**Test conditions:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Conditions** | **Valid Partitions** | **Tag**  **V** | **Invalid**  **Partitions** | **Tag**  **X** | **Valid**  **Boundaries** | **Tag**  **B** | **Invalid**  **Boundaries** | **Tag**  **D** |
| Loan amount | 500-10000 | V1 | < 500  >10000  0  non-integer  null | X1  X2  X3  X4  X5 | 500  10000 | B1  B2 | 499  10001 | D1  D2 |
| Period | 1 - 5 | V2 | <1  >5  0  non-integer  null | X6  X7  X8  X9  X10 | 1  5 | B3  B4 | 0  6 | D3  D4 |

**Test Cases:**

**Test case: LoanParamTest**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test case** | **Description** | **Expected result** | **Tags covered** |
| 1 | Monthly Rate: 9.67  Period: 5  Loan amount: 500 | Process finished with exit code 0 | B1,B4 |
| 2 | Monthly Rate: 0.00  Period: 3  Loan amount: 499 | IllegalArgumentException. | X1,D1,V2 |
| 3 | Monthly Rate: 0.00  Loan amount: 7500  Period: 0 | IllegalArgumentException. | V1,X8,D3 |
| 4 | Monthly Rate: 869.88  Period: 1  Loan amount: 10000 | Process finished with exit code 0 | B2,B3 |
| 5 | Monthly Rate: 0.00  Period: 4  Loan amount: 10001 | IllegalArgumentException. | X2,D2,V2 |
| 6 | Monthly Rate: 96.80  Period: 3  Loan amount: 3000 | Process finished with exit code 0 | V1,V2 |
| 7 | Loan amount: aaa  Period: bbb  Monthly Rate: 0.00 | --Cannot be tested. | X4,X9 |
| 8 | Monthly Rate: 0.00  Period:  Loan amount: | --Cannot be tested. | X5,X10 |
| 9 | Monthly Rate: 0.00  Period: 0  Loan amount: 0 | IllegalArgumentException. | X3,X8 |
| 10 | Monthly Rate: 94.38  Period: 5  Loan amount: 5001 | Process finished with exit code 0 | V1,V2 |

**Test case: LoanPrivateTest**

|  |  |  |
| --- | --- | --- |
| **Test case** | **Description** | **Expected Result** |
| 1 | Loan amount: 2500  Period: 2 y | Test Amount:  The value in f (loanAmount) is 2500.0 |
| 2 | Loan amount: 5750  Period: 4 | Test Amount:  The value in f (loanAmount) is 7.0 |
| 3 | Loan amount: 7500  Period: 2 | Test Period:  The value in f (period) is 24 |
| 4 | Loan amount: 1000  Period: 5 | Test Period:  The value in f (numberOfPayments) is 60 |
| 5 | Loan amount: 501  Period: 4 | Test Rate:  The value in f (monthlyInterestRate) is 0.005 |
| 6 | Loan amount: 9999  Period: 1 | Test Rate:  The value in f (monthlyInterestRate) is 0.004166666666666667 |

**Test case: CustomerTest**

|  |  |  |
| --- | --- | --- |
| **Test case** | **Description** | **Expected Result** |
| 1 | Name: Jimmy  Mpayment: 1350 | Process finished with exit code 0 |

**Test case: LoanTest**

|  |  |  |
| --- | --- | --- |
| **Test case** | **Description** | **Expected Result** |
| 1 | Amount: 5000  Period: 1 | Process finished with exit code 0 |

**Test case: MockTest**

|  |  |  |
| --- | --- | --- |
| **Test case** | **Description** | **Expected Result** |
| 1 | Amount: Jimmy  Period: 1020 | Process finished with exit code 0 |

**Decision Table**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Input Conditions** | | | | |
| Period | T | F | T | F |
| Loan amount | T | T | F | T |
| **Output Conditions** | | | | |
| Valid Loan | T | F | F | F |