**Foreign Currency Buying**

**Software Test Plan Document**

**Version <1.0>**

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**Revision History**

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# 1. Introduction

## 1.1 Purpose

This test plan describes the testing approach and overall framework that will drive the testing of our Foreign Currency Buying Software. The document introduces:

* Test Strategy: rules the test will be based on, including the givens of the project (like time constraints, start/end dates, current objectives, and assumption that the design team has come to a consensus to on.
* Execution Strategy: this is the part of the test plan where we set up and go into detail on how the test will be performed and what the expected results are, how defects in the software can be found, and how we can fix and iron out those bugs.
* Test Management: this process is where we handle the logistics, tests, and all events that may crop up during the execution of our test. I.e communication between the team, risk management and mitigation.

## 1.2 Overview

The “Foreign Currency Buying” Software is a web-based application that shall allow a user to purchase any combination or amount of foreign currency that is supported on the site. This will be done by using user created accounts to place orders of foreign currency for the users, and agent accounts to fulfill the orders for the foreign currency.

The functionality of this module spans through the entire internet, making our software available anywhere, anytime whenever one should want to use it. All information is subject to universal standards of defined security policy, where he/she can only view the information he/she is authorized to see on their account.

## 1.3 Audience

* Project team members perform tasks specified in this document and provide input and recommendations on this document.
* Project Manager Plans for the testing activities in the overall project schedule, reviews the document, tracks the performance of the test according to the task specified herein, approves the document and is accountable for the results.
* The stakeholders’ representatives and participants (I.e. the people who have a vested interest in whether our software is good and will be a profitable venture.)
* Technical Team ensures that the test plan and general design elements are industry standard.
* Business and economic analysts who can provide their input on functional changes based on the needs of users in this part of the market.

# 2. Test Strategy

## 2.1 Test Objectives

## The test objectives verify that the functionality of Foreign Currency Buying V1.0 works given the specifications.

## The test’s job is to execute and validate the test scripts, find, fix, and retest defects that are deemed high or medium severity as per the entrance criteria. The low severity defects are held for future fixing.

Following the test, the final product will be:

* Software that is production-ready;
* A set of test scripts that are stable and can be reused for Functional and UAT test execution.

## 2.2 Test Assumptions

## **Key Assumptions**

* Production similar data required and is available in the system before the start of Functional Testing.
* If the defect rate is high in cycle 2, then cycle 3 will be initiated in each testing phase.

**General**

* Once the build is ready for testing then Exploratory Testing will begin.
* Defects will be viewed via a snapshot in JPEG format.
* Using a VPN the Test Team will have access to the Test environment.
* Provided execution is supported by Development and Business Analyst then the Test Team will assume all necessary input required during Test design.
* The Test environment and prep activities will be owned by the Dev team.
* The project will provide test planning, test design, and test execution support.
* The project team is experienced and has prior knowledge or training in using the system, project, and test process.
* If outages or defect fixes occur there will be no environment downtime.
* The Project Manager will review and sign off all test deliverables.
* If information is shown correctly online and in reports, it will be assumed that the database is working correctly.
* If there are more defects in Cycle 2 then Cycle 3 will begin.

**Functional Testing**

* Concurrently with Functional testing, the testing team utilized preloaded data which is available on the system at the time of execution.
* The Test Team will perform Functional testing only on Foreign Currency Buying V1.0.

**UAT**

* End users (L1, L2, and L3) and the QA Group will provide support on creating a UAT script.

## 2.3 Test Principles

* Testing will aim to meet the business objectives, maintaining cost efficiency, and providing quality.
* All teams will be provided with consistent testing procedures.
* Testing procedures will be acute but maintain the ability to change when needed.
* Testing activities will always build on previous stages of testing.
* The Testing Environment and data will be as similar as possible to the production environment.
* Testing will always be repeatable and measurable.
* Testing will have different phases each with its own objectives and goals.
* Testing will contain entrance and exit criteria.

## 2.4 Data Approach

* During functional testing, Foreign Currency Buying V1.0 will utilize pre-loaded test data to be used for the testing activities.

## 2.5 Scope and Levels of Testing

## 2.5.1 Exploratory

**PURPOSE**: The purpose of Exploratory testing aims to find and remove critical defects prior to starting the level of testing.

**SCOPE**: First level navigation, and admin modules

**TESTERS**: Testing team.

**METHOD**: No test scripts or documentation is utilized during exploratory testing.

**TIMING**: Performed at the beginning of each cycle.

2.5.2 Functional Test

**PURPOSE**: The Functional Testing stage is utilized to verify the functions of the application. By giving input to the application the test can validate the output from the application.

**SCOPE**: Because there are changes in the requirements, the scope is high level. The scope can seen further down in the document based on the Test scenarios.

