ToDoMVC APP

Test Strategy

Version <1.0>

Revision History

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| Date | Version | Description | Author |
| 24/05/2020 | 1.0 | Initial Drap | Dinh Nguyen |
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**Test Strategy**

1. **Purpose**

The purpose of this test Strategy for the complete testing life cycle, user acceptance test of the project TODOMVC app is to:

* This document is completed and used by project test team to guide how to testing will be managed.
* Defines the scope, approach, resources and schedule for testing activities.
* Provide visibility to stakeholders in the testing effort, testing activities.

1. **Scope of work**

* Functional testing will be tested in ToDo MVC web app.
* Functions to be tested: create new, delete and filter.
* Apply automation testing process in project.
* Integrated with CI/CD.
* Non function testing such as: performance testing, security test will be out of scope.

1. **Test Approach**

* QA team will work with Product Owner to get the requirement about the system which need to be tested.
* After get the requirement from Product Owner, QA team will start analysis the requirement. If anything which is unclear, QA team need to check with Product Owner.
* After the requirement is clear and confirmed. QA team will start writing test cases.
* QA team also start writing automation test script.
* All testing activities need to have own task.
* We will create a board to keep track of status of every testing activities.
* The status of board will contains: To be selected for develop, On process, Done....
* The status of task need to be updated correctly.
* The source code of automation script will be hosted in GitLab and integrate with CI/CD tool.
* The automation build job will start automatically if any commit done from development team. Also, it will start automatically at nightly.
* After the automation on CI/CD done, the system should send email with attached report to everyone in the project.
* Automation test case need to run as regression test as much as possible.
* In the report, user should be able to see how many test cases passed or failed and the screen shot for failure with the log error.
* Bug should be tracked on the Jira tool with correct status. Who is reporter, who is assigned, on progress, to be fix, fixed, or done status should be marked correctly.
* Test cases have to be written in excel file format with best practice: pre-condition, step detail and expected behavior.

1. **Test environment**
   1. We will have 3 environments:

* Dev enviroment: dev team will dev script on their enviroment.
* Stage enviroment (called QA environment): after dev team pass the unit test, then they will deploy script on QA enviroment for QA team testing before deploy on production.
* Product environment (called user environment)
  1. Base System Hardware
* N/A.
  1. Base Software Elements in the Test Environment

The following base software elements are required in the test environment for this Test Strategy.

Operating System support for ToDo MVC app:

* Window 10 any version
* Mac OS
* Linux/Unix

Bellow browsers will support for ToDo MVC app:

* Chrome version from 71.x.x to the latest one
* Firefox version from 60.x.x to thate latest one
* Mircosoft Egde
* Safari
  1. Test Environment Configurations
* N/A

1. **Automation testing frameworks and techniques**

We will use Jasmine as our automation testing framework. The reason is: ToDo MVC app is written in Angular JS while Jasmine is a framework to support JS testing. Jasmine most used for asynchronous testing, is a feature-rich JS automation testing framework for JS. Jasmine is easy to install and develop scripts to automation. Easy to learn. It also provide nice reports and easy to extend.

The community of Jasmine is quite large, and we will get all kinds of support in the form of libraries, blog posts, or video tutorials.

We also integrate with cucumber BDD framework using Cucumber to our automation testing project so that other guys such as: Project manager, Business Analysis, Customer can understand the automation testing done.

1. **People and Roles**

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| Roles | Responsibilities |
| Test Manager | Provides management oversight.  Responsibilities include:   * Planning and logistics * Agree on the mission * Identify motivators * Acquire appropriate resources * Present management reporting * Advocate the interests of test * Evaluate effectiveness of test effort |
| QA team | Defines the technical approach to the implementation of the test effort.  Responsibilities include:   * Define test approach * Define test automation architecture * Verify test techniques * Define testability elements * Structure test implementation Implements and executes the tests. * Implement tests and test suites * Log results * Analyze and recover from test failures * Document incidents |

1. **Risk**

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| Risk | Mitigation Strategy | Contingency |
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1. **Release and control process**

Below flow should be considered as standard:

* Approved Change/New
* Release Planning
* Release Building
* Acceptance Testing
* Release Preparation
* Release and Deployment