Test Plan (BBQHouse)

LP-II STQA Mini Project 2

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Revision and Signoff Sheet

Document History - To maintain a list of changes being made

Version	Date	Author	Description of Change
1	27/10/2020	Shrut Shah	Draft
2	29/10/2020	Shubhankar Gaikwad	Final Draft

Approvers List - To track who has reviewed and signoff on the Test plan

Name	Role	Approver / Reviewer	Approval / Review Date
Prof. S. N. Girme	**Lab Teacher**	Approver	

Reference Documents - Clearly mark the document used as an input to create the test plan

Version	Date	Document Name
1.0	29/10/20	BBQ House - Online Restaurant System

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1. INTRODUCTION

1.1. Purpose

This test plan describes the testing approach and overall framework that will drive the testing of the web app for restaurant food ordering and table booking system - BBQHouse. The document introduces:

- Test Strategy: rules the test will be based on, including the givens of the project (e.g.: start / end dates, objectives, assumptions); description of the process to set up a valid test (e.g.: entry / exit criteria, creation of test cases, specific tasks to perform, scheduling, data strategy).
- Execution Strategy: describes how the test will be performed and process to identify and report defects, and to fix and implement fixes.
- Test Management: process to handle the logistics of the test and all the events that come up during execution (e.g.: communications, escalation procedures, risk and mitigation, team roster)

1.2. Project Overview

BBQ House is an online web application for a restaurant. Customers can register and login to view the menu, place orders or even book tables for a given date.
The user can experience table booking and food ordering facilities while sitting at home.
Details about franchise are also displayed with different branches and history.

1.3. Audience

- Project team members perform tasks specified in this document, and provide input and recommendations on this document.
- Project team members also plan for the testing activities in the overall project schedule, reviews the document, tracks the performance of the test according to the task herein specified, approves the document and is accountable for the results.

2. TEST STRATEGY

2.1. Test Objectives

The objective of the test is to verify that the functionality of **BBQHouse Web App** works according to the specifications.

The test will execute scripts generated using **Selenium IDE and Selenium Standalone server** for regression testing and exploratory testing and test report of Test suites is generated using **TestNG.**

The final product of the test is twofold:

- A production-ready software;

- A set of stable test scripts that can be reused for regression and exploratory testing.

2.2. Test Assumptions

Key Assumptions

- Production like data required, database connectivity be available in the system prior to start of testing

General

- Exploratory Testing would be carried out once the build is ready for testing

Regression Testing

- During regression testing, testing team will use different data which is available on the system at the time of execution to run the test scripts

Exploratory testing

- Check the running of modules, interconnection links and usability using Selenium IDE

2.3. Test Principles

- Testing will be focused on meeting the business objectives, cost efficiency, and quality.
- Testing processes will be well defined, yet flexible, with the ability to change as needed.
- Testing activities will build upon previous stages to avoid redundancy or duplication of effort.
- Testing environment and data will emulate a production environment as much as possible.
- Testing will be a repeatable, quantifiable, and measurable activity.
- Testing will be divided into distinct phases, each with clearly defined objectives and goals.
- There will be entrance and exit criteria.

2.4. Data Approach

- In exploratory testing, **BBQHouse Web App** will run pre-loaded test scripts data which is used for testing activities. In regression testing, run scripts with change of input data.

2.5. Scope and Levels of Testing

2.5.1. Exploratory testing

PURPOSE: the purpose of this test is to make sure critical defects are removed before the next levels of testing can start.

SCOPE: First level navigation.

TESTERS: Testing team.

METHOD: this exploratory testing is carried out in the application with selenium test scripts

TIMING: at the beginning of each cycle.

2.5.2. Regression testing

PURPOSE: Regression testing will be performed to check the functions of application with different data inputs. The testing is carried out by feeding the input and validates the output from the application.

TESTERS: Testing Team.

METHOD: The test will be performed according to scripts, which are stored in Test Package.

TIMING: After Exploratory test is completed.

TEST ACCEPTANCE CRITERIA

1. Approved Functional Specification document, unit tests and Test suites should be available.
2. TestNG test report with atleast 85% pass rate.
3. Test environment with application installed, configured and ready to use state

TEST CASE TABLE- Tests to be executed

Test Case Id	Test Case Name	Objective	Description	Expected Result
SeleniumTest1	LoginTest	To check the login functionality of app	Run the web app to check the login page functionality.	Test case passes on providing valid input and app navigates to Index page
SeleniumTest2	FailedLoginTest	To check the output when incorrect information is entered	Checks for the test data of user in the database.	Login failed