**TESTERS**: Testing Team.

**METHOD**: Functional scripts are stored within HP ALM.

**TIMING**: Functional Test are performed following Exploratory Test.

**TEST ACCEPTANCE CRITERIA**

* 1. An approved Functional Specification Document and Use case documents must be made available before attempting the Test Design phase.
  2. Test cases must be signed off before starting Test Execution.
  3. If development is completed, the unit tested that passed and its results are given to the Testing team to prevent duplicate defects.
  4. The Test environment and application is configured and ready to be utilized.

|  |  |  |
| --- | --- | --- |
| Sign-off |  | Readiness |
| •Approved Functional Specification Document  •Approved Use cases  •Approved Test cases | •Development is finished, and the unit is tested.  •Application deployed and system ready to be utilized in testing environment.  •Data like production is available for all functions.  •Defect fixes are planned according to Unit Testing and evaluation criteria. |

**TEST DELIVERABLES**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Deliverable Name** | **Author** | **Reviewer** |
| 1. | Test Plan | Test Lead | Project Manager |
| 2. | Functional Test Cases | Test Team | Business Analyst’s  Sign off |
| 3. | Logging Defects in HP ALM | Test Team | Test Lead/  Programming  Lead |
| 4. | Daily/weekly status report | Test Team/ Test Lead | Test Lead/ Project Manager |
| 5. | Test Closure report | Test Lead | Project Manager |

**MILESTONE LIST**

The milestone list can vary and change due to difficulties in System environment readiness, changes to scope, and dependencies that affect timelines.

One cycle shall not exceed 3 months but because testing will usually not consist of only one cycle then full testing shall be completed within 9 months.

2.5.3 User Acceptance Test (UAT)

**PURPOSE**: In order to verify the business logic, the end user can complete the last review of the system before deploying.

**TESTERS**: UAT is performed by end users (L1, L2, and L3).

**METHOD**: The users may utilize some validation that is not within the scrips due to needing to adapt to business needs. Based on input from the end users and business analysts the test team can write UAT test cases.

**TIMING**: This is the last level of testing prior to releasing to production.

**TEST DELIVERABLES**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Deliverable Name** | **Author** | **Reviewer** |
| 1. | UAT Test Cases | Test Team | Business Analyst’s  Sign off |

## 2.6 Test Effort Estimate

The man-hours that each activity performed by the QA team can be modeled after industry standards. The hours will be recorded, and the estimate can be adjusted as testing in progress to provide increased accuracy.

# 3. Execution Strategy

## 3.1 Entry and Exit Criteria

* The entry criteria refer to the desirable conditions in order to start test execution.
* The exit criteria are met when acceptable conditions are cleared to proceed with the implementation of the software product.
* Entry and exit criteria are meant to be flexible benchmarks and are not to be “set in stone”. If these criteria aren’t met, then the team will assess the situation, identify actions to be taken and make recommendations based on what they’ve found. The project manager will be the person most in control for “go-no go” decisions.
* Entry criteria is the start of the execution phase of the test: activities in test planning are 100% completed(executed)

|  |  |  |  |
| --- | --- | --- | --- |
| **Exit Criteria** | **Test Team** | **Tech Team** | **Notes** |
| 100% Test Software executes |  |  |  |
| 90% Pass rate of Test software |  |  |  |
| No critical or high security defects |  |  |  |
| Defects logged for further cleanup |  |  |  |

## 3.2 Test Cycles

* Multiple cycles for functional testing. During each cycle we will execute all current software.
* The first cycle objective is to identify and blocking, critical, or program ending defects.
* The second cycle objective is to identify and remaining high and medium level defects, remove and correct any software elements that improve software performance.
* Any cycles beyond these two serve to improve the software and fix minor bugs before release.

## 3.3 Validation and Defect Management

* It is the responsibility of the tester to open the defects, link them to the corresponding software, assign an initial severity and status.
* Defect manager responsible for reviewing the severity of the defects and facilitate with the technical team and fixing its implementation.

|  |  |
| --- | --- |
| **Severity** | **Impact** |
| 1st Critical | Crashes the system, causes file corruption, data loss. Abnormal return to the operating system. |
| 2nd High | Causes a vital lack of program functionality |
| 3rd Medium | Bug can potentially degrade the whole system, prevents other areas of the product from being tested. |
| 4th Low | Insufficient or error message has minimum impact on product use. |
| 5th Cosmetic | Unclear error message, no impact on product use |

## 3.4 Test Metrics

Test metrics to measure the progress and level of success of the test will be developed and shared with the project manager for approval. Below are some of the metrics.

|  |  |  |
| --- | --- | --- |
| **Report** | **Description** | **Frequency** |
| Test preparation/Execution Status | Defect severity status | Weekly/Daily |
| Daily Execution Status | Report on pass, fail, and total defects | Daily |
| Project weekly status report | Project driven reporting | Weekly |

# 4. Test Management Process

## 4.1 Test Management Tool

Various companies make management tools like one example would be HP application lifecycle management which is the test management tool.

* Responsible for test management. Used for testing all artifacts such as test cases, test results are updated to the management tool.
* Each resource in the testing team will be provided with read/write access to modify test cases as needed.
* All cases during the test design phase will be written directly into the management tool.

