



American International University-Bangladesh (AIUB)

Department of Computer Science

Faculty of Science & Technology (FST)

Fall 22 23

Section: C

Software Quality Assurance and Testing

Pick Up

A Report submitted

By

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Sign:

Date:

Software Test Plan

for

Pick Up

Version 1.0 approved

Prepared by

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10.12.2022

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REVISION HISTORY

Revision	Date	Updated By	Updated Comment
0.1	05-12-22	Rokon	1st Draft
0.2	05-12-22	Niloy	2nd Draft
0.3	06-12-22	Sayem	3rd Draft
0.4	07-12-22	Rabby	4th Draft
0.5	08-12-22	Rokon	5th Draft

0.6	09-12-22	Rabby	6th Draft
0.7	09-12-22	Niloy	7th Draft
0.8	18-12-22	Sayem	8th Draft

1. TEST PLAN IDENTIFIER:RS-MTP01.3

2. REFERENCES

- Software Requirement Engineering Document
- Software Quality And Testing Course PowerPoint Slides
- Selenium tool
- Postman Software

3. INTRODUCTION

3.1 Background to the Program

Many popular e-commerce websites are available. But the problem is when customers want a product that is not available in any e-commerce platform. Customers are not able to purchase those products sitting at home. Our system has two individual ways to purchase the product. One is as, like the other, sellers add their products customers can choose and buy. Another one is if customers can't find their expected product. They can purchase through the service provider. According to the product location, customers can send a request order to the service provider with details of the product. And Customers can get here products through the service provider. We are doing this project for helping people and many of us want products from a place where we have no familiar person to help. There is a high risk of an unknown person that they can deceive. So, through this system we can make it possible with enough credibility for the people.

3.2 Solution to the Program

This project is one that allows people to buy and sell physical goods, services, and digital products over the internet rather than at a brick-and-mortar location. Through this project, clients sell products and provide customer service properly and customers are able to buy their products. Using this website, user can pay their payments or they are able to pay cash on delivery (COD). And the purpose of this project is to maintain a business platform so peoples get their needed products by using this website in a few moments. And also, by using this project, people can easily interact with service providers and get products as soon as possible. By using this project, customer can easily do their shopping, clients can easily sell their products, and the company can earn money.

4. REQUIREMENT SPECIFICATION

4.1 System Features

Requirement ID	Requirement Description	Dependencies	Originator
FR-01	Two types of users: customer and client; store their credentials in the database.	Users need to have valid and unique email address, strong password as well as other valid information.	Junior Developer
FR-02	Authenticate validly of the users of the	Must be a registered user.	Junior Developer

	system and log them in.		
FR-03	Users can edit their profile.	Must be a registered user.	Junior Developer
FR-04	Products can be added, edited, and deleted by the client.	Must be a valid products.	Junior Developer
FR-05	Clients are able to track which customers have purchased their products.	Must be a valid client.	Senior Developer
FR-06	Customers can see all the products that have been added to the cart.	Must be a valid customer.	Junior Developer
FR-07	Customers can purchase products.	Customers must have valid payment details.	Senior Developer
FR-08	Customers can see which products were bought from which client.	Database	Senior Developer
FR-09	Customers can review the	Must have bought the product they	Junior Developer

	products on their experience.	are reviewing.	
FR-10	Admin can create client and customer.	Must be an authenticated admin.	Junior Developer
FR-11	Admin can see the statistical data of users, purchases	Must be an authenticated admin.	Senior Developer
FR-12	Admins can delete posts; block customers and clients.	Must be an authenticated admin.	Senior Developer

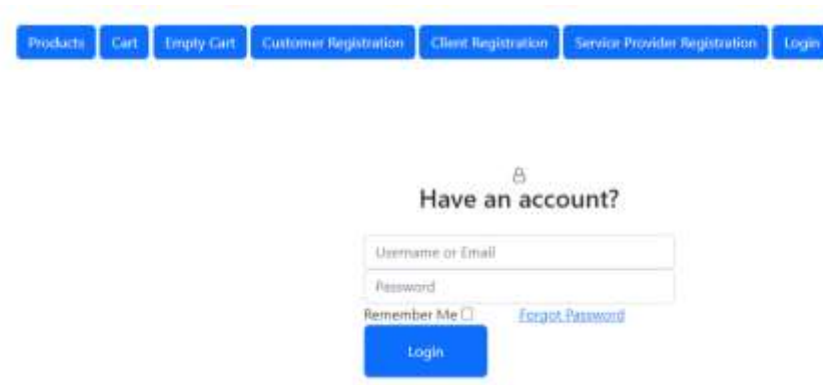
4.2 System Quality Attributes

Requirement ID	Date	Requirement Description	Dependencies	Originator
NF-0.R1	05-12-22	Security	Program	Software Engineer
NF-0.R2	06-12-22	Usability	Program	Junior Developer
NF-0.R3	07-12-22	Maintainability	Program	Senior Developer
NF-0.R4	08-12-22	Scalability	Program	Software Engineer
NF-0.R5	09-12-22	Performance	Program	Senior Developer

