

TUTORIAL 5

5. Write comprehensive test cases for a known application (e.g., Banking System).

Objective:

To test various modules of the Online Banking System by writing detailed test cases covering functionality, validation, boundary cases, and security.

MODULES TO TEST:

1. User Login
2. View Account Balance
3. Money Transfer
4. Transaction History

1. Test Case Template Format

Test Case ID	Test Scenario	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
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2. Test Cases for Login Module

TC_ID	Test Scenario	Test Steps	Test Data	Expected Result
TC_Login_01	Login with valid credentials	1. Open banking site 2. Enter username 3. Enter password 4. Click Login	Username: user123 Password: pass@123	Dashboard opens
TC_Login_02	Login with invalid password	Repeat above with wrong password	Username: user123 Password: wrongpass	Error message: "Invalid credentials"

TC_Login_03	Empty username field	Enter password only	Username: (blank) Password: pass@123	Message: "Username is required"
TC_Login_04	SQL injection attempt	Enter ' OR '1'='1 in both fields	Username: ' OR '1'='1	Show error or block request
TC_Login_05	Password field is masked	Observe password input field	N/A	Characters should be masked (e.g., ●●●●)

3. Test Cases for View Account Balance

TC_ID	Test Scenario	Test Steps	Test Data	Expected Result
TC_Balance_01	Check balance after login	1. Login 2. Click on "Account Balance"	Logged-in user	Display correct balance
TC_Balance_02	Check for unauthorized access	Try balance URL without login	Not logged-in	Redirect to login page
TC_Balance_03	Balance with multiple accounts	Check for user with savings & current account	User has 2 accounts	Show both balances correctly

4. Test Cases for Money Transfer Module

TC_ID	Test Scenario	Test Steps	Test Data	Expected Result
TC_Transfer_01	Transfer with valid data	1. Login 2. Go to Transfer 3. Enter valid recipient & amount 4. Submit	To A/C: 456789 Amount: ₹1000	Transfer success message
TC_Transfer_02	Transfer more than balance	Same as above but enter large amount	To A/C: 456789 Amount: ₹999999	Message: "Insufficient balance"

TC_Transfer_03	Invalid account number	Enter incorrect account format	To A/C: 123 (invalid)	Error: "Invalid account number"
TC_Transfer_04	Empty fields	Leave To A/C and amount blank	Blank fields	Error: "Required fields missing"
TC_Transfer_05	Concurrent transfer	Perform 2 transfers in parallel	2 browser tabs	Should maintain transaction integrity

5. Test Cases for Transaction History Module

TC_ID	Test Scenario	Test Steps	Test Data	Expected Result
TC_History_01	View all transactions	1. Login 2. Click on "Transaction History"	N/A	Show list of past transactions
TC_History_02	Filter by date	Use filter for specific date range	From: 01/01/2024 To: 01/02/2024	Only those transactions should display
TC_History_03	No transaction in range	Use a future date range	From: 01/01/2030	Message: "No transactions found"
TC_History_04	Export as PDF/CSV	Click on Export button	Format: PDF	File downloads successfully
TC_History_05	Unauthorized access	Access history without login	N/A	Redirect to login page

Steps for Students to Perform this Practical:

STEP 1: Understand the Module

Read about functionalities of banking applications – login, transfers, transaction history, etc.

STEP 2: Select a Module

Pick one module (e.g., Login or Money Transfer) to write and test.

STEP 3: Design Test Cases

Use the template provided. Cover:

- Positive cases
- Negative cases
- Boundary cases
- Security checks

STEP 4: Use a Demo Banking App (Optional for Practice)

Students can try using open-source or mock banking apps like:

- <http://parabank.parasoft.com> (Demo banking site)
- <https://demo.bankingon.io> (*if available*)

STEP 5: Execute Test Cases

If app is available, perform the tests and record results.

STEP 6: Document Bug Reports

If any test fails, write bug reports with:

- Description
- Steps to Reproduce
- Screenshot (if applicable)
- Severity and Priority

Sample Bug Report

Field	Value
Bug ID	BUG_001
Title	Login succeeds with invalid password
Module	Login
Steps to Reproduce	Enter wrong password and press Login
Expected Result	Error: "Invalid credentials"
Actual Result	Logged in successfully
Severity	High
Priority	Immediate fix

Learning Outcome for Students:

- Understand testing techniques (positive/negative cases)
- Learn how to document test cases
- Practice writing bug reports
- Explore testing on real-world application scenarios