## 4.2 Test Design Process

* Understand requirements
* Establish traceability matrix
* Preparation of Test cases
* SME/Peer Review of Test cases
* Incorporating review comments in test cases
* Testers need to ensure they perform their task and make day-wise execution details

## 4.3 Test Execution Process

* Execute each of the test step in test case
* Mark Status
* Raise defects for the failed test cases
* Send the daily status report to test lead
* Participate in defect triage cycle and explain the defects
* Complete the test execution of all the test cases

## 4.4 Test Risks and Mitigation Factors

|  |  |  |  |
| --- | --- | --- | --- |
| **Risk** | **Prob.** | **Impact** | **Mitigation Plan** |
| Schedule- Tight | High | High | Prepare in advance, early communication |
| Resources- Not enough resources | Medium | High | Deviations from estimated schedule factored in |
| Defects- defects are found at the last stage of a cycle | Medium | High | Defect management plan to put in place |
| Scope- Naturally defined, various new issues | Low-Medium | Low-High | Well defined and changes are kept in realizable sizes |

## 4.5 Communications Plan and Team Roster

## 4.6 Role Expectations

## 4.6.1 Project Management

* Project manager: reviews the content of the test plan and implements the strategies and signs off on everything.

## 4.6.2 Test Planning (Test Lead)

* Ensure criteria to be used
* Develop test plan and guidelines to create test conditions.
* Provide functional and technical team support.

## 4.6.3 Test Team

* Develop test conditions
* Perform execution and validation.

## 4.6.4 Test Lead

* Give the OK to start the next level of testing.
* Facilitate defect communications between the tech and test teams.

## 4.6.5 Development Team

* Review testing deliverables
* Assis in the validation of results
* Implement fixes to defects according to schedule.

# 5. Test Environment

Foreign Currency Buying V1.0 - The web site and web portal will be hosted on the server at the company’s location, and the database will be hosted on another server at the same location.

Forex API – The API will connect to the Forex’s servers in order to pull the information on currency exchange rates.