NF-0.R6	10-12-22	Reliability	Program	Senior Developer
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4.3 System Interface

4.3.1 Login Page



The screenshot displays the login page of a web application. At the top, there is a horizontal navigation bar with seven blue buttons: 'Products', 'Cart', 'Empty Cart', 'Customer Registration', 'Client Registration', 'Service Provider Registration', and 'Login'. Below this bar, the main content area features a login form. The form is titled 'Have an account?' with a small lock icon above the text. It contains two input fields: 'Username or Email' and 'Password'. Below these fields, there is a 'Remember Me' checkbox and a blue link labeled 'Forgot Password'. At the bottom of the form is a blue 'Login' button.

4.3.2 Registration Form of Client

[Products](#) [Cart](#) [Empty Cart](#) [Customer Registration](#) [Client Registration](#) [Service Provider Registration](#) [Login](#)

Client Registration

Name

Shop name

Email

Address

Mobile Number

Password

4.3.3 Registration Form of Customer

[Products](#) [Cart](#) [Empty Cart](#) [Customer Registration](#) [Client Registration](#) [Service Provider Registration](#) [Login](#)

Customer Registration

Name

Id

Password

Email

Address

Phone Number

4.3.4 Product List



4.3.5 My Orders

<div>Products Empty Cart Cart My Orders Request Order to SP Dashboard</div>			
Id	Status	Price	Details
2	Ordered	1000	<div>Details</div>


4.3.6 Order Details

Order Details

Order Id: 2

Order By: rafi

Order Details

Name	Image	Unit Price	Qty
Screenshot		1000	1

4.3.7 Request Order to Service Provider

Request Order to Service Provider

Product Name

Quantity

Product Details

Address

Mobile Number

Email

[Request Order](#)

4.4 Project Budgets

Effort Estimation

Constructive Cost Model

Project Type: Organic

Coefficient_{<Effort Factor>}: $2.4[p=1.05; T=0.38]$

SLOC: 10,000

Effort=PM= $\{2.4*(10000/1000)^{1.02}\}=26.92$

Development Time=DM= $(2.5 * 26.92^{0.38})=9$ months=1584 Working Hours
[1 month=22 Working Days | 198 Working Days | Daily 8 Hours]

Required number of people, ST=PM/DM= $26.92/8.74=3.08=3$

Budgeting:

Developer Salary in 9 months: Pre-Developer Salary Per Working Hours = 1000 Taka

Total Developer salary = $1000 \times 1584 = 1,584,000$ Taka

Requirement Analysis:

Time Needed: 1month (22working Days = 176 Working Hours)

Requirement Analysis Person's Hourly wage = 400 Taka

Total Requirement Analysis Expense = $400 \times 176 = 70,400$

Transportation Cost Estimation: 14,000 Taka

Training & Hardware Expenses Estimation: 150,000 Taka

Rent Expenses:

Room per Month = 20,000 Taka

Total in 9 Months = 180,000 Taka

Total Utilities in 9 Months: 40,000 Taka

Maintenance (Till 6 Months after Delivery):

Expense Per Hour = 1000 Taka

Total Estimated Time Needed for Maintenance = 60Hours

Total Estimated Maintenance Expense = $60 * 1000 = 60,000$ Taka

Other Human Resources cost:

Project Manager: $1 * 30,000 * 9 = 270,000$ Taka

Accountant: $1 * 20,000 * 9 = 180,000$ Taka

Technical Staff: $2 * 15,000 * 9 = 270,000$ Taka

Total HR cost: $270,000 + 180,000 + 270,000 = 720,000$ Taka

Total Estimated Expense: $15,84,000 + 70,000 + 14,000 + 150,000 + 180,000 + 40,000 + 60,000 + 720,000 = 2,818,000$ Taka

Profit:

30% of Total Estimated Expenses = $2,818,000 * 30\% = 845,400$ Taka

Final Project Budget = $2,818,000 + 845,400 = 3,663,400$ Taka

5. FEATURES NOT TO BE TESTED

- Edit Admin Profile (Personal Information)
- Statistical data of users, purchases
- Networking Testing
- Language (Default language is English)

