**1. Test case:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Seq.No** | **Condition to be tested** | **Test data** | **Expected result** |
| **1** | Login | Enter valid username and valid password | User should be able to log in |
| **2** | Login | Enter valid username and invalid password | User should not be able to log in |
| **3** | Login | Enter invalid username and valid password | User should not be able to log in |
| **4** | Login | Enter invalid username and invalid password | User should not be able to log in |
| **5** | View student record | Login with right type of user | User should be able to view student record |
| **6** | View student record | Not login | User should not be able to view student record |
| **7** | View student record | Login fail | User should not be able to view student record |
| **8** | View fee information | Login with right type of user | User should be able to view fee information |
| **9** | View fee information | Not login | User should not be able to view fee information |
| **10** | View fee information | Login fail | User should not be able to view fee information |
| **11** | Register subject | Login with right type of user and choose all fields rightly | User should be able to register subject |
| **12** | Register subject | Not login | User should not be able to register subject |
| **13** | Register subject | Login fail | User should not be able to register subject |
| **14** | Register subject | There is no subject in the semester user chose | User should not be able to register subject |
| **15** | Register subject | There is no teacher who student wants to apply for the course | User should not be able to register subject |
| **16** | Update object information | Login with right type of user | User should be able to update object information |
| **17** | Update object information | Not login | User should not be able to update object information |
| **18** | Update object information | Login fail | User should not be able to update object information |
| **19** | View statistic | Login with right type of user | User should be able to view statistic |
| **20** | View statistic | Not login | User should not be able to view statistic |
| **21** | View statistic | Login fail | User should not be able to view statistic |
| **22** | Statistic tuition | Login with right type of user and choose all fields rightly | System should be able to statistic tuition |
| **23** | Statistic tuition | Not login | System should not be able to statistic tuition |
| **24** | Statistic tuition | Login fail | System should not be able to statistic tuition |
| **25** | Statistic tuition | Choose fields incorrectly | System should not be able to statistic tuition |
| **26** | Calculate tuition fee | Login with right type of user and register subjects correctly | System should be able to calculate tuition fee |
| **27** | Calculate tuition fee | Not login | System should not be able to calculate tuition fee |
| **28** | Calculate tuition fee | Login fail | System should not be able to calculate tuition fee |
| **29** | Calculate tuition fee | Register subjects fail | System should not be able to calculate tuition fee |
| **30** | Collect tuition fee | Login with right type of user and choose all fields rightly | User should be able to collect tuition fee |
| **31** | Collect tuition fee | Not login | User should not be able to collect tuition fee |
| **32** | Collect tuition fee | Login fail | User should not be able to collect tuition fee |
| **33** | Collect tuition fee | Choose fields incorrectly | User should not be able to collect tuition fee |

**2. Test Scenario**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Seq.No** | **Requirement Name** | **Test Scenario(TS)** | | **Test Case(TC)** | |
| **TS Name** | **TS ID** | **TS Name** | **TC ID** |
| **1** | **Login**  **(UC01)** | ok | TS\_UC01.01 | 1. Enter valid UserName and valid Password | TS\_UC01.01\_TC01 |
| Cancel | TS\_UC01.02 | 1. Enter valid UserName and invalid Password | TS\_UC01.02\_TC01 |
| 2. Enter invalid UserName and valid Password | TS\_UC01.02\_TC02 |
| 3. Enter invalid UserName and invalid Password | TS\_UC01.02\_TC03 |
| **2** | **Register Subject**  **(UC02)** | Successful | TS\_UC02.01 | 1. Students register for each subject for each semester(Select a year, a subject, Choose a teacher who will teach the subject) | TS\_UC02.01\_TC01 |
| Fail | TS\_UC02.02 | 1. There is no subject to register in that semester | TS\_UC02.02\_TC01 |
| 2. There is no teacher who student wants to apply for the course | TS\_UC02.02\_TC02 |