# Appendix A.

## Test Cases

|  |  |  |
| --- | --- | --- |
| Test Case ID | Test Title | Test Description |
| 01 | User Registration | Given that the user has accessed the website, then the user shall be able to register an account through the website. The user must enter first name, last name, middle initial, mailing address, email address, phone number, as well as either a default credit card, deposit account, or pay-pal information. |
| 02 | User log-in: Website | Given that a user has registered, then the user should be able to log in to the website. The website shall ask the user if they wish to be remembered on the log in device so that in the future the user shall be logged in automatically. |
| 03 | Search: Website | Given that a user has registered, then the user should be able to log in to the website. The website shall ask the user if they wish to be remembered on the log in device so that in the future the user shall be logged in automatically. |
| 04 | Search result in list view: Website | Search results shall then be displayed on a list. The list shall display the most accurate results first according to the user's search. Each currency listed shall display the current exchange rate. There should be maximally 30 results displayed. |
| 05 | Purchase Options – Website | Given that the user has found a desired currency, then the user should be able to select it to display several purchase options. Purchase options should include Amount of currency, denomination mix, delivery option, the user shall type in the amount of currency. The denomination mix and delivery option shall be selected in a dropdown box by the user. |
| 06 | User Account Management: Website | Given that the user is logged into his/her account then the user shall be able to click edit profile. The user shall then be able to edit all information except the username and type of account. |
| 07 | Add to cart: Website | Given that the user has selected and entered purchase options, the user shall be able to add the selected currency to their cart. The currency is then added to their cart and the user shall be able to continue searching the list. The cart continues to display the amount of currency added while the user continues to search. |
| 08 | Retrieve Password | Given that the user has registered, then the user should be able to retrieve his/her password by email. |
| 09 | Search no match found | If no match is found after searching for currency, then the user should be notified while the search bar is still available so that a new search shall be performed. |
| 10 | Go to cart | The user shall select to check out when they are done adding currency to their cart. The following is displayed:  The total transaction amounts. A transaction fee of 1% of the purchase. A delivery fee (flat rate of $10.00). A tax amount (8.25% of the total purchase  The user shall edit his/her selection and the transaction total should recalculate. |
| 11 | Edit Selections | The user shall be able to make changes and make edits to the selected option in their cart. They should be able to say look at the transaction that is about to occur and make changes if they find any problems with their current transaction. |
| 12 | Input payment | The user shall be able to either input their credit card information that will be used to purchase the foreign currency, or they should be able to input their PayPal account information. This is the final step before submitting the order. |
| 13 | Submit Order | Once the payment credentials have been inputted, the user shall be able to see a “Submit Order” button displayed at the bottom of the screen, and once clicked the order shall be submitted. |
| 14 | Cancel Transaction | The user shall be able to cancel their transaction after their order is submitted and before the transaction is marked as “complete.” The user should be able to either enter their transaction number or choose from a list in order to cancel a transaction. |
| 15 | Submit Issues | The user shall be able to submit any issues they have encountered while purchasing foreign currency. The user should be able to enter their transaction number of their order and should be able to type a description of the issues in a text box.  Once the user has submitted the issue, they should be able to view the status of their issues via their account. |
| 16 | Convert Transaction | The user shall be able to change the amount of currency ordered or the selected currency during the gray period. A fee will automatically be added to their total. |
| 17 | Manage User Issues | The admin user shall be able to choose the user’s email, address, or phone number to contact the user about any submitted issues through the website. |
| 18 | Certify Delivery | The delivery agent user shall be able to enter their credentials and the user’s transaction number to complete the transaction. The delivery agent user should be able to request the user’s signature through the website. |
| 19 | Add Signature | The user shall be able to electronically submit their signature in order to complete the transaction. |
| 20 | Complete Transaction | Given the user has submitted the order and provided their signature, the admin user should be able to mark the order as complete. |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 01 | | | Designed By | | | Test Team |
| Module Name | | | User module | | Test Priority | | High | | | Design Date | | | 11/29/2021 |
| Release Version | | | 1.0 | | Test Title | | User Registration | | | Executed By | | | Test Team |
| Project Lead | | | Project Lead | | Test Description | | Given that the user has accessed the website, then the user shall be able to register an account through the website. The user must enter first name, last name, middle initial, mailing address, email address, phone number, as well as either a default credit card, deposit account, or pay-pal information. | | | Execution Date | | | 11/29/2021 |
| Pre-Conditions | | User has accessed the site | | | | | | | | | | | |
| Dependencies | | None | | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | | Actual Result | Status | | Defect # | Notes | |
| 1 | Click the register button. | | | N/A | | Users can enter information. | | The correct input boxes appeared. | Correct | | N/A | Working as intended. | |
| 2 | Enter name, mailing address, phone #, email address, and financial information. | | | “Valid Account information” | |  | | User was able to enter valid account information. | Correct | | N/A | Working as intended. | |
| 3 | Click submit | | | N/A | | Account is registered. | | The account was registered | Correct | | N/A | Working as intended. | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 02 | | Designed By | | Test Team | |
| Module Name | | | User module | | Test Priority | | High | | Design Date | | 11/29/2021 | |
| Release Version | | | 1.0 | | Test Title | | User log-in: Website | | Executed By | | Test Team | |
| Project Lead | | | Project Lead | | Test Description | | Given that a user has registered, then the user should be able to log in to the website. The website shall ask the user if they wish to be remembered on the log in device so that in the future the user shall be logged in automatically. | | Execution Date | | 11/29/2021 | |
| Pre-Conditions | | A valid user account to login. | | | | | | | | | | |
| Dependencies | | Test Case 01 | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | Actual Result | Status | | Defect # | | Notes |
| 1 | In the login Panel enter username | | | “A valid username” | | Username is accepted | Username is accepted | Correct | | N/A | | Working as intended. |
| 2 | Enter password of user account | | | “A valid password” | | Password is accepted | Password is accepted | Correct | | N/A | | Working as intended. |
| 3 | Click “Login” button | | | N/A | | The user is logged in. | The user is logged in. | Correct | | N/A | | Working as intended. |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 03 | | Designed By | | Test Team | |
| Module Name | | | User module | | Test Priority | | Medium | | Design Date | | 11/29/2021 | |
| Release Version | | | 1.0 | | Test Title | | Search: Website | | Executed By | | Test Team | |
| Project Lead | | | Project Lead | | Test Description | | Given that a user has registered, then the user should be able to log in to the website. The website shall ask the user if they wish to be remembered on the log in device so that in the future the user shall be logged in automatically. | | Execution Date | | 11/29/2021 | |
| Pre-Conditions | | User is logged in. | | | | | | | | | | |
| Dependencies | | Test Case 02 | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | Actual Result | Status | | Defect # | | Notes |
| 1 | Enter information into the search box. | | | “Valid search text” | | Search information appears in box | Search information appears in box | Correct | | N/A | | Working as intended |
| 2 | Press search button | | | N/A | | Correct search results are displayed | No results are displayed. | Incorrect | | 1 | | Not working as intended, first defect. |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 04 | | Designed By | | Test Team | |
| Module Name | | | User module | | Test Priority | | Medium | | Design Date | | 11/29/2021 | |
| Release Version | | | 1.0 | | Test Title | | Search result in list view: Website | | Executed By | | Test Team | |
| Project Lead | | | Project Lead | | Test Description | | Search results shall then be displayed on a list. The list shall display the most accurate results first according to the user's search. Each currency listed shall display the current exchange rate. There should be maximally 30 results displayed. | | Execution Date | | 11/29/2021 | |
| Pre-Conditions | | User has searched | | | | | | | | | | |
| Dependencies | | Test Case 03 | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | Actual Result | Status | | Defect # | | Notes |
| 1 | Enter information into the search box. | | | “Valid search text” | | Search information appears in box | Search information appears in box | Correct | | N/A | | Working as intended |
| 2 | Press search button | | | N/A | | Correct search results are displayed | Correct search results are displayed | Correct | | N/A | | Working as intended |
| 3 | Results displayed in list view | | | N/A | | Correct Search results are displayed | Results are displayed in sentence view | Incorrect | | 2 | | Also, incorrect if test case 03 fails. |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 05 | | Designed By | | Test Team | |
| Module Name | | | User Module | | Test Priority | | High | | Design Date | | 11/29/2021 | |
| Release Version | | | 1.0 | | Test Title | | Purchase Options – Website | | Executed By | | Test Team | |
| Project Lead | | | Project Lead | | Test Description | | Given that the user has found a desired currency, then the user should be able to select it to display several purchase options. Purchase options should include Amount of currency, denomination mix, delivery option, the user shall type in the amount of currency. The denomination mix and delivery option shall be selected in a dropdown box by the user. | | Execution Date | | 11/26/2021 | |
| Pre-Conditions | | Users have searched currencies. | | | | | | | | | | |
| Dependencies | | Test Case 04 | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | Actual Result | Status | | Defect # | | Notes |
| 1 | Click desired currency | | | N/A | | Displays purchase options | Displays purchase options | Correct | | N/A | | Working as intended |
| 2 | Click options dropdown box | | | N/A | | Displays denomination and delivery options. | Displays denomination and delivery options. | Correct | | N/A | | Working as intended |
| 3 | Amount entered and accepted | | | “Valid amount” | | Purchase entered | Purchase entered | Correct | | N/A | | Working as intended |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 06 | | Designed By | | Test Team | |
| Module Name | | | User Module | | Test Priority | | Low | | Design Date | | 11/29/2021 | |
| Release Version | | | 1.0 | | Test Title | | User Account Management: Website | | Executed By | | Test Team | |
| Project Lead | | | Project Lead | | Test Description | | Given that the user is logged into his/her account then the user shall be able to click edit profile. The user shall then be able to edit all information except the username and type of account. | | Execution Date | | 11/29/2021 | |
| Pre-Conditions | | User has a registered account | | | | | | | | | | |
| Dependencies | | Test Case 02 | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | Actual Result | Status | | Defect # | | Notes |
| 1 | Click edit profile | | | N/A | | Displays account information | Displays account information | Correct | | N/A | | Working as intended |
| 2 | Enter new email | | | “Valid email” | | Email is changed | Email stays the same | Incorrect | | 3 | | Not working as intended |
| 3 | Enter new password | | | “Valid password” | | Password is changed | Password stays the same | Incorrect | | 3 | | Not working as intended |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 07 | | Designed By | | Test Team | |
| Module Name | | | User Module | | Test Priority | | High | | Design Date | | 11/29/2021 | |
| Release Version | | | 1.0 | | Test Title | | Add to cart: Website | | Executed By | | Test Team | |
| Project Lead | | | Project Lead | | Test Description | | Given that the user has selected and entered purchase options, the user shall be able to add the selected currency to their cart. The currency is then added to their cart and the user shall be able to continue searching the list. The cart continues to display the amount of currency added while the user continues to search. | | Execution Date | | 11/29/2021 | |
| Pre-Conditions | | User has chosen desired currency | | | | | | | | | | |
| Dependencies | | Test Case 05 | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | Actual Result | Status | | Defect # | | Notes |
| 1 | Click add to cart | | | N/A | | Currency is added to cart | Currency is added to cart | Correct | | N/A | | Working as intended |
| 2 | Search for the next currency | | | “Valid search text” | | Can continue to search | New currency replaces old currency | Incorrect. | | 4 | | Not working as intended, high priority |

