**Task 1:**

My primary role as the project's test manager of this project is to oversee every step of the testing process, from planning and developing tests to carrying them out and analyzing the findings. Certain major duties will be implemented to guarantee that our software complies with business requirements and performs as intended:

1. Define test strategy:

I will collaborate with our testing team, which consists of testers, an automated software test analyst, a database test analyst, and testers, to develop a thorough test plan that takes into account the environment, resources, scope, approach, timetable, and objectives for each test.

1. Planning and organizing test activities:

I will design and oversee the overall test strategy, which includes the test environment, test data, test cases, and test schedule. To determine test dependencies and make ensuring that tests are in line with development milestones, I will work with the 12-person development team.

1. Manage the test team:

I will manage our test team including an automation software test analyst, a database test analyst, and 3 testers. I will provide direction, guidance and support to the team and ensure that all team members have the necessary skills and resources to perform their roles.

1. Define and execute test cases:

I'll work with our test team to develop use cases based on test cases and business needs. I'll make sure the test cases are carried out in accordance with the testing plan and address both functional and non-functional criteria.

1. Identifying and managing defects:

I will track defects and communicate with the development team to ensure timely resolution, and ensure that all defects are properly documented and that the test team verifies that they have been fixed.

1. Ensuring Quality and Compliance:

To ensure prompt resolution of all issues, I will keep track of them, engage with the development team, and make sure that the test team verifies that they have been fixed.

1. Reporting and communicating test results:

To ensure that any concerns and risks are appropriately communicated and corrective actions are implemented promptly, I will share test results with the development team, project stakeholders, and senior management.

Overall, the project's success depends on my work as the test manager. I will collaborate closely with the development team to guarantee that the software is extensively tested, satisfies operational needs, and fulfils deadlines and quality standards.

**Use Case 1:**

**Use Case Name:** Applying for a Home Loan Finance Package

**Actor:** Customers, Website System

**Description:** This use case describes how the customer uses the website

system to apply for a finance package (home loan)

**Pre-condition:**

1. the website system is online

2. the customer has the internet-connected devices

3. the customer has accessed the website and selected the home

loan finance package option

**Normal Workflow:**

|  |  |
| --- | --- |
| 1 | The customer will enter the landing website page and select the home loan finance package option. |
| 2 | The website page will present advice inquiry web form with different types of home loan finance packages. |
| 3 | The customer will select the appropriate home loan finance package and click on the "Apply" button. |
| 4 | The website will prompt the customer to fill out the home loan finance package application form. |
| 5 | The customer will fill out the form and submit the application. |
| 6 | The website system will verify the information submitted and present the terms and conditions of the loan. |

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| 7 | The customer will read and accept the loan terms and conditions and click on the "Confirm" button. |
| 8 | The website system will generate the loan agreement and send it to the customer's registered email address. |
| 9 | The customer will receive the loan agreement, carefully review it, and confirm its content through electronic signature. |
| 10 | The website system will confirm receipt of the customer's signature and process the loan application. |
| 11 | The system will notify the customer of the application result, whether it is approved or rejected. |
| 12 | If the application is approved, the system will disburse the loan amount to the customer's designated bank account. |
| 13 | The use case ends with the customer receiving the home loan amount in his bank account. |

**Alternative Workflow:**

7a. If the customer does not meet the eligibility criteria for the selected loan

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| 1 | The website system will provide other suitable home loan finance packages. |
| 2 | The customer will read and accept the new loan terms and conditions, and fill out the suitable form, and click on the "Submit" button. |

6a. If the customer omits any mandatory information in the application form

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| 1 | The website system will prompt the customer to complete these fields before submitting. |
| 2 | The customer will check and complete these fields and then submit |

10a. I If the customer is unable to electronically sign the loan agreement

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| 1 | The website system will provide alternative options for the customer to print the agreement and sign and return it via email or post |
| 2 | The customer will use handwritten signature and receive the agreement via email or post |

**Test Cases:**

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| --- | --- | --- | --- | --- | --- |
| **Test Scenario ID** | | Test 1-Nomal Workflow | | **Test Case ID** | 1 |
| **Test Case Description** | | Successful Home Loan Application | | **Test Priority** | High |
| **Pre-Requisite** | | Internet connection + Chrome browser | | **Post-Requisite** | N/A |
| **Test Execution Steps:** | | | | | |
| **NO** | **Action** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 1 | Go to the website | URL | Website will display | Website displays | pass |
| 2 | Select the option ‘Home Loan’ | Select the option | The Home Loan page will display | Home Loan page displays | pass |
| 3 | Click the "Apply" button | Click | Application form will display | Application form displays | pass |
| 4 | Fill out the form with the valid information | Valid information | No Error Message will be prompted | no Error Message is prompted | pass |
| 5 | Click the "Submit" button | Click | The loan terms and conditions will display | Loan terms and conditions display | pass |
| 6 | Click the "Confirm" button | Click | an email of the loan agreement will be sent | the email is sent | pass |
| 7 | Confirm the email content through electronic signature | Electronic signature | Approved application result will be notified on the web page | Application result is notified | pass |
| 8 | Access to the bank account | Account number,  password | the bank account will  receive the loan amount | the bank account  receives the loan amount | pass |