SeleniumTest3	SignupTest	To check the working of signup and registration page	Test explores the sign up page features and validates the data functions.	Successful signup and registration of new user details into the table.
SeleniumTest4	OrderTest	To explore the working of food ordering page	Explores the navigations on ordering page and various features like item selection, final bill calculation.	Successful able to place orders
SeleniumTest5	TableBookingTest	To explore the working of table booking feature of the web app	Explores the navigations on table booking page and features like date selection, number of guests etc	Succesfully able to book a table
SeleniumTest6	NavigationTest	To check the complete navigation of the app using automated test scripts	Explore the full functionality of the web app from login, ordering to checkout	Smooth working and exploration of the app.
TestSuite1	FinalTestSuite	Test suite which runs all test cases one by one	Run all the tests for the iteration on the Selenium server.	Most of test cases (>85%) passed. Run using Selenium IDE and scripts and report using TestNG.

3. EXECUTION STRATEGY

3.1. Entry and Exit Criteria

- The entry criteria refer to the desirable conditions in order to start test execution; only the migration of the code and fixes need to be assessed at the end of each cycle. **- Fully working WAMP project with database connectivity, Apache web server, relevant testing libraries, Selenium drivers.**
- The exit criteria are the desirable conditions that need to be met in order proceed with the implementation. - **Test Report captured, atleast 85% test cases pass, no major defect.**

3.2. Validation and Defect Management

- It is expected that the testers execute all the scripts in each of the cycles described above. However it is recognized that the testers could also do additional testing if they identify a possible gap in the scripts.
- Check the bug taxonomy, identify reasons for failure. Focus on frequently occurring bugs and create tests for them and mention in bug taxonomy.

Severity	Impact
1 (Critical)	▪ This bug is critical enough to crash the system, cause file corruption, or cause potential data loss ▪ It causes an abnormal return to the operating system (crash or a system failure message appears). ▪ It causes the application to hang and requires re-booting the system.
2 (High)	▪ It causes a lack of vital program functionality with workaround.
3 (Medium)	▪ This Bug will degrade the quality of the System. However there is an intelligent workaround for achieving the desired functionality - for example through another screen. ▪ This bug prevents other areas of the product from being tested. However other areas can be independently tested.
4 (Low)	▪ There is an insufficient or unclear error message, which has minimum impact on product use.
5(Cosmetic)	▪ There is an insufficient or unclear error message that has no impact on product use.

4. TEST MANAGEMENT PROCESS

4.1. Test Management Tool

- Selenium IDE is used for exploratory testing .
- Test scripts generated are exported to Java file and ran for regression tests in NetBeans.
- TestNG is used to capture the report generated after running the Test Suite in NetBeans.

4.2. Test Risks and Mitigation Factors- Bug Taxonomy

Risk	Prob.	Impact	Mitigation Plan
DATA BUGS- User sensitive data loss	High	High	• Delete current user specific cookie data after logout • User should be able to update only his/her data
FUNCTIONALITY BUGS- Buttons fail to access proper data	Medium	High	• Check the connection to database. • Ensure proper functional working through unit tests
CODING BUGS- Database connection failure	Medium	Critical	Ensure proper jdbc connectors are present and database login details are accurate.
INTERFACE BUGS - Faulty GUI and navigations	Low	Low	Make UI constant so it looks same on different devices. Display of proper error messages. Check Swing component's event action listener code. Make sure that alerts that are opened during navigation are handled properly.
INTEGRATION AND SYSTEM BUGS- Improper system setup	Medium	Medium	Install required JDK version 1.8, JDBC connector. Make sure that ports required for selenium server and apache server are free.
TEST AND TEST DESIGN BUGS- Unsuccessful testing of functionalities	Medium	Medium	Install proper testing tools- Install relevant Chrome drivers, Selenium IDE plugins, Selenium standalone server, TestNG. .
Non-availability of Independent Test environment and accessibility	Medium	High	Due to non availability of the environment, the schedule gets

Risk	Prob.	Impact	Mitigation Plan
			impacted and will lead to delayed start of Test execution.
Delayed Testing Due To new Issues	Medium	High	During testing, there is a good chance that some “new” defects may be identified and may become an issue that will take time to resolve. Find a suitable method to run the selenium scripts for the project. PHP export option is not available for newer versions of Selenium IDE, so convert into Java and run tests in a designated test project to explore the web app functionality.

5. TEST ENVIRONMENT

BBQHouse Web App will be hosted on Apache Web server(XAMPP).

Development on Netbean 8.2, JDK 1.8 , Junit4, TestNG, PHP 7, MySQL 5, Selenium IDE, Selenium standalone server.

A windows 7/8/10 environment.

6. APPROVALS

The Names and Titles of all persons who must approve this plan.

Signature:	
Name:	**Prof. S. N. Girme**
Role:	**Lab Teacher**
Date:	