt-1.1: Input Wrong User ID
3. Alt-1.2: Input Wrong Password
4. TC-04: Add student
5. Alt-2.1: Input user ID which already exist
6. Alt-2.2: User ID or Password Empty

**TS-02: Add Teacher**

1. TC-01: Login as Admin
2. Alt-1.1: Input Wrong User ID
3. Alt-1.2: Input Wrong Password
4. TC-05: Add Teacher
5. Alt-5.1: Input Teacher Id that already exist
6. Alt-5.2: Teacher ID or password field empty

**TS-03: Add Course**

1. TC-01: Login as Admin
2. Alt-1.1: Input Wrong User ID
3. Alt-1.2: Input Wrong Password
4. TC-06: Add new Course
5. Alt-6.1: Input Course ID which already exists
6. Alt-6.2: Empty Course ID or Course Name

**TS-04: Delete Student**

1. TC-01: Login as Admin
2. Alt-1.1: Input Wrong user ID
3. Alt-1.2: Input Wrong Password
4. TC-07: Delete Student
5. Alt-7.1: Input the course ID which doesn’t exist in database

**TS-05: Mark Attendance**

1. TC-03: Login as Teacher
2. Alt-3.1: Wrong ID
3. Alt-3.2: Wrong Password
4. TC-11: Add Attendance
5. Alt-11.1: Input user ID which not enroll in particular subject

**TS-06: View Attendance**

1. TC-02: Login as Student
2. Alt-2.1: Wrong ID
3. Alt-2.2: Wrong Password
4. Alt-2.3: Keep User ID or Password empty and try to login
5. TC-09: View Attendance

**TS-07: View Marks**

1. TC-02: Login as Student
2. Alt-2.1: Wrong ID
3. Alt-2.2: Wrong Password
4. Alt-2.3: Keep User ID or Password empty and try to login
5. TC-10: View marks