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| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 08 | | Designed By | | Test Team | |
| Module Name | | | User Module | | Test Priority | | Medium | | Design Date | | 11/29/2021 | |
| Release Version | | | 1.0 | | Test Title | | Retrieve Password | | Executed By | | Test Team | |
| Project Lead | | | Project Lead | | Test Description | | Given that the user has registered, then the user should be able to retrieve his/her password by email. | | Execution Date | | 11/29/2021 | |
| Pre-Conditions | | The user has a valid account | | | | | | | | | | |
| Dependencies | | Test Case 01 | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | Actual Result | Status | | Defect # | | Notes |
| 1 | Click retrieve password | | | N/A | | Moves to password retrieval page | Moves to password retrieval page | Correct | | N/A | | Working as intended |
| 2 | Enter email address | | | Enter “Valid email” | | Password retrieval email is sent | Password retrieval email is sent | Correct | | N/A | | Working as intended |

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| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 09 | | Designed By | | Test Team | |
| Module Name | | | User Module | | Test Priority | | Low | | Design Date | | 11/29/2021 | |
| Release Version | | | 1.0 | | Test Title | | Search no match found | | Executed By | | Test Team | |
| Project Lead | | | Project Lead | | Test Description | | If no match is found after searching for currency, then the user should be notified while the search bar is still available so that a new search shall be performed. | | Execution Date | | 11/29/2021 | |
| Pre-Conditions | | User has searched | | | | | | | | | | |
| Dependencies | | Test Case 03 | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | Actual Result | Status | | Defect # | | Notes |
| 1 | User can re-enter search after no results | | | “Valid search results” | | Users can research new results. | Old results are displayed | Incorrect | | 5 | | Low priority but should be easy fix |