6. TESTING APPROACH

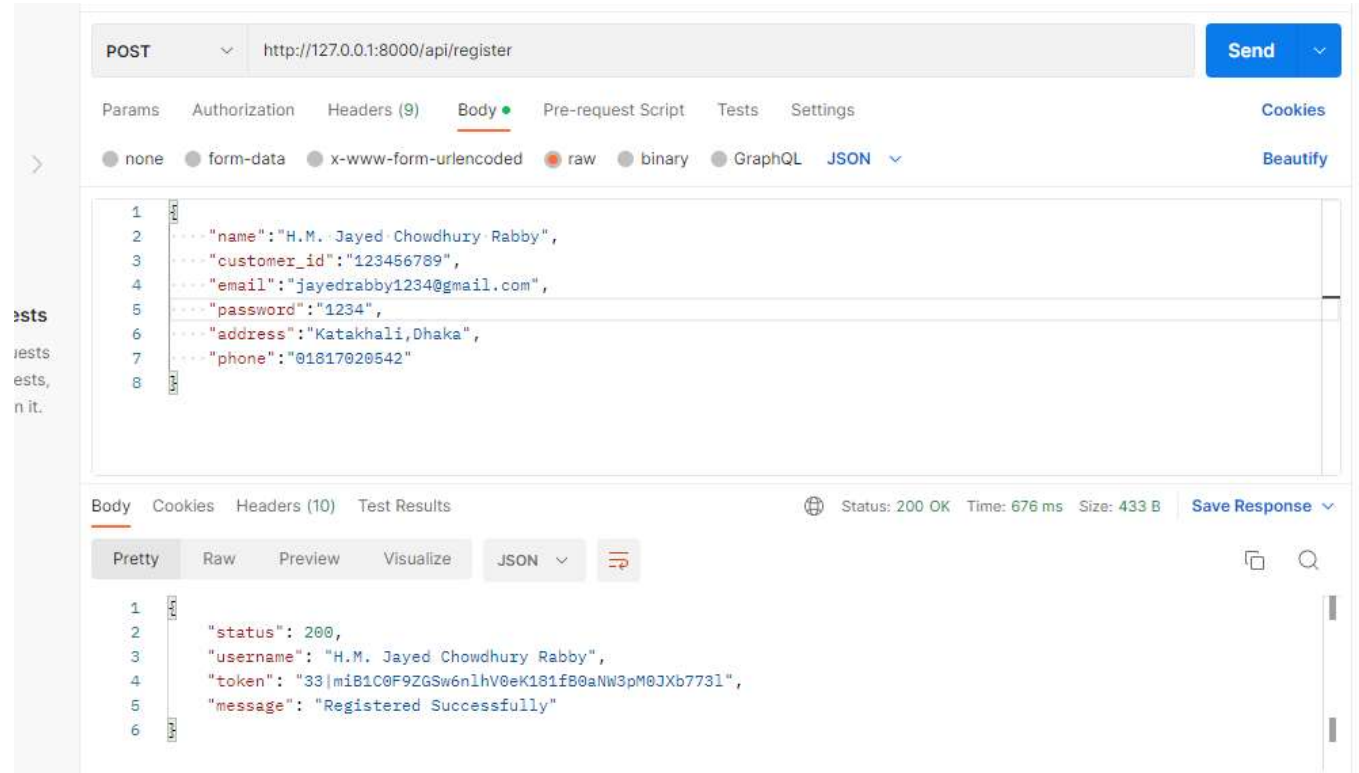
6.1 Testing Levels

Unit Testing: This level of testing is done by the developers to ensure that the functionality developed by the developers is working correctly according to the expectation. At this level, the lead developer approves the module, integrates it with the system level, and passes it to the SQA team. In this process, it only finds the defects for this particular unit and needs to work around them to make the unit functional and meet the expectation.