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| **Test Scenario ID** | | Test 2-Alternative Workflow | | **Test Case ID** | 2 |
| **Test Case Description** | | Successful Home Loan Application using a handwritten signature | | **Test Priority** | High |
| **Pre-Requisite** | | Internet connection + Chrome browser | | **Post-Requisite** | N/A |
| **Test Execution Steps:** | | | | | |
| **NO** | **Action** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 1 | Repeat Step 1 to 6 of Test 1 |  | an email of the loan agreement will be sent | the email is sent | pass |
| 2 | Confirm the email content through handwritten signature | Handwritten signature | Approved application result will be notified on the web page | Application result is notified | pass |
| 3 | Access to the bank account | Account number,  password | the bank account will  receive the loan amount | the bank account  receives the loan amount | pass |

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| --- | --- | --- | --- | --- | --- |
| **Test Scenario ID** | | Test 3-Alternative Workflow | | **Test Case ID** | 3 |
| **Test Case Description** | | Failed Home Loan Application as does not meet the eligibility criteria | | **Test Priority** | High |
| **Pre-Requisite** | | Internet connection + Chrome browser | | **Post-Requisite** | N/A |
| **Test Execution Steps:** | | | | | |
| **NO** | **Action** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 1 | Repeat Step 1 to 3  of Test 1 |  | Application form will display | Application form displays | pass |
| 2 | Upload an invalid document for the eligibility criteria | An expired NZ driver's licence | Details of the failed application result will prompt;  A link will display | Details of the failed application result prompts, the link displays | pass |
| 3 | Click the link | Click | Requirements list of eligibility criteria will display;  A button of “Back to application” will display; | Requirements list of eligibility criteria displays;  The button displays | pass |
| 4 | Click the link | Click | Application form will display | Application form displays | pass |

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| **Test Scenario ID** | | Test 4-Alternative Workflow | | **Test Case ID** | 4 |
| **Test Case Description** | | Failed Home Loan Application using empty information | | **Test Priority** | High |
| **Pre-Requisite** | | Internet connection + Chrome browser | | **Post-Requisite** | N/A |
| **Test Execution Steps:** | | | | | |
| **NO** | **Action** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 1 | Repeat Step 1 to 3  of Test 1 |  | Application form will display | Application form displays | pass |
| 2 | Fill out the form with the blank information | An empty input for the First name, and Last name | An error message will prompt | An error message prompts | pass |
| 3 | Click the "Submit" button | Click | A message  of fields missing information will prompt | The message prompts | pass |
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| --- | --- | --- | --- | --- | --- |
| **Test Scenario ID** | | Test 5-Alternative Workflow | | **Test Case ID** | 5 |
| **Test Case Description** | | Failed Home Loan Application using invalid information | | **Test Priority** | High |
| **Pre-Requisite** | | Internet connection + Chrome browser | | **Post-Requisite** | N/A |
| **Test Execution Steps:** | | | | | |
| **NO** | **Action** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 1 | Repeat Step 1 to 3  of Test 1 |  | Application form will display | Application form displays | pass |
| 2 | Fill out the form with the invalid information | “123456” for the First name, and “$$$$$$”  for the Last name | An error message will prompt | An error message prompts | pass |
| 3 | Click the "Submit" button | Click | A message  of fields invalid information will prompt | The message prompts | pass |
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**Use Case 2:**

**Use Case Name:** Mortgage Calculator

**Actor:** Customers, Website System

**Description:** This use case describes how the customer will uses the

Mortgage Calculator on the website system to evaluate the house cost

which he wants to buy

**Pre-condition:**

1. the website system is online

2. the customer has the internet-connected devices

3. the customer has accessed the website and selected the home

loan finance package option

**Normal Workflow:**

|  |  |
| --- | --- |
| 1 | the customer will visit the landing website page |
| 2 | the website system will display the landing page and the "Mortgage Calculator" option. |
| 3 | the customer will select the "Mortgage Calculator" option. |
| 4 | the website system will display the "Mortgage Calculator", and prompt the customer to input information about the home he wants to purchase. |

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| 5 | the customer will input the necessary information and select the ‘Calculate’ button. |
| 6 | the website system will calculate the estimated monthly mortgage payment and the total cost of the loan over its life, and display the calculated result. |
| 7 | the customer will review the calculated information to decide whether to proceed with the home purchase, and click on the confirm button |
| 8 | the use case ends with the website system rendering to the home loan page. |