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| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 10 | | Designed By | | Test Team | |
| Module Name | | | User Module | | Test Priority | | High | | Design Date | | 11/29/2021 | |
| Release Version | | | 1.0 | | Test Title | | Go to cart | | Executed By | | Test Team | |
| Project Lead | | | Project Lead | | Test Description | | The user shall select to check out when they are done adding currency to their cart. The following is displayed:  The total transaction amounts. A transaction fee of 1% of the purchase. A delivery fee (flat rate of $10.00). A tax amount (8.25% of the total purchase  The user shall edit his/her selection and the transaction total should recalculate. | | Execution Date | | 11/29/2021 | |
| Pre-Conditions | | Has account and added currency to cart | | | | | | | | | | |
| Dependencies | | Test Case 07 | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | Actual Result | Status | | Defect # | | Notes |
| 1 | Click go to cart | | | N/A | | Page goes to the cart and displays appropriate information | Page goes to cart and displays appropriate information | Correct | | N/A | | Working as intended |
| 2 | Change amount | | | “Valid amount entered” | | User can change to a new amount | User can change to a new amount | Correct | | N/A | | Working as intended |

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| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 11 | | Designed By | | Test Team | |
| Module Name | | | User module | | Test Priority | | Medium | | Design Date | | 11/29/2021 | |
| Release Version | | | 1.0 | | Test Title | | Edit Selections | | Executed By | | Test Team | |
| Project Lead | | | Project Lead | | Test Description | | The user shall be able to make changes and make edits to the selected option in their cart. They should be able to say look at the transaction that is about to occur and make changes if they find any problems with their current transaction. | | Execution Date | | 11/29/2021 | |
| Pre-Conditions | | User has added to the cart. | | | | | | | | | | |
| Dependencies | | Test Case 07 | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | Actual Result | Status | | Defect # | | Notes |
| 1 | Click on cart button. | | | N/A | | Users can view their cart. | The cart appeared. | Correct | | N/A | | Working as intended. |
| 2 | Click on “edit cart.” | | | N/A | | Users can edit their cart. | User was able to click the edit button and make changes. | Correct | | N/A | | Working as intended. |
| 3 | Submit changes. | | | N/A | | Users can submit any changes made. | User was able to click the submit button to make changes to their order. | Correct | | N/A | | Working as intended. |

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| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 12 | | Designed By | | Test Team | |
| Module Name | | | User module | | Test Priority | | High | | Design Date | | 11/29/2021 | |
| Release Version | | | 1.0 | | Test Title | | Input Payment | | Executed By | | Test Team | |
| Project Lead | | | Project Lead | | Test Description | | The user shall be able to either input their credit card information that will be used to purchase the foreign currency, or they should be able to input their PayPal account information. This is the final step before submitting the order. | | Execution Date | | 11/29/2021 | |
| Pre-Conditions | | The user has added items to the cart. | | | | | | | | | | |
| Dependencies | | Test Case 07 | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | Actual Result | Status | | Defect # | | Notes |
| 1 | Add credit card information. | | | N/A | | Users can enter credit card information. | The information was submitted without issues. | Correct | | N/A | | Working as intended. |
| 2 | Add PayPal information | | | N/A | | Users can enter their PayPal credentials. | The information was submitted without issues. | Correct | | N/A | | Working as intended. |

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| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 13 | | Designed By | | Test Team | |
| Module Name | | | User Module | | Test Priority | | High | | Design Date | | 11/29/2021 | |
| Release Version | | | 1.0 | | Test Title | | Submit Order | | Executed By | | Test Team | |
| Project Lead | | | Project Lead | | Test Description | | Once the payment credentials have been inputted, the user shall be able to see a “Submit Order” button displayed at the bottom of the screen, and once clicked the order shall be submitted. | | Execution Date | | 11/29/2021 | |
| Pre-Conditions | | Add payment information. | | | | | | | | | | |
| Dependencies | | Test Case 12 | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | Actual Result | Status | | Defect # | | Notes |
| 1 | Click on “submit order” button. | | | N/A | | Users can submit their orders. | The order was successfully submitted. | Correct | | N/A | | Working as intended. |

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| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 14 | | Designed By | | Test Team | |
| Module Name | | | User Module | | Test Priority | | Medium | | Design Date | | 11/29/2021 | |
| Release Version | | | 1.0 | | Test Title | | Cancel Transaction | | Executed By | | Test Team | |
| Project Lead | | | Project Lead | | Test Description | | The user shall be able to cancel their transaction after their order is submitted and before the transaction is marked as “complete.” The user should be able to either enter their transaction number or choose from a list in order to cancel a transaction. | | Execution Date | | 11/29/2021 | |
| Pre-Conditions | | An order had to be submitted. | | | | | | | | | | |
| Dependencies | | Test Case 13 | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | Actual Result | Status | | Defect # | | Notes |
| 1 | Go to “cancel transaction” page. | | | N/A | | Cancel transaction page will display. | Page was displayed. | Correct | | N/A | | Working as intended. |
| 2 | Enter transaction number. | | | N/A | | Users can enter their transaction number. | User was successfully able to input the number. | Correct | | N/A | | Working as intended. |
| 3 | Choose transaction number from a list. | | | N/A | | Users can choose their transaction number. | User was successfully able to choose the correct number. | Correct | | N/A | | Working as intended. |

