1. **TEST PLAN**

**1.1 Introduction**

Test plan is designed to advise the scope, approach and strategy of testing an application, to identify risks and issues, to define test criteria and test environment, and to identify the type of testing to be performed on the Application Under Test(AUT).

**1.2 Test Strategy**

**1.2.1 Scope Of Testing**

**Features to be tested**

|  |  |
| --- | --- |
| **Module** | **Description** |
| Login | User and admin can log into the system |
| Create Account | User can create a new account by entering the required details |
| Update Account | Existing user can update his account details |
| Transactions | Users can deposit and withdraw money from their account |
| Check details | User can check the account details of their account |
| Remove Account | User can remove their existing account |
| View customer list | Bank admin can access the overall customer list |
| ATM | User can access the ATM facility |

**Features not to be tested**

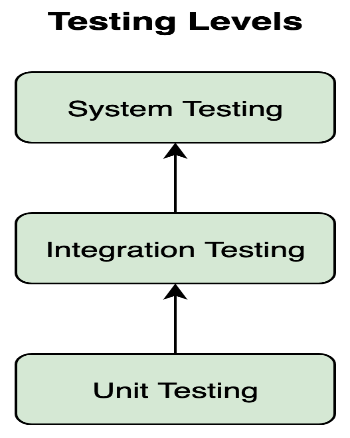
These features are not to be tested because they are not included in the software requirement specifications.

* User Interfaces
* Hardware Interfaces

**1.2.2 Test Type**

In this project there are three types of testing to be conducted:

* **Unit Testing :** It is a type of software testing where individual units or components of a software are tested.
* **Integration Testing** **:** It is a type of software technique where individual software modules are integrated and tested as a group.
* **System Testing :** It is a level of testing that validates the complete and fully integrated software product. It is done to check whether the software meets specified requirements or not.



Unit tests help to fix bugs early in the development cycle. Unit testing is of two types :

* Manual
* Automated

Under automated approach the developer writes a section of code in the application just to test the function. It is later commented out and finally removes the test code when the application is deployed.

**1.2 Test Objective**

The test objectives are to verify the different functionalities of the Application Under Test (AUT). The project should focus on testing operations such as entering, editing, deleting, storing and searching data to make it work without errors on an actual environment.

**1.3 Test Criteria**

**1.3.1 Suspension Criteria**

If more than 40% of test cases are failed then the testing is suspended until all failed cases are fixed.

**1.3.2 Exit Criteria**

This denotes a successful completion of a test phase.

* It is mandatory that the run rate is 100%.
* Pass rate is 95%.

**1.4 Test Environment**

All test cases are carried out in Code Blocks IDE version 20.03.