**Alternative Workflow:**

5a. If the customer does not input the valid information for the

"Mortgage Calculator"

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| 1 | the website system will prompt the messages to the customer to input valid information. |
| 2 | the customer will input valid information |
| 3 | the use case resumes at step 5. |

7a. If the monthly payment amount is too high

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| 1 | the customer will select the ‘recalculate’ option. |
| 2 | the system will return to Mortgage Calculator page, and display more payment options |
| 3 | the customer will adjust the details, select other suitable payment option, and click the “Calculate” button. |
| 4 | the use case resumes at step 7. |

**Test Cases:**

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| **Test Scenario ID** | | Test 1-Nomal Workflow | | **Test Case ID** | 1 |
| **Test Case Description** | | Monthly Mortgage Payment Calculation | | **Test Priority** | High |
| **Pre-Requisite** | | Internet connection + Chrome browser | | **Post-Requisite** | N/A |
| **Test Execution Steps:** | | | | | |
| **NO** | **Action** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 1 | Go to the website | URL | Website will display | Website displays | pass |
| 2 | Select the option "Mortgage Calculator" | Select the option | The page "Mortgage Calculator" will display | "Mortgage Calculator" displays | pass |
| 3 | Enter the necessary information | Loan amount:  $1.2 million,  Loan term: 2040,  Interest rate: 6%’  Frequency: monthly | Monthly repayment will display,  Total payment will display | Monthly repayment displays,  Total payment displays | pass |
| 4 | Click the "Confirm" button | Click | The home loan page will display | The home loan page displays | pass |
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| **Test Scenario ID** | | Test 2- Alternative Workflow | | **Test Case ID** | 2 |
| **Test Case Description** | | Recalculating the Mortgage Payment | | **Test Priority** | High |
| **Pre-Requisite** | | Internet connection + Chrome browser | | **Post-Requisite** | N/A |
| **Test Execution Steps:** | | | | | |
| **NO** | **Action** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 1 | Repeat Step 1 to 3  of Test 1 |  | Monthly repayment will display,  Total payment will display | Monthly repayment displays,  Total payment displays | pass |
| 4 | Click "Recalculate" button | Click | The new page of "Mortgage Calculator" will display | "Mortgage Calculator" displays | pass |
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| **Test Scenario ID** | | Test 3-Alternative Workflow | | **Test Case ID** | 3 |
| **Test Case Description** | | Calculating the Mortgage Payment with empty fields | | **Test Priority** | High |
| **Pre-Requisite** | | Internet connection + Chrome browser | | **Post-Requisite** | N/A |
| **Test Execution Steps:** | | | | | |
| **NO** | **Action** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 1 | Repeat Step 1 to 2 of Test 1 |  | "Mortgage Calculator" will display | "Mortgage Calculator" displays | pass |
| 2 | Enter the empty fields | empty field for Loan amount,  Loan term,  Interest rate | An error message will prompt | An error message prompts | pass |
| 3 | Click on the  "Calculate" button | Click | A message of fields missing information will prompt | The message prompts | pass |
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| **Test Scenario ID** | | Test 4-Alternative Workflow | | **Test Case ID** | 4 |
| **Test Case Description** | | Calculating the Mortgage Payment with invalid fields | | **Test Priority** | High |
| **Pre-Requisite** | | Internet connection + Chrome browser | | **Post-Requisite** | N/A |
| **Test Execution Steps:** | | | | | |
| **NO** | **Action** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 1 | Repeat Step 1 to 2 of Test 1 |  | "Mortgage Calculator" will display | "Mortgage Calculator" displays | pass |
| 2 | Enter the invalid fields | Loan amount: $0,  Loan term: 2045,  Interest rate: 999, | An error message will prompt | An error message prompts | pass |
| 3 | Click on the  "Calculate" button | Click | A message of fields invalid information will prompt | The message prompts | pass |
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| **Test Scenario ID** | | Test 5-Alternative Workflow | | **Test Case ID** | 5 |
| **Test Case Description** | | Calculating the Mortgage Payment with invalid fields | | **Test Priority** | High |
| **Pre-Requisite** | | Internet connection + Chrome browser | | **Post-Requisite** | N/A |
| **Test Execution Steps:** | | | | | |
| **NO** | **Action** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 1 | Repeat Step 1 to 2 of Test 1 |  | "Mortgage Calculator" will display | "Mortgage Calculator" displays | pass |
| 2 | Enter the invalid fields | Loan amount: $$,  Loan term: \*\*,  Interest rate: $$, | An error message will prompt | An error message prompts | pass |
| 3 | Click on the  "Calculate" button | Click | A message of fields invalid information will prompt | The message prompts | pass |
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