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| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 15 | | Designed By | | Test Team | |
| Module Name | | | User module | | Test Priority | | Low | | Design Date | | 11/29/2021 | |
| Release Version | | | 1.0 | | Test Title | | Submit Issues | | Executed By | | Test Team | |
| Project Lead | | | Project Lead | | Test Description | | The user shall be able to submit any issues they have encountered while purchasing foreign currency. The user should be able to enter their transaction number of their order and should be able to type a description of the issues in a text box.  Once the user has submitted the issue, they should be able to view the status of their issues via their account. | | Execution Date | | 11/29/2021 | |
| Pre-Conditions | | User has attempted to purchase currency. | | | | | | | | | | |
| Dependencies | | Test Case 05 | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | Actual Result | Status | | Defect # | | Notes |
| 1 | Go to “Submit Issues” page. | | | N/A | | Users can view the “submit issues” page. | The user was able to view the page. | Correct | | N/A | | Working as intended. |
| 2 | Enter transaction number. | | | N/A | | Users can enter their transaction number. | The user was able to enter their number. | Correct | | N/A | | Working as intended. |
| 3 | Enter a description of the issue. | | | N/A | | Users can type a description of their issue via a text box. | The user was able to type out their issues. | Correct | | N/A | | Working as intended. |

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| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 16 | | Designed By | | Test Team | |
| Module Name | | | User module | | Test Priority | | Medium | | Design Date | | 11/29/2021 | |
| Release Version | | | 1.0 | | Test Title | | Convert Transaction | | Executed By | | Test Team | |
| Project Lead | | | Project Lead | | Test Description | | The user shall be able to change the amount of currency ordered or the selected currency during the gray period. A fee will automatically be added to their total. | | Execution Date | | 11/29/2021 | |
| Pre-Conditions | | Order must be submitted. | | | | | | | | | | |
| Dependencies | | Test Case 13 | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | Actual Result | Status | | Defect # | | Notes |
| 1 | Click on “convert transaction” page. | | | N/A | | Users can view the convert transaction page. | The user was able to click on and view the page. | Correct | | N/A | | Working as intended. |
| 2 | Change amount of currency or currency type. | | | N/A | | Users can change the amount of currency or the type of currency during the gray period. | The user was able to convert the transaction. | Correct | | N/A | | Working as intended. |
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| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 17 | | Designed By | | Test Team | |
| Module Name | | | Admin module | | Test Priority | | High | | Design Date | | 11/29/2021 | |
| Release Version | | | 1.0 | | Test Title | | Manage User Issues | | Executed By | | Test Team | |
| Project Lead | | | Project Lead | | Test Description | | The admin user shall be able to choose the user’s email, address, or phone number to contact the user about any submitted issues through the website. | | Execution Date | | 11/29/2021 | |
| Pre-Conditions | | User must submit issues | | | | | | | | | | |
| Dependencies | | Test Case 15 | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | Actual Result | Status | | Defect # | | Notes |
| 1 | Choose user’s email, address, or phone number. | | | N/A | | Admin users can choose to contact a user via one of three ways. | The admin was able to select the form of communication. | Correct | | N/A | | Working as intended. |

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| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 18 | | Designed By | | Test Team | |
| Module Name | | | Delivery agent module | | Test Priority | | High | | Design Date | | 11/29/2021 | |
| Release Version | | | 1.0 | | Test Title | | Certify Delivery | | Executed By | | Test Team | |
| Project Lead | | | Project Lead | | Test Description | | The delivery agent user shall be able to enter their credentials and the user’s transaction number to complete the transaction. The delivery agent user should be able to request the user’s signature through the website. | | Execution Date | | 11/29/2021 | |
| Pre-Conditions | | User must submit order. | | | | | | | | | | |
| Dependencies | | Test Case 13 | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | Actual Result | Status | | Defect # | | Notes |
| 1 | Enter credentials. | | | N/A | | Delivery agents can enter their credentials. | The agent was successfully able to enter their details. | Correct | | N/A | | Working as intended. |
| 2 | Enter user’s transaction number. | | | N/A | | Delivery agents can enter the user’s transaction number. | The agent was able to enter the user’s number. | Correct | | N/A | | Working as intended. |
| 3 | Request signature. | | | N/A | | Delivery agents can send a request for a user’s signature. | The agent was able to send a request. | Correct | | N/A | | Working as intended. |

