## **Identify New Bikes**

Submitted to

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**https://www.zigwheels.com**

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10.1 TESTING TOOLS

1. **Introduction**

The Test Plan has been created to facilitate communication within the team members. This document describe approaches and methodologies that will apply to the unit, integration and system testing "https:www.zigwheels.com/". It includes the objectives, test responsibilities, entry and exit criteria, scope, schedule major milestones, entry and exit criteria and approach. This document has clearly identified what the test deliverables will be, and what is deemed in and out of scope.”

**1.2 Target Audience**

* Business Unit(BU) SME
* Academy Coach
* Technical Trainer

**2. SCOPE**

The document mainly targets the GUI testing and validating data in report output as per Requirements Specifications provided by client.

**2.1 Functions to be tested**

* GUI
* Search and Filter logics
* Page navigations.

**2.2 Functions not to be tested**

* Functions which is not a part in 2.1 cannot be tested.

**3. QUALITY OBJECTIVE**

**3.1 Primary Objectives**

A primary objective of testing is: to assure that the system meets the full requirements, including quality requirements (functional and non-functional requirements) and fit metrics for each quality requirement and satisfies the use case scenarios and maintain the quality of the product. At the end of the project development cycle, the user should find that the project has met or exceeded all of their expectations as detailed in the requirements.

Any changes, additions, or deletions to the requirements document, Functional Specification, or Design Specification will be documented and tested at the highest level of quality allowed within the remaining time of the project and within the ability of the test team.

**3.2 Secondary Objectives**

The secondary objectives of testing will be declared to identify and expose all issues and associated risks, communicate all known bugs and issues to the project team, and ensure that all issues are addressed in an appropriate testing techniques before the release. As an objective, this requires careful and methodical testing of the application to first ensure all areas of the system are capable and consequently able to find and fix Bugs in an appropriate way.

**4. TESTING APPROACH**

The approach, is Analytical therefore, in accordance to requirements-based strategy requirements specification forms the basis for planning, Plan estimating and designing tests. Test cases will be created during the testing methodologies are determined in Test Strategy.

Team also must use experience and skills for the error guessing with utilize testers' skills, along with similar applications or technologies.

The project is using an agile approach, with weekly iterations. At the end of each week the requirements identified for that iteration will be delivered to the team and will be tested.

**4.0 Test Automation**

Automated unit tests and UI smoke-tests are part of the development process, and it must be automated during which performance data must be captured.

**4.1 Test Types**

The following are the types of Testing used in the Web Development courses

1. Functional & Non – Functional Testing
2. Regression & Smoke Testing
3. Automation Testing

**4.2 Test Deliverables**

|  |  |
| --- | --- |
| Project Phase | Deliverables |
| Test Planning | **·** Test Strategy Document |
| Test Analysis & Design | **·** Test Conditions  **·** Test Cases  **·** Test Data  **·** Test Environment  **·** Automated Test Scripts |
| Test Execution | **·** Test Logs |
| Test Completion | **·** Test Summary Report |

**5. Multi browser Testing**

Based on the requirements for the application the testing is done on two browsers to ensure the working of the application in multiple browsers. The two browsers used for testing are Chrome and Edge. Data driven library creation is done using property file is used to keep the URL, Browser.

**6. Resources Required**

**6.1 Hardware**

* PC

**6.2 Software**

* Windows 7 and above
* Chrome 80 and above
* Edge 80 and above
* MS Excel
* Selenium Web drivers
* TestNG
* Selenium Grid

7**. ENTRY AND EXIT CRITERIA**

**7.1 Entry criteria**

* All test hardware platforms must have been successfully installed, configured, and functioning properly
* All the necessary documentation, design, and requirements information should be available that will allow testers to operate the system and judge the correct behavior
* All the standard software tools including the testing tools must have been successfully installed and functioning properly
* Proper test data is available
* The test environment such as, lab, hardware, software, and system administration support should be ready
* QA resources have completely understood the requirements
* QA resources have sound knowledge of functionality
* Reviewed test scenarios, test cases and RTM

**7.2 Exit criteria**

* A certain level of requirements coverage has been achieved.
* No high priority or severe bugs are left outstanding.
* All high-risk areas have been fully tested, with only minor residual risks left outstanding.
* Cost – when the budget has been spent.
* The schedule has been achieved

**8. SUSPENSION CRITERIA AND RESUMPTION REQUIREMENTS**

**8.1 Suspension criteria**

* The build contains many serious defects which affect the functionality or limit testing progress.
* Significant change in requirements suggested by client
* Software/Hardware problems
* Assigned resources are not available when needed by test team.

**8.2 Resumption criteria**

Resumption will only occur when the problem(s) that caused the suspension, have been resolved.

**9. TEST STRATEGY**

**9.1 QA Role in the process**

**9.1.1. Understanding requirements:**

* Requirement specifications will be sent by client.
* Understanding of requirements will be done by QA

**9.1.2. Preparing Test Cases:**

* QA will be preparing test cases based on the exploratory testing. This will cover all scenarios for requirements.

