American International University-Bangladesh (AIUB)
Department of Computer Science
Faculty of Science &Technology (FST)
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Section: C
Software Quality Assurance and Testing

Developing a Test Plan for Online Food Delivery System

A Report submitted
By

SN	Student Name	Student ID
1	Dola,Shionty Ghosh	18-38013-2
2	Uddin,MD.Azim	18-37793-2
3	Roy,Showmik	17-35832-3
4	Sad,Mahiul Alam	18-37864-2

Under the supervision of

Abhijit Bhowmik

Associate Professor & Special Asst., Office of Student Affairs at

American International University-Bangladesh.

Software Test Plan

For

<Online Food Delivery System>

Version 1.0 approved

repared by

<Showmik Roy>

<Uddin,MD.Azim>

<Mahiul Alam Sad >

<Shionty Ghosh Dola>

<American International University Bangladesh>

<14/08/2021>

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Revision History

Revision	Date	Updated by	Update Comments
0.1	08.05.2021	Roy,Showmik	First Draft
0.2	10.06.2021	Uddin,MD.Azim	Design Testing
0.3	15.07.2021	Sad,Mahiul Alam	Testing Complete
0.4	12.08.2021	Dola,Shionty Ghosh	Feedback

1. **TEST PLAN IDENTIFIER**: Online Food Delivery System_01.1

2. REFERENCES

i. https://itsourcecode.com/free-projects/php-project/online-food-ordering-system-source-code/
ii. https://www.irjet.net/archives/V7/i11/IRJET-V7I1167.pdf
iii. https://blog.sagipl.com/online-food-ordering-app-development/

3. INTRODUCTION

Actually our project is online food delivery system. We want to develop a web based software system that will provide online food delivery service. Currently corona situation is very serious issue that's why people don't prefer to take food after going to restaurant and also don't want interact with other people, because gathering of large number of people is not good thing for now-days for pandemic situation and in this situation for this reason business of restaurant's owner is also down. Besides it is impossible to cook every-day's food at home for corona affected people that's why it is also essential for them to buy food from restaurant. That's why if any kind of service provider can give them service customer of restaurant without going to the restaurant then people will happy to take this offer and also the restaurant owner also be befitted. That's why we want to develop this type of software. Foe the pandemic situation this type of software can add huge value at the market place. There are also many food delivery service software is available but our specialty is that we will provide some uncommon feature like people can give feedback for the service, they can select at a time more then one restaurant and also can add some other's food from outside of the restaurant that's why they can able to give message to the delivery person etc.

4. REQUEIREMNT SPECIFICATION

4.1 System Features

✧ Here have 4 types of users (1)Admin, (2) Delivery Person (3) Chef (4) Customer.

Admin :

- Have to registration in the system
- Can log in with the valid id and correct password.
- Can add Employee/Admin.
- Can block(Delete) all type of user .
- Can manipulate all user information/Add (edit-delete-view etc.) .
- Admin will control over all system.

Employee(Chef/staff of the restaurant):

- Have to registration in the system
- Can Registration(View-Edit-Delete their information)
- log in with the valid id and correct password.
- Can add food at restaurant menu.
- can update and search food from menu card.
- can delete food from menu card.
- can search food.
- Get order notification from customer and start to prepare food .

Customers:

- Have to registration in the system
- Can Registration(View-Edit-Delete their information).
- log in with the valid id and correct password.
- Can select restaurant.
- Can search food.
- Can select food.
- Can pay bill or take the service like cash on delivery.
- Can track food delivery person.
- Can comment or provide review of the food .
- Can give message to the delivery person.

Delivery person:

- Have to registration in the system
- Can Registration(View-Edit-Delete their information).
- log in with the valid id and correct password.
- will get food order from customer.
- Will take and confirm the order.
- Take payments from customer.
- Can view customer.

4.2 System Quality Attributes

For assure the top quality for software then we have to maintain some quality attribute. Such as security, usability, maintainability, security, usability, reliability and many more. For build a

good quality software, must need to ensure or essential to maintain those quality attribute to build a project.

