



Document Control

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Introduction

This document contains the test cases for the Financial Management System (FMS). Each test case describes a specific test scenario, including preconditions, test steps, expected results, and traceability to requirements.

The test cases are categorized by type:

- F Functional:** Tests that verify the system functions according to requirements
- P Performance:** Tests that verify the system meets performance requirements
- S Security:** Tests that verify the system meets security requirements
- U Usability:** Tests that verify the system meets usability requirements

Functional Test Cases

Test Type

F Functional

Description

Verify that a Finance Manager can create a new budget with annual, quarterly, and monthly views.

Preconditions

- User is logged in with Finance Manager role
- Chart of accounts is configured
- Fiscal year is defined

Test Steps

| Step | Action | Expected Result |
|------|---|---|
| 1 | Navigate to Budget Management module | Budget Management dashboard is displayed |
| 2 | Select "Create New Budget" option | Budget creation form is displayed |
| 3 | Enter budget name, fiscal year, and description | Input is accepted and validated |
| 4 | Select accounts to include in budget | Budget line items for selected accounts are displayed |
| 5 | Enter budget amounts for each account by period (monthly/quarterly) | System calculates totals and validates entries |
| 6 | Save budget | Budget is saved with "Draft" status |
| 7 | View budget in annual, quarterly, and monthly views | Budget is displayed correctly in all three views |

Expected Results

Budget is created successfully and can be viewed in annual, quarterly, and monthly formats.

Traceability

- **Requirements:** BR001, FR001
- **User Stories:** US001
- **Acceptance Criteria:** AC001, AC002

Test Type

F Functional

Description

Verify that a Finance Manager can create and compare multiple what-if budget scenarios.

Preconditions

- User is logged in with Finance Manager role
- A draft budget exists in the system

Test Steps

| Step | Action | Expected Result |
|------|---|--|
| 1 | Navigate to Budget Management module | Budget Management dashboard is displayed |
| 2 | Open existing draft budget | Budget details are displayed |
| 3 | Select "Create Scenario" option | Scenario creation interface is displayed |
| 4 | Create Scenario 1 with 5% revenue increase | Scenario 1 is created and saved |
| 5 | Create Scenario 2 with 10% expense reduction | Scenario 2 is created and saved |
| 6 | Create Scenario 3 with both 5% revenue increase and 10% expense reduction | Scenario 3 is created and saved |
| 7 | Select "Compare Scenarios" option | Comparison view shows all scenarios side by side |

Expected Results

At least 3 different budget scenarios can be created and compared side by side.

Traceability

- **Requirements:** BR002, FR003
- **User Stories:** US003
- **Acceptance Criteria:** AC004, AC005

Performance Test Cases

Test Type

P Performance

Description

Verify that the system can support at least 100 concurrent users without performance degradation.

Preconditions

- System is deployed in test environment
- Load testing tools are configured
- Test data is available

Test Steps

| Step | Action | Expected Result |
|------|--|--|
| 1 | Configure load testing tool to simulate 25 concurrent users | Load testing tool is configured |
| 2 | Run test with common user scenarios (login, view dashboard, generate report) | System handles 25 users with response times under 2 seconds |
| 3 | Increase load to 50 concurrent users | System handles 50 users with response times under 2 seconds |
| 4 | Increase load to 75 concurrent users | System handles 75 users with response times under 3 seconds |
| 5 | Increase load to 100 concurrent users | System handles 100 users with response times under 3 seconds |
| 6 | Monitor system resources (CPU, memory, network) during test | Resource utilization remains below 80% threshold |

Expected Results

System maintains acceptable performance with 100 concurrent users, with response times under 3 seconds and resource utilization below 80%.

Traceability

- **Requirements:** NFR001
- **User Stories:** N/A
- **Acceptance Criteria:** N/A

Test Type

P Performance

Description

Verify that all reports generate within 5 seconds, even with large data sets.

Preconditions

- System is deployed in test environment
- Test data includes at least 100,000 transactions
- Performance monitoring tools are configured

Test Steps

| Step | Action | Expected Result |
|------|---|-----------------------------------|
| 1 | Login as Finance Manager | User is logged in successfully |
| 2 | Navigate to Financial Reporting module | Reporting dashboard is displayed |
| 3 | Generate P&L report for current month | Report generates within 5 seconds |
| 4 | Generate P&L report for current quarter | Report generates within 5 seconds |
| 5 | Generate P&L report for current year | Report generates within 5 seconds |
| 6 | Generate Balance Sheet report | Report generates within 5 seconds |
| 7 | Generate Cash Flow report | Report generates within 5 seconds |

Expected Results

All reports generate within 5 seconds, regardless of the reporting period or data volume.

Traceability

- **Requirements:** NFR002
- **User Stories:** US005
- **Acceptance Criteria:** N/A

Security Test Cases

Test Type

S Security

Description

Verify that all financial data is encrypted at rest and in transit.

Preconditions

- System is deployed in test environment
- Security testing tools are configured
- Database access is available for verification

Test Steps

| Step | Action | Expected Result |
|------|--|--|
| 1 | Use network packet capture tool to monitor data transmission | Tool is configured and capturing packets |
| 2 | Login to the system and perform financial transactions | Transactions are completed successfully |
| 3 | Analyze captured packets | All data is transmitted using HTTPS/TLS |
| 4 | Attempt to read sensitive data from captured packets | Data cannot be read in clear text |
| 5 | Access database directly and examine financial data tables | Sensitive financial data is stored in encrypted format |
| 6 | Verify encryption key management procedures | Keys are securely stored and rotated according to policy |

Expected Results

All financial data is encrypted during transmission (TLS) and storage (database encryption).

Traceability

- **Requirements:** NFR003
- **User Stories:** N/A
- **Acceptance Criteria:** N/A

Test Type

S Security

Description

Verify that the system enforces password complexity requirements.

Preconditions

- System is deployed in test environment
- User account creation functionality is available

Test Steps

| Step | Action | Expected Result |
|------|--|---|
| 1 | Login as System Administrator | User is logged in successfully |
| 2 | Navigate to User Management module | User Management interface is displayed |
| 3 | Create a new user with password "password" | System rejects password as too simple |
| 4 | Try password "Password1" | System rejects password (missing special character) |
| 5 | Try password "Pass1" | System rejects password (too short) |
| 6 | Try password "Password1!" | System accepts password |
| 7 | Verify password history enforcement | System prevents reuse of recent passwords |

Expected Results

System enforces password complexity requirements: minimum 8 characters, at least one uppercase letter, one lowercase letter, one number, and one special character.

