Here are detailed test cases for the **"Quick Fund Transfer"** feature, covering different aspects such as functional, security, performance, and edge cases.

1. **Functional Test Cases**

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| **Test Case ID** | **Test Scenario** | **Test Steps** | **Expected Result** |  | **Amount Validation** |
| **FT\_01** | Verify successful fund transfer via NEFT | 1. Login 2. Select "Quick Fund Transfer" 3. Choose NEFT, enter valid beneficiary and amount 4. Complete OTP verification 5. Submit transaction | Amount is successfully transferred, and transaction status is updated |  | Pass (₹1 - ₹2,00,000)  Fail (< ₹1 or > ₹2,00,000) |
| **FT\_02** | Verify successful fund transfer via UPI | 1. Login 2. Select "Quick Fund Transfer" 3. Choose UPI, enter valid UPI ID and amount 4. Complete OTP verification 5. Submit transaction | Amount is transferred instantly, and transaction appears in history |  | Pass (₹1 - ₹2,00,000)  Fail (< ₹1 or > ₹2,00,000) |
| **FT\_03** | Verify successful fund transfer via RTGS | 1. Login 2. Select "Quick Fund Transfer" 3. Choose RTGS, enter valid details and amount (₹2,00,000 or above) 4. Complete OTP verification 5. Submit transaction | Amount is transferred, and real-time status is updated |  | Pass (₹1 - ₹2,00,000)  Fail (< ₹1 or > ₹2,00,000) |
| **FT\_04** | Verify beneficiary saving functionality | 1. Add a new beneficiary 2. Perform a transaction 3. Logout and login again 4. Check if beneficiary is saved | Beneficiary should be available for future transactions |  | N/A (Not amount-dependent) |
| **FT\_05** | Verify transaction history update | 1. Perform a successful transaction 2. Navigate to transaction history 3. Check the latest transaction status | The transaction should appear with correct details |  | Pass (₹1 - ₹2,00,000)  Fail (< ₹1 or > ₹2,00,000) |

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**2. Security Test Cases**

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| **Test Case ID** | **Test Scenario** | **Test Steps** | **Expected Result** | **Pass** | **Fail** |
| **ST\_01** | Verify OTP expiry | 1. Initiate a transaction 2. Wait for OTP to expire 3. Enter expired OTP | Error message: "OTP Expired. Request a new OTP." | OTP expires and system prompts for a new OTP | System allows expired OTP |
| **ST\_02** | Verify account lockout after multiple failed login attempts | 1. Enter incorrect credentials 5 times | Account should be locked after defined attempts | Account gets locked after failed attempts | Account remains accessible |
| **ST\_03** | Ensure OTP is sent only to registered mobile number | 1. Try changing OTP delivery to a different number | OTP should be sent only to the registered number | OTP is sent to the correct number | OTP sent to an unregistered number |
| **ST\_04** | Verify encryption of sensitive data | 1. Inspect network requests for login and transactions | User credentials and account details should be encrypted | Sensitive data is encrypted | Data is exposed in plaintext |
| **ST\_05** | Test SQL Injection in input fields | 1. Enter SQL code in beneficiary details 2. Attempt to transfer funds | System should reject malicious input | Input is blocked | System allows execution |

**3. Performance Test Cases (Non functional Testing Scenerios)**

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| **Test Case ID** | **Test Scenario** | **Test Steps** | **Expected Result** | **Pass** | **Fail** |
| **PT\_01** | Test response time for fund transfer | 1. Perform 10 transactions back-to-back 2. Measure time taken | Each transaction should complete in under 10 seconds | Transactions complete in ≤10s | Transactions take >10s |
| **PT\_02** | Test high transaction load handling | 1. Simulate 5000 concurrent transactions | System should handle load without crashing | No crash, transactions process smoothly | System crashes or lags |
| **PT\_03** | Test performance in low network conditions | 1. Switch to slow network (2G) 2. Perform a transfer | Transaction should succeed with delay or show an error | Proper delay or meaningful error shown | Transaction gets stuck indefinitely |

**4. Edge Case Test Cases**

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| **Test Case ID** | **Test Scenario** | **Test Steps** | **Expected Result** | **Pass** | **Fail** |
| **EC\_01** | Test boundary values for transaction amount | 1. Try transferring ₹0.99 2. Try transferring ₹2,00,000.01 | Both transactions should be rejected | System rejects invalid amounts | System allows invalid amounts |
| **EC\_02** | Verify behavior when switching devices mid-transaction | 1. Start a transaction on one device 2. Try completing it on another device | Transaction should either fail or prompt re-authentication | Re-authentication required | Transaction continues without validation |
| **EC\_03** | Test transaction with invalid UPI ID | 1. Enter incorrect UPI ID and initiate a transfer | Error message: "Invalid UPI ID. Please check and try again." | Proper error message displayed | Transaction goes through |
| **EC\_04** | Verify duplicate transaction prevention | 1. Perform two identical transactions quickly | System should prompt: "This transaction has already been processed." | Duplicate transactions prevented | Both transactions processed |
| **EC\_05** | Test transaction failure due to insufficient balance | 1. Attempt a transfer exceeding available balance | Error message: "Insufficient balance." | Transaction fails as expected | Transaction succeeds incorrectly |

**5. Compatibility Test Cases**

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| **Test Case ID** | **Test Scenario** | **Test Steps** | **Expected Result** | **Pass** | **Fail** |
| **CT\_01** | Verify feature on Android & iOS devices | 1. Perform transactions on multiple mobile devices | Feature should work on both platforms | Transactions work on Android & iOS | Feature fails on any platform |
| **CT\_02** | Test on different screen sizes | 1. Test app on small, medium, and large-screen phones | UI should be properly aligned | UI elements are responsive | UI breaks or overlaps |
| **CT\_03** | Test transactions on different OS versions | 1. Use old Android/iOS versions to perform a transfer | Feature should work smoothly on older OS versions | Smooth transaction flow | App crashes or lags |

**Test Cases & Testing Methods**

| **Test Case** | **Expected Result** | **Testing Method** |
| --- | --- | --- |
| Login with correct credentials | User logs in successfully | **Functional Testing** |
| Login with incorrect password | Error message displayed | **Negative Testing** |
| Transfer ₹1 | Should succeed | **Boundary Testing** |
| Transfer ₹2,00,000 | Should succeed | **Boundary Testing** |
| Transfer ₹2,00,001 | Should fail | **Boundary Testing** |
| Transfer using UPI with incorrect PIN | Should fail | **Negative Testing** |
| OTP entered correctly | Transaction should process | **Functional Testing** |
| OTP entered incorrectly 3 times | User account blocked | **Security Testing** |
| Try transferring money after session timeout | Should redirect to login | **Security Testing** |