- **Security:** This can be Define all the specific threats that the software system to be protected from bugs or malware or any third party attack.
  Software must have some security that defined to check duplicating, editing, deleting, viewing and also collecting data analysis.
- **Usability:** This should be start with the previous design. If the developer and designer already have this software product and consider or measuring all the number of errors and fix by itself, the time that it will takes to learn how to work on the interface and complete all the tasks easily to set up a baseline and defined the usability target line.
  The client can learn easily then can operate frequently, prepare inputs and interpret outputs through interaction with a software operate system easily.
- **Flexibility:** Client or customer can easily be able to access and use the software so frequently to utilize and find their needs. Developer should be understand what an user need and quick response for that. So they can easily able to customize the conditions and all the user can be to understand the new feature easily that developer change earlier. Client should be able to understand the software system easily.
- **Safety:** this is very important for a good quality software. Data safety is very precious thing for a good quality and customer satisfaction.Software must can ability to resist all the unauthorized attempts at any user.
- **Reliability:** This can be define that the range to which of the software system continually performs the specified functions and without any system failure. The ability of a software system to be performs it is required functions and understated the conditions for a inelastic period.
  Preventative actions or procedures are essential to avoid any failure in the software.
- **Maintainability:** If a software system will be shut-down more than 24 hour for maintenance then it will not good for the system. The software system will be take a decent time for maintenance. Then most importantly the easy way find out to solve or fix any problem if occur in software system. Finally conform to technical design team that standard of software and it's quality.
- **Robustness: I**f at the execution time arise any kind of exception, that time a software how goodly handle it.
- **Operability:** It can be defines how easily a user can operate a system and how much user friendly a system. How easily user can learn about that software system.
- **Test-ability:** It defines how easily testing team can perform testing activity. And if there is any defect find out then they can easily solve the problem.
- **Stability:** This can be define that any software system perform under it is own requirement on some specific situation and do it's best. How much load can handle a software.
- **Resource behavior :** how much resource taking the system from memory. If the system take more memory, the system will be slower. so less use of resource is good for a software.
- **Portability:** How much usability for same software system can perform in different environment like different operating system. Like windows, Android.

Here if I rank all those quality attribute then security, usability, reliability, Flexibility on top of them in compare to other. For software you must have to notice all the quality attribute for better quality product but mostly this four.

4.3 System Interface

Fig : System interface

Fig: System interface of customer

4.4 Project Requirements

For properly complete this project we have to fulfil some requirements:

Time: 7-8 months

Budget: 500000 tk (in total)

Team: 8 members active team.

Office environment will be so quite, perfect.

Some PC .

5. FEATURES NOT TO BE TESTED

- Features which do not need to test are given below:
- **User record maintenance:** As oracle ensures extensive unrestricted access control, so no need to check that at this moment.
- **Oracle based database creation:** As oracle ensures privacy by not showing information directly to the user, so this feature do not need to be tested.
- **Source and Destination selection:** Source and Destination will be fixed and controlled by the system development team.

6. TESTING APPROACH

6.1 Testing Levels

- At first testing phase of our online Food delivery System, all experiments will be inferred utilizing the current Program Specification. Then we need to Distinguish which specific tests will be utilized to test every module. We identify the expected results for each test. We will document the test case configuration, test data, and expected results. We will document the test data, test cases, and test configuration used during the testing process. This document will be submitted by using the System Test Report (STR).

- In our project, we will do static unit testing. Each and every line of code unit will be validated against requirements of the unit by reviewing the code. This testing will validate all of the project code performs as expected. Our development team will do Unit Testing during the development of the project.

- System test is the end-to-end system specifications. System Testing of the project will do a series of different tests whose purpose will confirm to exercise the full system test. Every input in the application will be verified through testing to check for desired outputs.

- We need to do acceptance testing which will be performed by the users. It will verify functionality and usability of the software. It is usually the last step before the user/customer takes the possession of our project.

6.2 Test Tools

In this project, we will use Selenium as our software testing tool.
Selenium is the open source automation testing driver which is used for doing automated tests on different web browsers. Selenium is used to automate the testing in various web browsers. It supports Chrome, Mozilla, Firefox, Safari, and IE, and can easily automate browser testing using Selenium Web Driver.

