Big bang asq project- test strategy

# Test strategy

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## Introduction

Big Bang ASQ is a web application which is used by companies for providing their employees to run few practice tests and other internal exams. The major functionalities associated are Registering as a user, Logging in, attending few tests, taking up practice questions, viewing user history, User profile.

## Scope

This document is used by the whole of the testing team in understanding the strategy to be followed in the whole project. This document will be reviewed by the Project Manager. Testing activities include understanding the gathered requirements, having initial testing done on the existing application, reporting the existing issues to the development team, writing test cases once the sprints starts, executing the test cases whenever the new feature is developed, reporting the issues if any, closing the issues once they are fixed. The exit criteria or when the testing can be stopped is when all the features are developed and all the open defects been closed. All the features which are already existing in the application and the new features which are going to be developed are in scope for the testing team.

Out of Scope for functional testing:

There are few aspects of the project which are out of scope for testing. Testing of the Mongo dB, queries which are used to retrieve data from the backend, security aspects of the application. These few will be covered in the Unit Testing phase.

## Test approach

The approach we are going to have in the project is manual testing using Grey Box testing strategy. Grey box as there are few tests which are conducted at the unit test level to test the lines of code in particular to few functionalities.

We have [unit](http://www.softwaretestinghelp.com/unit-testing/), integration, system, regression, Smoke testing and Build Verification testing which will be implemented in the project.

* Unit test: Unit testing will be conducted by the developers for the individual modules or features they develop.
* Integration testing: will be done by the testing team along with the dev team whenever a new feature or a module has been integrated with the other module.
* System testing: Functional testing of each functionality and end to end flow of the whole system will be conducted by the testing team
* Smoke Test: Once the whole application is built and deployed the developers will do a quick smoke test of major functionalities.
* Build Verification Test: This is done by the testing to ensure that the build for each sprint is stable to continue with the System Testing. If the build verification tests fail, then we cannot go ahead testing the system.
* Regression Testing: This is done by the testing team whenever a defect has been resolved and when a new feature is deployed.

For every sprint of the project the test cases and the scenarios will be developed for the various testing types.

After developing the test cases there will be a peer review which will be conducted. Depending on the review comments the test cases will be baselined and those will be used for execution.

Testing team will have to create a RTM.

Once the deployment is done testing team will execute the test cases and raise defects if any.

The defects will be raised with the status of new, once the dev team accepts the defect raised by the testing team it moves to open, once the defect is fixed by the dev team it moves to fixed and the testing team has to do a retest and if the functionality is fixed the defect moves to closed phase. If the defect still occurs, then the testing team can move it to open. If the dev team wants to move fixing of the defect to next phase, then the defect will be in deferred phase.

The same life cycle of writing test cases- executing - defect life cycle and closure will happen for all the sprints.

For the nonfunctional requirements of 100 users and 1000 questions we are going ahead with Expert advice and not conducting any specific test. Based on Expert Estimation we are going to close the nonfunctional requirements.

The testing team members are two: Akanksha, Avani both will be involved in all the phases of testing.

Testing Team phrase refers to both the members as a single entity.

If there is any change request which has been given by the client. That will also have the same process to be followed with a different set of templates.

## Test environment:

Test environment setup will be done by the dev team, providing two setoff user groups: a new registered user and a admin. The software and hardware requirements are TBD.

## Testing Tools

For the initial sprint we are going ahead writing the test cases in excel sheets and recording the results also in excel sheets. For defect management activity we are going to use Taiga tool.

If there is any open source software available for test management activities, then we will use them which is for now in TBD phase.

## Release Control

Every Sprint will have a version of the application which has to be tested. With every release there will be release notes which will be available stating what are the features developed in this release. Version history will also be maintained for the same. For every release a smoke test will be conducted and the dev team will give in the results for the unit and smoke test they have conducted.

## Risk analysis

We do not see any potential risks for now.

Risk can be when the timelines get stretched or get stringent then we can have a possible risk of having to perform the test in a rush.

## Review and approvals

This document will give for peer review and then move to team review. Once done with team review the Project Manager will review. All the review changes will be tracked at the beginning of the document along with the approver name, date and comment. It will be continuously reviewed and updated with the testing process enhancements.

## Notes

We have put automation in out of scope because automation would require more time dedicated to it in creating the framework, scripts and execution. As we are on a crunch on the timelines, we are opting out automation.

Regarding the non-functional testing i.e. load testing we are going ahead with expert estimate