| **3** | **View Student Record**  **(UC03)** | Successful | TS\_UC03.01 | 1. Check for personal information such as: Student ID, Full Name, Address, Gender, Date of Birth, Subject, Email, ... and completely match | TS\_UC03.01\_TC01 |
| Fail | TS\_UC03.02 | 1. StudentID information is incorrect | TS\_UC03.02\_TC01 |
| 2. Full Name information is incorrect | TS\_UC03.02\_TC02 |
| 3. Adress information is incorrect | TS\_UC03.02\_TC03 |
| 4. Date of birth information is incorrect | TS\_UC03.02\_TC04 |
| .................... |  |
| **4** | **Manage entity information**  **(UC04)** | Successful | TS\_UC04.01 | 1. Employees manage information about objects such as Credit Class, Student, Management Class, Diminished Object with basic functions such as Add, Edit, Delete for each object | TS\_UC04.01\_TC01 |
| Fail | TS\_UC04.02 | 1. Add invalid objects information | TS\_UC04.02\_TC01 |
| 2. Could not add objects information | TS\_UC04.02\_TC02 |
| **5** | **View Fee Information (UC05)** | Successful | TS\_UC05.01 | 1. List success the student's courses for one semester in a year and the status of the payment for subjects during that semester | TS\_UC05.01\_TC01 |
| Fail | TS\_UC05.02 | 1. Statistic wrong | TS\_UC05.02\_TC01 |
| 2. Can't login to view the fee information | TS\_UC05.02\_TC02 |
| **6** | **Statistic tuition**  **(UC06)** | Successful | TS\_UC06.01 | 1. Login with right type of user and choose all fields rightly | TS\_UC06.01\_TC01 |
| Fail | TS\_UC06.02 | 1. Statistic wrong | TS\_UC06.02\_TC01 |
| 2. Can't login to view the statistic | TS\_UC06.02\_TC02 |
| **7** | **Collect tuition fee**  **(UC07)** | Successful | TS\_UC07.01 | 1. The exact amount of the student's tuition is paid and the total amount of tuition paid by the student in that semester | TS\_UC07.01\_TC01 |
| Fail | TS\_UC07.02 | 1. Register subjects fail | TS\_UC07.02\_TC01 |
| 2. Login fail | TS\_UC07.02\_TC02 |
| 3. Not login | TS\_UC07.02\_TC03 |
| **8** | **Calculate Tuition fee**  **(UC08)** | Successful | TS\_UC08.01 | 1. Preferred tuition fee | TS\_UC08.01\_TC01 |
| Fail | TS\_UC08.02 | Preferred invalid money | TS\_UC08.02\_TC01 |
| **9** | **View Statistic**  **(UC09)** | Successful | TS\_UC09.01 | list success the payment schedule for a given day or payment list for a certain period of time. | TS\_UC09.01\_TC01 |
| Fail | TS\_UC09.02 | 1. Login fail | TS\_UC09.02\_TC01 |
| 2. Not login | TS\_UC09.02\_TC02 |

**3. Requirement Traceability Matrix**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Seq.No** | **UCID** | **TSID** | **TCID** | **Status** | **Defects** |
| **1** | UC01 | TS\_UC01.01 | TS\_UC01.01\_TC01 | Passed | No |
| **2** | UC01 | TS\_UC01.02 | TS\_UC01.02\_TC01 | Passed | No |
| **3** | UC01 | TS\_UC01.02 | TS\_UC01.02\_TC02 | Passed | No |
| **4** | UC01 | TS\_UC01.02 | TS\_UC01.02\_TC03 | Passed | No |
| **5** | UC02 | TS\_UC02.01 | TS\_UC02.01\_TC01 | Passed | No |
| **6** | UC02 | TS\_UC02.02 | TS\_UC02.02\_TC01 | Passed | No |
| **7** | UC02 | TS\_UC02.02 | TS\_UC02.02\_TC02 | Passed | No |
| **8** | UC03 | TS\_UC03.01 | TS\_UC03.01\_TC01 | Passed | No |
| **9** | UC03 | TS\_UC03.02 | TS\_UC03.02\_TC01 | Passed | No |
| **10** | UC03 | TS\_UC03.02 | TS\_UC03.02\_TC02 | Passed | No |
| **11** | UC03 | TS\_UC03.02 | TS\_UC03.02\_TC03 | Passed | No |
| **12** | UC03 | TS\_UC03.02 | TS\_UC03.02\_TC04 | Passed | No |
| **13** | UC04 | TS\_UC04.01 | TS\_UC04.01\_TC01 | Passed | No |
| **14** | UC04 | TS\_UC04.02 | TS\_UC04.02\_TC01 | Passed | No |
| **15** | UC04 | TS\_UC04.02 | TS\_UC04.02\_TC02 | Passed | No |
| **16** | UC05 | TS\_UC05.01 | TS\_UC05.01\_TC01 | Passed | No |
| **17** | UC05 | TS\_UC05.02 | TS\_UC05.02\_TC01 | Passed | No |
| **18** | UC05 | TS\_UC05.02 | TS\_UC05.02\_TC02 | Passed | No |
| **19** | UC06 | TS\_UC06.01 | TS\_UC06.01\_TC01 | Passed | No |
| **20** | UC06 | TS\_UC06.02 | TS\_UC06.02\_TC01 | Passed | No |
| **21** | UC06 | TS\_UC06.02 | TS\_UC06.02\_TC02 | Passed | No |
| **22** | UC07 | TS\_UC07.01 | TS\_UC07.01\_TC01 | Passed | No |
| **23** | UC07 | TS\_UC07.02 | TS\_UC07.02\_TC01 | Passed | No |
| **24** | UC07 | TS\_UC07.02 | TS\_UC07.02\_TC02 | Passed | No |
| **25** | UC07 | TS\_UC07.02 | TS\_UC07.02\_TC03 | Passed | No |
| **26** | UC08 | TS\_UC08.01 | TS\_UC08.01\_TC01 | Passed | No |
| **27** | UC08 | TS\_UC08.02 | TS\_UC08.02\_TC01 | Passed | No |
| **28** | UC09 | TS\_UC09.01 | TS\_UC09.01\_TC01 | Passed | No |
| **29** | UC09 | TS\_UC09.02 | TS\_UC09.02\_TC01 | Passed | No |
| **30** | UC09 | TS\_UC09.02 | TS\_UC09.02\_TC02 | Passed | No |