- **Framework and Language Support**
  Selenium can be supported in Java, Python, JavaScript, C#, programming languages for testing software automation. Scripts can be written in any of these programming languages and Selenium converts the codes into Selenium supported codes very firstly. Selenium supported languages has different frameworks which helps to write test script for Selenium test automation.

- **Open Source Availability**
  The Selenium community is helping developers teams and software engineers to automate the web browser functions and features. Selenium customize the code for better code management. Selenium is very effective automation tool and it can easily test the scripts to check validation functionality.
- **Multi-Browser Support**
  Chrome, Firefox, Safari, Internet Explorer, Opera, and Edge browsers are the most used web browsers and Selenium script can be easily run in all the mentioned browsers. And

the codes for selenium is same of all the browser, so it do need to rewrite the script again.

- **Support Across Various Operating Systems**
  Selenium automation tool supports all operating systems. Selenium runs in Windows, Linux, Mac OS, UNIX, etc. This makes developers and software testers to write easily the test automation scripts.

- **Ease Of Implementation**
  Selenium automation framework is very easy to understand and useful tool. Selenium helps to create and execute test scripts effectively. Testers can monitor while tests are running. Testers easily analyze detailed reports of Selenium and take proper actions.

- **Re usability and Integration**
  Selenium can be reusable and can be used to test in multiple browsers and operating systems. Selenium is not like a web automation testing tool that is all inclusive. Reason behinds is it needs third-party frameworks to broaden the scope of testing.

- **Flexibility**
  Test management is very important in testing life cycle. Selenium features like regrouping and refactoring of test cases are very easier and efficient. These features help developers and testers to change the code, reducing duplication, and improving maintainability.
- **Parallel Test Execution**
  The main purpose of automated testing is to save efforts and time. By using Selenium Grid, we can execute multiple tests in parallel, reducing the test execution time.

- **Less Hardware Usage**
  Selenium focused on automation tools like QTP, UFT, SilkTest, and Selenium requires less hardware as compared to other testing tools.

- **Easy to Learn and Use**

Writing Selenium scripts is needs to write only some codes to automate functionalities of any website. The Selenium website is very helpful for developer and testers team to do documentation. Selenium tutorials, testing, and development support are available in selenium website and other website to learn easily.

6.3 Meetings

Our testing team will meet once in a week to evaluate progress to date and to identify errors and defect as early as possible. The testing team leader will meet with development team and the project manager once every two weeks as well. Additional meetings can be called as required for emergency situations. Test team needs to backup plan for risk. Because risk can happen anytime. So there all departments decide the backup plan.

7. TEST CASES/TEST ITEMS

Project Name: ONLINE FOOD DELIVERY AND REVIEWING APP			Test Designed by: Showmik	
Test Case ID: FR_1			Test Designed date:1/8/2021	
Test Priority (Low, Medium, High): Medium			Test Executed by: Azim	
Module Name: User Control			Test Execution date:5/8/2021	
Test Title: Verify login with valid username and password				
Description: Test website login page				
Precondition (If any): User must have valid username and password				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Enter username 3. Enter password 4. Click login	Username: 123 Password: 123	User should login into the application	As expected,	Pass
Post Condition: Admin is validated with database and successfully login to account. The account session details are logged in the database.				

Project Name: ONLINE FOOD DELIVERY AND REVIEWING APP			Test Designed by:Dola	
Test Case ID: FR_2			Test Designed date: 5/8/2021	
Test Priority (Low, Medium, High): High			Test Executed by: Saad	
Module Name: Order Checkout			Test Execution date: 9/8/2021	
Test Title: verify users and take order				
Description: Test checkout page				
Precondition (If any): Manager must have verified username and password for checking the order list.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the order list 2. Verify the order 3. Checking all form data & payment history 4. Take order	Username: 321 Password: 321	Confirm the order and enable to deliver the order.	As expected,	Pass
Post Condition: Checking user data from database and verified it , then confirm the order and enable for next process.				

