Graphical user interface, application

Description automatically generated

**Billable\_Hours**

**System Test Plan**

**Revision History:**

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| 20-Nov.-21 | V1.0 | Initial Draft | Adenike Olapetan |
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**References:**

|  |  |  |  |  |
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# INTRODUCTION

## 1.1 Purpose

This document is the System Test Plan for: **Billable\_Hours.**

It describes the scope and approach of carrying out system test on the application prior to release into production environment. It also contains various resources required for the successful completion of this project.

## 1.2 Overview

**Background:**

This change request has been raised to implement a billable rate system that every lawyer , depending on their grade has a billable rate and for any project worked on , each layer must document and report theri total number of hours to enable to Finance team to create invoices for clients to make payment. The timetable of the company is in the following format:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Employee ID | Billable Rate (per hour) | Project | Date | Start Time | End Time |
| 1 | 300 | Google | 2019-07-01 | 09:00 | 17:00 |
| 2 | 100 | Facebook | 2019-07-01 | 11:00 | 16:00 |

**Test environment:**

System test will be conducted on the Billable Hour on Web, Mobile and API available on the following:

Test will be carried out on the mobile version of the application using an android device as well using postman to conduct API testing. Also web testing will be carried out on a Window Operating System

Web: [https://csvdemomockappp.bundlewallet.com](https://csvdemomockappp.bundlewallet.com/)

Mobile: [QA test directory](https://drive.google.com/drive/folders/1rkYwTctee63g1F2EhuR2vgkosgnSnBCm?usp=sharing)

API: <https://documenter.getpostman.com/view/303979/TzK15EQF>

# SOFTWARE RISKS ISSUES

Below is a list of issues that might constitute risk to testing:

* Availability and stability of test environment
* Changing requirements - Stick to initial requirements where feasible. If changes are necessary, they should be adequately reflected in related schedule changes and should go through the proper change process. Additional Requirements can also be moved to a later phase of the software development.
* Management commitment and support - Inadequate commitment or support from management can also be risky to the test process
* Time to do the job right - Enough time needs to be allocated to testing. If time allocated for testing is not sufficient or gets reduced due to unforeseen contingencies, then Risk Analysis will be used to determine which areas are high priorities to the business.
* Product Risk: the possibility that the system or software might fail to satisfy or fulfil some reasonable expectation of the customer, user, or stakeholder.
* Delay in solution delivery to test.

# ITEMS TO BE TESTED

The test execution of this solution will be focused on the following:

* CSV File Upload
* Billable Hours Calculation

# FEATURES TO BE TESTED

The below features are to be tested via Web, API and Mobile:

|  |  |  |
| --- | --- | --- |
|  | **Category / Functional Activity** | **Sub-category** |
| 1 | CSV File Upload | Verify tha the user can install and launch Billable \_hours APK availaible at https://csvdemomockappp.bundlewallet.com/ |
| 2 | Verify that the user can select the file path of the CSV file on the screen succesfully |
| 3 | Verify that the user can successfully click the Parse Invoice File button |
| 4 | Verify that the details of the file are uploaded to a server successfully |
| 5 | Billable Hours Calculation | Verify that the result of invoice billable per hours for company category is displayed the user |
| 6 | Ensure that the billable hours for each of the company are calculated correctly |
| 7 | Verify that user can not upload a file with invalid(PDF) file format |
| 8 | Verify that user can not upload an empty CSV file |

# FEATURES NOT TO BE TESTED

* Login/Sign Up Functionality
* Performance – performance test to measure throughput (e.g. successful number of requests that can be sent and received) and resource utilization.

# APPROACH

# 6.1. Test Levels

#### 6.1.1 System Testing

Testing will be performed by the budle test team with assistance from the Developer and Business Analyst as required and would be owned by the Head, Quality Management & Testing.

The Test Analyst will use the system test baseline documentation to prepare all test cases and procedures. This approach will verify the accuracy and comprehensiveness of the requirements in the documentation in those areas covered by the tests. Test cases will be reviewed by the System Test Lead. This will help ensure that the test captures the requirements specified in the baseline document.

