Test Strategy

**Objective**

This document outlines the overall test approach we would be using during a sprint, aiming to produce effective testing deliverables for the successful release of a high quality product.

**Scope of testing**

* Functional testing
* Regression
* Performance of the application

**(Sprint)Test planning**

* Review the user stories/Epics (inspection - which can identify potential bugs with in the design)
* Identify/write the test cases
* Identify the tests that can be automated
* Bidirectional traceability of the tests to requirements
* Test conditions, environment requirements and any risks identified
* Resource planning
* Timelines

**Test Execution**

* **Functional Testing**

Functional testing should be carried out as soon as the functionality is available for testing event before its deployed on to the shared test environment. This would give an opportunity to identify defects early in the development environment.

* **Automation/Regression Testing**

Once all the required changes from the sprint is complete and merged on to the shared test environment, the regression tests(ideally automation run) should be performed to uncover any impact on the existing system due to the new changes introduced.

* **Performance Testing**

The general look and feel of the application and the screen response time is tested.

**Defect Management**

All the defects identified should be logged in a defect management tool (e.g. JIRA).

Each defect should have –

* + Defect details (including steps to reproduce, expected vs actual results)
  + Assigned to
  + Severity
  + Priority
  + Status

**Test Deliverables**

The following test deliverables are required to produce

* + Test plan, Test cases
  + Test report
  + Defects report
  + Traceability matrix

**Communication**

The communication for the agile projects should be very brief and clear, considering the short window of release cycle. The below tools and meetings can help greatly.

* Kanban board – for the testing status
* Test Management tool – for the test execution status
* Defect Management tool – for the outstanding defects and the resolution plan
* Daily standups
* Testing updates over dedicated teams channel
* Release Updates over dedicated teams channel
* CAB meetings to mitigate risks

Sample test case (BDD style)

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case** | **Given** | **When** | **Then** |
| Buy Gas | Given the energy exists | When the 'number of units' is entered as 10 for 'Gas' and clicked on buy option | The sale is confimed |
| Buy Gas with incorrect data | Given the energy exists | When the 'number of units' is entered as "test" for 'Gas' and clicked on buy option | Error page is displayed |