Project Name: ONLINE FOOD DELIVERY AND REVIEWING APP	Test Designed by: Dola
Test Case ID: FR_3	Test Designed date:10/8/2021
Test Priority (Low, Medium, High): High	Test Executed by: Saad
Module Name: Payment system and give order	Test Execution date:12/8/2021
Test Title: Token verify and give food order	
Description: Test food ordering page	
Precondition (If any): User must have valid username and password	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the homepage 2. Add food to the cart 3. Fill up the form 4. Payment 5. Confirm order	Username: 99999999999 Password: 321	Customer can confirm the food order.	As expected,	Pass

Post Condition: User should have to fill up the form and give necessary information and payment then confirm the order.

8. ITEM PASS/FAIL CRITERIA

- If the test cases satisfies all the character and constraints of design specification and system architecture, then the test cases will be executed.
- When the test case does not meet the conditions and signature of the design specification, then the test cases will be failed.
- If the component meets all the restrictions and signatures of the document design specification, it only passes the test case.
- The tests performed on the system must satisfy
  functional requirements, non-functional requirements, and use cases to be passed.
- If any one of the three criteria is deemed to be passed, the test will fail.
- A defect is something that may cause a crash but remains in the application.

9. TEST DELIVERABLES

At the developing time every software have to goes through different phases. Test deliverable means test artifacts. so these are

- ❖ Test cases.
- ❖ Test plan document.
- ❖ Test strategy report.
- ❖ Test summery report.
- ❖ Test data.
- ❖ Test metrics.
- ❖ Test defect report.
- ❖ Test status report.
- ❖ Test evolution report.
- ❖ Plan for error or bug remove report.
- ❖ Release note.
- ❖ Log files execution.
- ❖ Project summary.

10. STAFFING AND TRAINING NEEDS

During the system testing/integration and project acceptance phases, it is best to assign at least one full-time evaluator to the project. This requires hiring a part-time employee at the beginning

of the project to participate. In the comments, etc., they were used full-time approximately four months after the project was completed. If no testers are available, the project manager/test manager assumes this role. To ensure complete testing and matching, the following areas should be viewed from a learning perspective.

This is a very delicate project, because the end user is a general audience, so all test team members should be suitable for all tests. Tools such as Selenium, Katelin Studio, and Test Complete are used to run test cases. For regression testing, test team members cannot use these tools. In this case, the test manager and project manager should work with the management staff and train the members of the test team.