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| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 19 | | Designed By | | Test Team | |
| Module Name | | | User module | | Test Priority | | High | | Design Date | | 11/29/2021 | |
| Release Version | | | 1.0 | | Test Title | | Add Signature | | Executed By | | Test Team | |
| Project Lead | | | Project Lead | | Test Description | | The user shall be able to electronically submit their signature in order to complete the transaction. | | Execution Date | | 11/29/2021 | |
| Pre-Conditions | | User must submit order. | | | | | | | | | | |
| Dependencies | | Test Case 13 | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | Actual Result | Status | | Defect # | | Notes |
| 1 | Electronically sign document. | | | N/A | | Users can enter their name to generate an electronic signature. | The user was able to electronically sign the document. | Correct | | N/A | | Working as intended. |
| 2 | Submit signature | | | N/A | | Users can click “submit” to send their signature. | The user was able to submit their signature. | Correct | | N/A | | Working as intended. |

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| Project Name | | | Foreign Currency Buying V1.0 | | Test Case ID | | 20 | | Designed By | | Test Team | |
| Module Name | | | Admin user module | | Test Priority | | High | | Design Date | | 11/29/2021 | |
| Release Version | | | 1.0 | | Test Title | | Complete Transaction | | Executed By | | Test Team | |
| Project Lead | | | Project Lead | | Test Description | | Given the user has submitted the order and provided their signature, the admin user should be able to mark the order as complete. | | Execution Date | | 11/29/2021 | |
| Pre-Conditions | | User has provided a signature. | | | | | | | | | | |
| Dependencies | | Test Case 19 | | | | | | | | | | |
| Step # | Test Desc | | | Test Data | | Expected  Result | Actual Result | Status | | Defect # | | Notes |
| 1 | Click on “Mark order complete” | | | N/A | | Admin users can click a button to complete an order. | The admin user was able to mark the order as complete. | Correct | | N/A | | Working as intended. |

# Appendix B.

## Requirements Traceability Matrix

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| Project Name | | Foreign Currency Buying | |
| Module Name | | RTM Module | |
| Release Version | | 1.0 | |
| Project Lead | | Project Lead | |
| Requirement ID | Requirement Title | | SDD Reference | | Use Case | Test Case ID | Test Title |
| FR1 | User Registration | | 3.4.1.4 General User Use Cases - Create Account | | General User Create Account (GUCA) | 01 | User Registration |
| FR2 | User log-in - Website | | 3.4.1.4 General User Use Cases - Create Account | | General User Create Account (GUCA) | 02 | User log-in: Website |
| FR3 | Search - Website | | 3.4.1.1 General User Use Cases - Purchase Currency | | Purchase Currency (PC) | 03 | Search: Website |
| FR4 | Search result in a list view- Website | | 3.4.1.1 General User Use Cases - Purchase Currency | | Purchase Currency (PC) | 04 | Search result in list view: Website |
| FR5 | Purchase options - Website | | 3.4.1.1 General User Use Cases - Purchase Currency | | Purchase Currency (PC) | 05 | Purchase Options - Website |
| FR6 | User account management - Website | | 3.4.1.4 General User Use Cases - Create Account | | General User Create Account  (GUCA) | 06 | User Account Management: Website |
| FR7 | Add to cart - Website | | 3.4.1.1 General User Use Cases - Purchase Currency | | Purchase Currency (PC) | 07 | Add to cart: Website |
| FR8 | Retrieve password - Website | | 3.4.1.5 General User Use Cases | | Retrieve Password (RP) | 08 | Retrieve Password |
| FR9 | Search no match found - Website | | 3.4.1.1 General User Use Cases - Purchase Currency | | Purchase Currency (PC) | 09 | Search no match found |
| FR10 | Go to cart - Website | | 3.4.1.1 General User Use Cases - Purchase Currency | | Purchase Currency (PC) | 10 | Go to cart |
| FR10 | Go to cart - Website | | 3.4.1.1  General User Use Cases - Purchase Currency | | Purchase Currency (PC) | 11 | Edit Selections |
| FR1 | User Registration | | 3.4.1.1 General User Use Cases - Purchase Currency | | Purchase Currency (PC) | 12 | Input payment |
| FR11 | Checkout - Website | | 3.4.1.1 General User Use Cases - Purchase Currency | | Purchase Currency (PC) | 13 | Submit Order |
| FR13 | Edit Transactions - Website | | 3.4.1.3 General User Use Cases | | Cancel Order (CO) | 14 | Cancel Transaction |
| FR14 | Submit issues - Website | | 3.4.1.2 General User Use Cases | | Submit Issue (SI) | 15 | Submit Issues |
| FR13 | Edit Transactions - Website | | 3.4.1.6 General User Use Cases | | Edit Transaction (ET) | 16 | Convert Transaction |
| FR22 | Manage issues | | 3.4.2.4 Administrative User Use Cases | | Manage Submitted General User Issues (MSGUI) | 17 | Manage User Issues |
| FR18 | Certify delivery | | 3.4.3.2 Delivery Agent User Use Cases | | Certify Delivery  (CD) | 18 | Certify Delivery |
| FR18 | Certify delivery | | 3.4.1.1 General User Use Cases/  3.4.3.2 Delivery Agent User Use Cases | | Add Signature (AS) | 19 | Add Signature |
| FR18 | Certify delivery | | 3.4.3.2 Delivery Agent User Use Cases | | Certify Delivery (CD) | 20 | Complete Transaction |