**9.1.3. Preparing Test Matrix:**

* QA will be preparing test matrix which maps test cases to respective requirement. This will ensure the coverage for requirements.

**9.1.4.** **Reviewing testcases and Matrix:**

* Peer review will be conducted for test cases and test matrix by QA Lead
* Any comments or suggestions on test cases and test coverage will be provided by reviewer respective Author of Test Case and Test Matrix
* Suggestions or improvements will be re-worked by author and will be send for approval
* Re-worked improvements will be reviewed and approved by reviewer

**9.1.5.** **Creating Test Data**:

* Test data will be created by respective QA on client's developments/test site based on scenarios and Test cases.

**9.1.6 Executing Test Cases:**

* Test cases will be executed by respective QA on client's development/test site based on designed scenarios, test cases and Test data.
* Test result (Actual Result, Pass/Fail) will updated in test case document Defect Logging and Reporting:
* QA will be logging the defect/bugs in Word document, found during execution of test cases. After this, QA will inform respective developer about the defect/bugs.

**9.1.7 Smoke and Regression Testing:**

* Smoke testing for checking software build stability will be done by respective QA once it is done by respective developers regression testing will be done if required.

**9.1.8 Deployment/Delivery:**

* Once all bugs/defect reported after complete testing is fixed and no other bugs are found, report will be deployed to client’s test site by PM.
* Once round of testing will be done by QA on client’s test site if required Report will be delivered along with sample output by email to respective lead and Report group.
* QA will be submitting the filled hard copy of delivery slip to respective developer.
* Once lead gets the hard copy of delivery slip filled by QA and developer, he will send the report delivery email to client.

**9.2 TESTING TYPES**

**9.2.1 Black Box Testing**

* It is also called Behavioural testing or Partition testing. Black Box testing focuses on the functional requirements of the software. It enables one to derive sets of input conditions that satisfy all functional requirements for a program.

**9.2.2 GUI Testing**

* GUI testing will includes testing the UI part of report. It covers users Report format, look and feel, error messages, spelling mistakes, GUI guideline violations.

**9.2.3 Functional Testing:**

* Functional testing is carried out in order to find out unexpected behaviour of the report. The characteristic of functional testing are to provide correctness, reliability, testability and accuracy of the report output/data.

**9.2.4 Performance Testing:**

* Check the optimal time the page is loaded
* Check the functionalities of the webpage under testing

**9.2.5 User Acceptance Testing:**

* The purpose behind user acceptance testing is to conform that project is developed according to the specified user requirements and is ready for operational use (UAT).

**9.2.6 Alpha Testing:**

* Alpha testing will be conducted at the developer’s site.

**9.3 BUG SEVERITY AND PRIORITY DEFINITION**

* Bugs severity and priority fields are very important for categorizing the bugs and its priority level in the project when the bug will be fixed. Testing will assign severity to all bugs. The Test Lead is responsible to see the correct severity is assigned to the each bug.
* The QA Lead, Development Lead and Project Manager will participate in bug review meetings to assign the priority of all currently active bugs. This meeting will be known as “Bug Triage Meetings”. The QA Lead is responsible for setting up these meetings on a routine basis to address the current set of new and existing but unresolved bugs.

**9.3.1 Severity List**

|  |  |  |
| --- | --- | --- |
| **Severity ID** | **Severity Name** | **Severity Description** |
| Sev\_1 | Critical | This will cause the product crash and the bug causes non-recoverable conditions on the build.  Ex: System crash, Database fault, File corruption and potential data loss. |
| Sev\_2 | High | Major system component is unuseable due to failure or incorrect of the functionality. Bugs can cause lack of functionality, insufficient or unclear error messages that may cause major impact on the project build. |
| Sev\_3 | Medium | Incorrect functionality of components or a process. This is a simple bug to fix around. |
| Sev\_4 | Low | Documentation bugs or like the Sev\_3. |

**9.3.2 Priority List**

|  |  |  |
| --- | --- | --- |
| **Priority ID** | **Priority Name** | **Priority Description** |
| P01 | High | This bug must cause a major functionality problem in a build, so it should be fixed before the shipping of the product. |
| P02 | Medium | These are some important bugs which should be fixed with in the given time before shipping. |
| P03 | Low | These are not such important bugs to be addressed with high priority. But this will be resolved at the later time. |

**10. RESOURCE AND ENVIRONMENT NEEDS**

**10.1 Testing Tools**

|  |  |
| --- | --- |
| **Process** | **Tools** |
| TestCase creation | Microsoft Excel |
| TestCase tracking | Microsoft Excel |
| TestCase execution | Manual, Selenium |
| TestCase management | Microsoft Excel |
| Defect management | Microsoft Excel |
| Test reporting | Microsoft Excel |