| **Test ID** | **Commit Hash** | **Description** | **Expected Outcome** | **Actual Outcome** | **Pass / Fail** |
| --- | --- | --- | --- | --- | --- |
| T1 | ac7115c | Basic Transaction class created with hardcoded test data. | Program compiles and displays test transaction data. | Displayed correctly in terminal. | Pass |
| T2 | eb8ca85 | Attempted to use Transaction with user input. Forgot to compile all files. | Program should compile and accept user input. | Compilation failed: "Transaction not declared". | Fail |
| T3 | cb0cf84 | Added user input support to main.cpp. No validation included. | User enters data and transaction is stored. | Worked, but allowed negative amounts. | Pass (with known flaw) |
| T4 | 7dffed4 | Implemented input validation to prevent negative amounts. | Negative amounts are rejected with an error. | Prompted correctly and rejected negatives. | Pass |
| T5 | 9eead81 | Introduced loop and menu system. Allowed multiple transactions. | Menu displays and loops until exit. | Worked as expected. Session stores multiple transactions. | Pass |
| T6 | b1d10e5 | Added file saving using FinanceManager. Forgot file check initially. | Transactions are written to transactions.txt. | First run failed to open file. After fix, saved correctly. | Fail (then Pass) |
| T7 | bfa52c7 | Added option to load and display transactions from file. | Reads and displays saved transactions. | Loaded successfully. Handled missing file with error message. | Pass |
| T8 | ac3be0d | Implemented budget setting and warning if exceeded. | Expense triggers warning if over budget. | Warning shown correctly after exceeding budget. | Pass |
| T9 | 986feab | Budget system now checks budget *per month*. Also fixed crash from bad input in transaction file. | Monthly budgets are tracked separately. Program no longer crashes. | File read works. Crash bug fixed. | Pass |
| T10 | d992126 | Replaced manual category input with numbered list. Basic validation added. | User must pick from listed categories. | Worked, but no handling for blank input or wrong numbers. | Pass (needs more checks) |
| T11 | cd49382 | Filtering by category from saved transactions. | Transactions filtered and displayed by selected category. | Displayed correct matches. Worked as intended. | Pass |
| T12 | a88b539 | Added filtering by exact date and amount threshold. | User can filter >= or <= values. | Correctly filtered based on date or amount range. | Pass |
| T13 | cfce9cc | Implemented monthly report with totals for income and expense. | Shows income, expense, and balance for selected month. | Correct totals shown, grouped by type. | Pass |
| T14 | bda527a | Created bar chart for expenses by category. Unicode block failed, fallback used. | Graph shows bars per category using ‘|’. | Displays ASCII bar chart. | █ caused error. Replaced with ‘|’ |
| T15 | 3242d68 | Improved input validation — bad types, blanks, wrong menu entries. | App should reject and re-prompt invalid inputs. | Handled all tested bad inputs correctly. | Pass |
| T16 | 6384b73 | Final validation for dates — invalid days/months rejected. | Rejects 2025-99-12, etc. | Invalid dates now blocked properly. | Pass |