Two cycles of testing is planned for this phase of testing.

# 6.1.1.1 Test Cycle1

|  |  |
| --- | --- |
| **Step** | **Action** |
| 1 | Develop test script for testing  Action of each test will be referred to as “Pass or Fail”  Run a first level test from end to end  All issues noted in test one will be logged on Issues Log |
| 2 | Test Manager and Test team will define defect rating and severity and the impact |
| 3 | The rating of the defect will define if test should be discontinued or test team should move to the next stage of testing. |
| 4 | All defects will be filled out in a "Defect Logging Form" |
| 5 | Defects shall be forwarded to project managers for rectification |

# 6.1.1.2 Test Cycle 2

|  |  |
| --- | --- |
| **Step** | **Action** |
| 1 | At notification of resolution of defect:  Test team will test each defect on the defect log. |
| 2 | Identify if defect have been properly fixed |
| 3 | Identify new defect (If any) |
| 4 | Where Step 2 fails, test lead shall update the "Defect Logging Form"   * Return to the project manager * Update the "Defect Log" to show it is once again awaiting rectification |
| 5 | * Where stage 3 occurs: * Test team will apply test 1, steps 4 and 5 |
| 6 | Where testing is successful, test lead shall  Update the "Defect Log" by signing off the fix |
| 7 | Test Team will review and rate test severity and impact |
| 8 | Update the "Defect Log" |
| 9 | Escalate to the project manager |
| 10 | A detail test report shall be submitted to project manager and IT Risk |
| 11 | Sign-Off of the System test phase by the Test Analyst and Test Manager |

# 6.2. Test Strategy

The strategy to be adopted for this project is as follows:

* Perform standard / compliant testing in line with the company’s policy
* Perform a basic (normal) flow test to ensure that the requirements are met
* Perform branch flows using various scenarios

# 6.3. Change Control

All changes, enhancements and other modification requests to the system will be handled through the published change control procedures within the organisation

The *functional requirement document* will provide the basis for defining changes and will be signed off for every new change.

# 6.4 Environmental Needs

1. **Server -** test will be performed onserver provisioned
2. **Hardware -** The testing will be done on the Test Analyst’s desktop with the following configuration:

Installed memory (RAM): 4.00 GB – to update

System type:

Operating system: Windows

Operating system: 64-bit Operating system, x64-based processor

1. **Tool -** Microsoft Excel will be used to create and manage manual test cases with both action and validation test steps. Defects will also be logged on the excel sheet and assigned to the developer.

# 6.5 Meetings

The project manager would be contacted (via email and stand-up meetings), when required.

# Measures and Metrics

The following information will be collected by the test team during the testing phase.

1. Defects by priority and severity.

2. Defect Origin (Requirement, Design)

3. Test logs (execution result)

4. Issue Log

# ITEM PASS/FAIL CRITERIA

Test Items shall be classified on pass/fail basis. All passed test items shall be noted satisfied while all test items noted “failed” shall be treated as defect and passed to the Developer for correction

# ENTRY AND EXIT CRTITERIA

## 8.1 Entry Criteria – System Test

The following items must be available prior to start of system test:

|  |  |  |
| --- | --- | --- |
| **S/N** | **Entry Criteria** | **Status** |
| 1 | Project / Task **registration and approval**  (**Approval Status** = Approved; valid **Project Stage** exists) | Done |
| 2 | Signed off baseline document has been received | Done |
| 3 | Code Review Sign Off | Done |
| 4 | User review session has been held with the stakeholders | Done |
| 5 | Solution has been deployed on the test environment & Test environment is free for System Test use | Done |
| 6 | Source Code Checked-in | Done |

8.2 Exit Criteria - System Test

The Test Team shall consider testing completed and shall sign-off testing only when all listed conditions have been fulfilled.