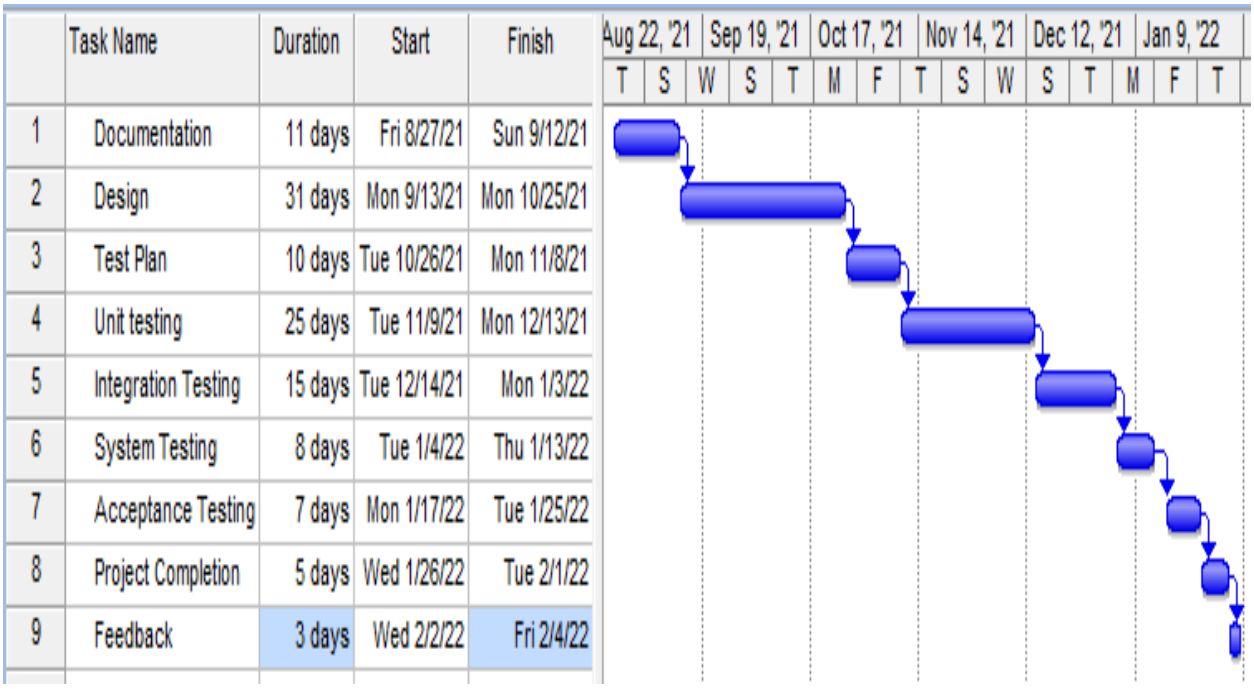
11. RESPONSIBILITIES

	Project Manager	SQAT Leader	Development Team	Testing Team	Users/Customer
Ensure schedule, budget & quality.	X	X		X	
Regularly review Testing progress with the Test Controller.	X				
Checking Progress		X			
Before Machine Test Sign Off, Ensure Exit Requirements are met.	X			X	
Manage Device Test Team Issues/Risks		X			
Execute Test Conditions and Mark off results				X	
Acceptance test documentation and execution should be check	X	X		X	X
System Design reviews	X	X	X	X	X
Screen and report prototype			X	X	X

reviews					
Integration Testing		X	X	X	
Unit testing execution and documentation		X	X	X	
Detailed Design reviews	X	X	X	X	
Change control and regression testing	X	X	X	X	X

12. TESTING SCHEDULE

Time has been allocated within the project plan for the following testing activities. The specific dates and times for each activity are defined in the project plan timeline.



	Task Name	Duration	Start	Finish
1	Documentation	11 days	Fri 8/27/21	Sun 9/12/21
2	Design	31 days	Mon 9/13/21	Mon 10/25/21
3	Test Plan	10 days	Tue 10/26/21	Mon 11/8/21
4	Unit testing	25 days	Tue 11/9/21	Mon 12/13/21
5	Integration Testing	15 days	Tue 12/14/21	Mon 1/3/22
6	System Testing	8 days	Tue 1/4/22	Thu 1/13/22
7	Acceptance Testing	7 days	Mon 1/17/22	Tue 1/25/22
8	Project Completion	5 days	Wed 1/26/22	Tue 2/1/22
9	Feedback	3 days	Wed 2/2/22	Fri 2/4/22

13. PLANNING RISKS AND CONTINGENCIES

In a project, risk is actually an uncertain event that that may occur any time at the project.

- **Deadline miss:** We have to remember that, deadline cannot be delay.
- **Communication Gap:** it may happen at the project time between team members. So we always try to communicate each members of the project and also can show the progress of our work. Besides very weeks at a meeting with all members can share their project and can discuss with each other for how they can give their best.
- **Fault in Planning in the project:** It may take wrong planning at project planning period. Then if the project gets started after that we may know that our planning is not correct that time many problem occurs and for that situation it is hard to start from the first and here also have waste of money.
- **Turnover of Employee:** At the project team there are many employee work so during the project, any employee may leave the job, or anyone may sick or any kind of issue can happen with a employee that time it is difficult to maintain work.

  So at the risk management time, we will be proactive strategy because of good output and benefits. Because at the early we will identify potential ricks, besides probability of the risk and after occur it's impact will analyze. Then we will rank them by their importance. Primarily we can handle risk by this.

14. APROVALS:

Project Sponsor	Abhijit Bhowmik
Development Manager	Shionty Ghosh Dola
EDI Project Manager	Mahiul Alam Sad
RS Test Manager	Showmik Roy
RS development Team Manager	MD. Azim Uddin