1. **TEST CASES**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Test Case Description** | **Test Steps** | **Test Data** |
| TU01 | Check Login with a valid password. | 1. Enter password  2. Click Enter. | password = ‘pass’ |
| TU02 | Check Login with an invalid password | 1. Enter password  2. Click Enter. | password = ‘user’ |
| TU03 | Check whether the create a new account option in main menu is working | 1. Enter choice  2. Click Enter | choice = 1 |
| TU03\_01 | Check if new account details can be successfully added. | 1. Enter the details  2. Click ‘1’ to go to the main menu or ‘0’ to exit. | account\_number= 123456789  name= “userone”  date\_of\_birth= 25/03/1998  age= 22  address= “houseone”  citizenship\_number= 1234  phone\_number=9449999999  amount\_to\_deposit= 1000  type\_of\_account=”saving” |
| TU04 | Check whether the ‘check the details of existing account’ option in main menu is working | 1. Enter choice  2. Click Enter | choice=4 |
| TU04\_01 | Check if the existing account details can be viewed by entering account number. | 1. Enter choice 2. Click Enter 3. Enter account number 4. Click Enter 5. Click ‘1’ to go to the main menu or ‘0’ to exit. | choice=1  account\_number=  123456789 |
| TU04\_02 | Check if the existing account details can be viewed by entering an invalid account number. | 1. Enter choice 2. Click Enter 3. Enter invalid account number 4. Click Enter 5. Click ‘1’ to go to the main menu or ‘0’ to exit | choice=1  account\_number=  999999999 |
| TU04\_03 | Check if the existing account details can be viewed by entering account name. | 1. Enter choice 2. Click Enter 3. Enter account name 4. Click Enter 5. Click ‘1’ to go to the main menu or ‘0’ to exit | choice=2  account\_name=  “userone” |
| TU04\_04 | Check if the existing account details can be viewed by entering an invalid account name. | 1. Enter choice 2. Click Enter 3. Enter invalid account name 4. Click Enter 5. Click ‘1’ to go to the main menu or ‘0’ to exit | choice=2  account\_name=  “abcdef” |
| TU05 | Check whether the ‘View customer’s list’ option in main menu is working | 1. Enter choice 2. Click Enter 3. Click ‘1’ to go to the main menu or ‘0’ to exit. | choice=6 |
| TU06 | Check whether the ‘Transactions’ option in main menu is working | 1. Enter choice 2. Click Enter 3. Enter account number | choice=3  account\_number=  123456789 |
| TU06\_01 | Check whether the ‘deposit’ option in Transactions section is working | 1. Enter choice 2. Click Enter 3. Enter amount to deposit 4. Click ‘1’ to go to main menu or ‘0’ to exit | choice=1  amount\_to\_deposit=1000 |
| TU06\_02 | Check whether the ‘withdraw’ option in Transactions section is working | 1. Enter choice 2. Click Enter 3. Enter amount to withdraw 4. Click ‘1’ to go to main menu or ‘0’ to exit | choice=2  amount\_to\_withdraw= 500 |
| TU06\_03 | Check whether the ‘Transactions’ option in the main menu is working with an invalid account number. | 1. Enter choice 2. Click Enter 3. Enter invalid account number | choice=3  account\_number=  999999999 |
| TU07 | Check whether there is change in account details  after transaction by accessing ‘check the details of existing account’ | 1. Enter choice 2. Click Enter 3. Enter account number 4. Click ‘1’ to go to the main menu or ‘0’ to exit. | choice= 4  account\_number=  123456789 |
| TU08 | Check whether the ‘Update information of an existing account’ option in the main menu is working | 1. Enter Choice 2. Click Enter | choice=2 |
| TU08\_01 | Check whether address of an existing account can be changed | 1. Enter choice 2. Click Enter 3. Enter account number 4. Click Enter 5. Enter new address 6. Click ‘1’ to go to the main menu or ‘0’ to exit. | choice=1  account\_number=  123456789  new\_address= “house” |
| TU08\_02 | Check whether phone number of an existing account can be changed | 1. Enter choice 2. Click Enter 3. Enter account number 4. Click Enter 5. Enter new phone number 6. Click ‘1’ to go to the main menu or ‘0’ to exit. | choice=2  account\_number=  123456789  new\_phone\_number= 9999999999 |
| TU08\_03 | Check whether the ‘Update information of an existing account’ option in the main menu is working with an invalid input | 1. Enter Choice 2. Click Enter | choice=9 |
| TU09 | Check whether the details have been updated by checking the ‘View customer list’ option | 1. Enter Choice 2. Click Enter | choice=6 |
| TU10 | Check whether the ATM feature is working | 1. Enter Choice 2. Click Enter 3. Enter PIN number 4. Click Enter | choice=7  PIN number=1234 |
| TU10\_01 | Check whether the ‘Check the balance’ option of‘ ATM  is working | 1. Enter Choice 2. Click Enter 3. Click Y/N for ‘Would you like another transaction’ | choice=1  choice=1 |
| TU10\_02 | Check whether the ‘Deposit’ option of‘ ATM  is working | 1. Enter Choice 2. Click Enter 3. Enter amount to deposit 4. Click Y/N for ‘Would you like another transaction’ | choice=2  amount\_to\_deposit=  100  choice=1 |
| TU10\_03 | Check whether the ‘Withdraw’ option of‘ ATM  is working | 1. Enter Choice 2. Click Enter 3. Enter amount to withdraw 4. Click Y/N for ‘Would you like another transaction’ | choice=3  amount\_to\_withdraw= 100  choice= 2 |
| TU10\_04 | Check whether the ‘Exit’ option of‘ ATM  is working | 1. Enter Choice 2. Click Enter | choice=4 |