

# Manual Test Case Designs

## Test Case 1: testDUPath

**Objective:** Verify the customer and employee functionalities, including deposit, withdrawal, transfer, and interest application. Ensure correct DU-paths in the menu logic are covered.

Test Step	Expected Result
Start the application.	Application prompts for login credentials.
Enter customer credentials: "yash" .	Customer login successful message.
Access customer menu.	Menu displayed with options for deposit, withdrawal, and transfer.
Select deposit (account 12345 , amount 10000.0 ).	Deposit confirmation message displayed.
Select withdrawal (account 12345 , amount 500.0 ).	Withdrawal confirmation message displayed.
Select transfer (from 12345 to 9756 , amount 1000.0 ).	Transfer confirmation message displayed.
Logout customer and login as employee: "yash" .	Employee login successful message.
Apply interest.	Interest application confirmation message displayed.
Verify system output.	Verify all expected messages appear, as per assertions.

## Test Case 2: testAdminLogin

**Objective:** Verify admin login flow and functionality with valid credentials.

Test Step	Expected Result
Enter admin username: "admin" .	System prompts for password.
Enter admin password: "admin123" .	Admin login successful message displayed.
Access admin menu.	Admin menu options displayed.
Verify system output.	Ensure admin login message is included in the output.

### Test Case 3: testTransferMoney

**Objective:** Validate the transfer of money between two accounts.

Test Step	Expected Result
Attempt to transfer from account 12345 to 9756 .	System prompts for transfer amount.
Enter transfer amount: 1000.0 .	Transfer confirmation message displayed.
Verify updated balances.	Source account balance decreases, destination account balance increases.
Verify system output.	Ensure the output includes the transfer confirmation message.

### Test Case 4: invalidCustomerLogin

**Objective:** Ensure invalid customer login credentials are not authenticated.

Test Step	Expected Result
Enter invalid customer credentials: "jo", "jo" .	System denies access and returns null .

### Test Case 5: validCustomerLogin

**Objective:** Ensure valid customer login credentials are authenticated.

Test Step	Expected Result
Enter valid customer credentials: "jay", "jay" .	System authenticates successfully and returns the Customer object.

## Test Case 6: invalidEmployeeLogin

**Objective:** Ensure invalid employee login credentials are not authenticated.

Test Step	Expected Result
Enter invalid employee credentials: "som", "so" .	System denies access and returns null .

## Test Case 7: validEmployeeLogin

**Objective:** Ensure valid employee login credentials are authenticated.

Test Step	Expected Result
Enter valid employee credentials: "som", "som" .	System authenticates successfully and returns the Employee object.

## Test Case 8: invalidAdminLogin

**Objective:** Ensure invalid admin login credentials are not authenticated.

Test Step	Expected Result
Enter invalid admin credentials: "admin", "jo" .	System denies access and returns false .

## Test Case 9: validAdminLogin

**Objective:** Ensure valid admin login credentials are authenticated.

Test Step	Expected Result
Enter valid admin credentials: "admin", "admin123" .	System authenticates successfully and returns true .

## All-DU-Paths Coverage

- 1. **Login Paths:** Cover customer, employee, and admin login with both valid and invalid credentials.
- 2. **Functional Paths:** Test all menu functionalities (deposit, withdraw, transfer, interest application).
- 3. **Menu Options Traversal:** Each menu option in the customer and employee menus is exercised at least once.