**Chapter 6**

**TESTING**

**Software Testing** is the process used to help identify the correctness, completeness, security and quality of the developed computer software. Testing is the process of technical investigation and includes the process of executing a program or application with the intent of finding errors.

**Test Strategies**

Test strategy tells the test plan of the project. It also tells how to test and what to test. The testing done in this project are Unit testing and Integration testing.

* Features to be tested: Form navigation and generation of reports.
* Items to be tested: Functioning of forms and buttons.
* Purpose of testing: To check the effective working of MDMS.
* Pass / Fail Criteria: Changes made on the back end like recreation of tables should affect the front end as well. If so, the test is successful.
* Assumptions and Constraints: Tables should be created and values have to be entered at the back end before testing and entity integrity and referential integrity constraints should be taken care

**6.1 Unit Testing**

Unit testing is a software verification and validation method in which a programmer tests if individual units of source code are fit for use. Some of the tests performed in the project are inserting, delete, retrieve and modify.

**6.1.1 Unit Test Case1**

**Table 6.1** Unit test case for Login Information Check operation

|  |  |
| --- | --- |
| Sl No. of test case : | 1 |
| Name of test : | Check or login test |
| Item / Feature being tested : | Check button |
| Sample Input : | USERNAME=’admin’,PASSWORD=’admin’  Upon mouse click on button. |
| Expected output : | Login Button Appears if login information is correct if not “Invalid Username or Password” appears. |
| Actual output : | Login Button appears. |
| Remarks : | Test succeeded |

**6.1.2 Unit Test Case2**

**Table 6.2** Unit test case for Login Information Check operation

|  |  |
| --- | --- |
| Sl No. of test case : | 2 |
| Name of test : | Check test |
| Item / Feature being tested : | Check button |
| Sample Input : | USERNAME=’admin’,PASSWORD=’isw’  Upon mouse click on button. |
| Expected output : | Login Button Appears if login information is correct if not “Invalid Username or Password” appears. |
| Actual output : | Message: Invalid Username or Password |
| Remarks : | Test succeeded |

**6.1.3 Unit Test Case3**

**Table 6.3** Unit test case for updation operation

|  |  |
| --- | --- |
| Sl No. of test case : | 3 |
| Name of test : | Update test |
| Item / Feature being tested : | Save button |
| Sample Input : | Password=’admin’,FN=’Bhagya’,LN=’Batra’,address=’#503 Rajajinagar bangalore’,email\_id=’bhagya@vsnl.net’  Upon mouse click on button. |
| Expected output : | Appearing of Next Button |
| Actual output : | Next Button Appears |
| Remarks : | Test succeeded |

**6.1.4 Unit Test Case4**

**Table 6.4** Unit test case for Deletion operation

|  |  |
| --- | --- |
| Sl No. of test case : | 4 |
| Name of test : | Deletion Test |
| Item / Feature being tested : | Delete Button |
| Sample Input : | Username=’admin’,Password=’admin’  Upon mouse click on button. |
| Expected output : | Visibility of Done button |
| Actual output : | Done Button Appears and profile is deleted |
| Remarks : | Test succeeded |

**6.1.5 Unit Test Case5**

**Table 6.5** Unit test case for Display operation

|  |  |
| --- | --- |
| Sl No. of test case : | 5 |
| Name of test : | Display test |
| Item / Feature being tested : | Display button |
| Sample Input : | USN=”1RV11IS100”  . Upon mouse click on button. |
| Expected output : | Data successfully retrieved from the database and displayed |
| Actual output : | Data successfully retrieved from the database and displayed |
| Remarks : | Test succeeded |

**6.1.6 Unit Test Case6**

**Table 6.6** Unit test case for Search operation

|  |  |
| --- | --- |
| Sl No. of test case : | 6 |
| Name of test : | Search test |
| Item / Feature being tested : | Search button |
| Sample Input : | Keyword=USN  Upon mouse click on button. |
| Expected output : | Displaying all details with USN matching the Keyword. |
| Actual output : | No record |
| Remarks : | Test fails |

**Solution :-**

Requested keyword the USN, was not yet appended in the database.

**6.2 Integration Testing**

**6.2.2 Integration Test Case1**

**Table 6.7** Integrated test case for login navigation

|  |  |
| --- | --- |
| Sl No. of test case : | 1 |
| Name of test : | login navigation |
| Item / Feature being tested : | login Button |
| Sample Input : | Click login button on the login page after entering username and password |
| Expected output : | Move to Profile page. |
| Actual output : | Move to Profile page. |
| Remarks : | Test succeeded |

**6.2.2 Integration Test Case2**

**Table 6.8** Integrated test case for generation of Grid View.

|  |  |
| --- | --- |
| Sl No. of test case : | 2 |
| Name of test : | Grid View Generation |
| Item / Feature being tested : | Search Feature |
| Sample Input : | Click Search button after entering pattern in textbox |
| Expected output : | Display of grid view with Name,Contact |
| Actual output : | Display of grid view with Name,Contact |
| Remarks : | Test succeeded |

**6.2.3 Integration Test Case 3**

**Table 6.9** Unit test case for Password Recovery operation

|  |  |
| --- | --- |
| Sl No. of test case : | 3 |
| Name of test : | Password Recovery test |
| Item / Feature being tested : | Display Password button |
| Sample Input : | Username=’Admin’ answer(code)=’rvce’ |
| Expected output : | Message: Original Password Display |
| Actual output : | Message: “admin”-actual password |
| Remarks : | Test succeeded |

**6.3 System Testing**

**6.3.1 System Test Case1**

**Table 6.10** System test case for overall system check

|  |  |
| --- | --- |
| Sl No. of test case : | 1 |
| Name of test : | System overall test |
| Item / Feature being tested : | home1.html |
| Sample Input : | Data entered through forms |
| Expected output : | Updated data displayed in generated reports |
| Actual output : | Updated data displayed in generated reports |
| Remarks : | Test succeeded |