* All testing identified in the "Test Plan" has been completed
* Expected test coverage is achieved
* All test cases are executed successfully and identified product risks are mitigated
* All defects identified are closed and required work quality is achieved
* No defects classified as Severity “Critical" exist
* No defects classified as priority "High" exist
* Less than 3 defects classified as priority "Medium" exist
* Less than 6 defects classified as priority "Low" exist

# SUSPENSION AND RESUMPTION CRITERIA

## 9.1. Suspension Criteria

System testing will be suspended if any of the following occurs:

* Hardware/software is not available at the times indicated in the project schedule
* Unavailability of external dependent systems during execution
* When a defect is introduced that cannot allow any further testing
* Source code contains one or more critical defects, which seriously prevents or limits testing progress
* If the number or type of defects reaches a point where the follow on testing has no value and it makes no sense to continue the test
* Assigned test resources are not available when needed by the test team

## 9.2. Resumption Criteria

In the event that system testing is suspended, resumption criteria will be specified and testing will not re-commence until the software reaches these criteria

* When the external dependent systems become available again.
* When a fix is successfully implemented and the Testing Team is notified to continue testing
* A new build is delivered

**Note:**

Suspension criteria assume that testing cannot go forward and that going backward is also not possible. A failed build would not suffice as you could generally continue to use the previous build. Most major or critical defects would also not constitute suspension criteria as other areas of the system could continue to be tested.

# TEST DELIVERABLES

The following are deliverables of the test exercise:

* Test Plan
* Test Cases and Scripts
* Defects Log
* Signed Off Baseline Document
* Project/Task Plan
* Code Review Sign Off
* Test Summary/Exit Report

# STAFFING AND TRAINING NEEDS

The following staffs are needed to carry out this testing project. However, the project manager would be contacted for the training (via email), where required.

# RESPONSIBILITIES

The following groups have responsibility for segments of the testing.

* **System Test group -** This group provides the overall management of the testing and the technical testing expertise. The Test Analyst is responsible for all test plans and documentation.
* **Project group –** This group transmits the system to be tested and respond to the System Defect Logs.

The entire project team will participate in the review of the system and detailed designs and

defects discovered during development and testing.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Activity** | **Project Manager** | **Development**  **Manager** | **Test Manager** | | **Test Analyst** |
| Provision of Technical Documents | X | X |  |  | |
| Test Planning and Estimation |  |  | X | X | |
| Review and Sign off Test Plan | X | X | X |  | |
| Testing Documentation |  |  | X | X | |
| Test Preparation and Execution |  |  |  | X | |
| Test Environment Set-up |  |  | X |  | |
| Change Control of Test Environments |  |  | X | X | |
| Provision of Unit Tested Test Items |  | X |  |  | |
| Bug fixes and return to the Test Team for confirmation test |  | X |  |  | |
| Product Change Control | X | X | X |  | |
| Ongoing Test Reporting |  |  | X | X | |
| Test Summary Reporting |  |  | X | X | |

# SCHEDULE

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Baseline start** | **Baseline finish** | **#of Days** | **Actual start** | **Actual finish** | **# of Days** |
| 19-12-2021 | 20-12-2021 | 2Days | 20-12-2021 | 20-12-2021 | 2 Days |

# PLANNING RISKS AND CONTINGENCIES

|  |  |  |
| --- | --- | --- |
| **Risks** | **Impact** | **Mitigation** |
| Test Resource Risk | High | Should the assigned Test Analyst become unavailable, the Test Lead will assign another Test Analyst to do the testing |
| Security Risk | High | Should be handled by the Test Analyst in collaboration with the Enterprise Security team |
| Test Environment –An unstable test environment will slow down test activities | High | If the testing schedule is significantly impacted by system failure, the development manager will assign a resource to the test group to do debugging. |
| Defect Resolution Time – There is a need to agree on defects resolution time | High | The Test Analyst and Developer will agree on a defect resolution time for ‘show-stopping’ defects |

# APPROVALS

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Department** | **Signature** | **Date** |
| Adenike Olapetan | Quality Management & Testing |  | 20-Dec.-21 |
|  |  |  |  |