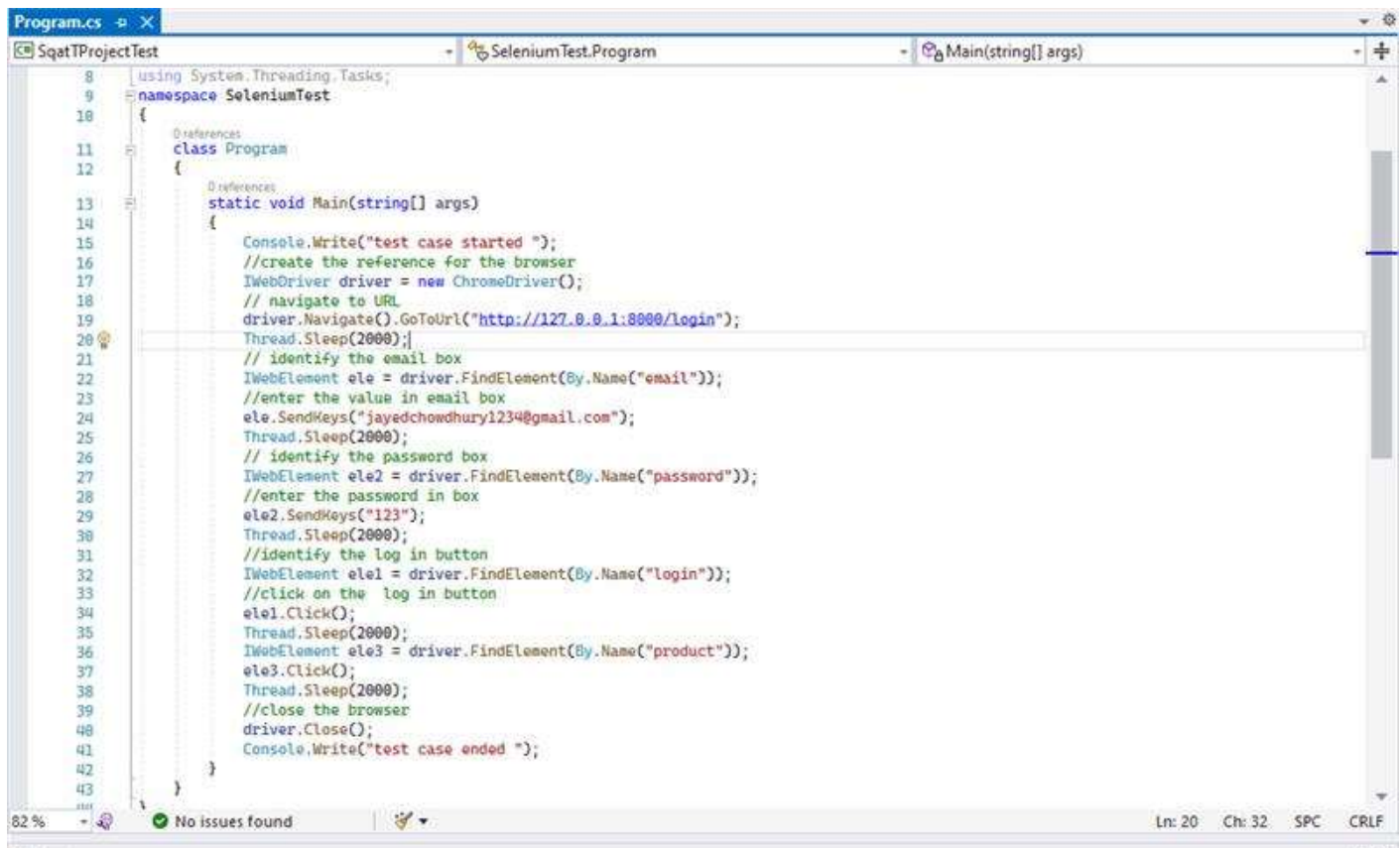
System/ Integration Testing: At this level, all the modules are integrated and a system-level test will be conducted by the test manager and SQA engineers to find out the existing bugs which were not able to detect on unit testing. This level of testing is time-consuming and expensive. By this level of testing, most of the major defects have been detected, and need to work around the application to remove the bug and make the system properly functional.

Acceptance Testing: This level of testing is done by some of the potential users, business personnel of the department, and the project lead to ensure that the application meets the stockholders' expectations. This testing is conducted only to find defects rather than ensure that the application meets the acceptance criteria. After the System/Integration test is completed, the acceptance test will run in parallel with the existing creating user manuals and instructions processes for one month.

6.2.1 Postman



6.2.1 Selenium



The screenshot shows a Visual Studio editor window with the file `SeleniumTest.Program` open. The code is in C# and implements a Selenium test case. It includes a `using` statement for `System.Threading.Tasks`, a `namespace SeleniumTest`, and a `class Program` with a `Main` method. The `Main` method performs the following steps: writes "test case started", creates a `ChromeDriver`, navigates to `http://127.0.0.1:8000/login`, sleeps for 2000ms, finds the email input, enters the email `jayedchowdhury1234@gmail.com`, sleeps for 2000ms, finds the password input, enters `123`, sleeps for 2000ms, finds the login button, clicks it, sleeps for 2000ms, finds the product button, clicks it, sleeps for 2000ms, closes the browser, and writes "test case ended". The status bar at the bottom indicates "No issues found" and shows line 20, column 32.

```
Program.cs x
SeleniumTest.Program
Main(string[] args)

8 using System.Threading.Tasks;
9 namespace SeleniumTest
10 {
11     // references
12     class Program
13     {
14         // references
15         static void Main(string[] args)
16         {
17             Console.WriteLine("test case started ");
18             //create the reference for the browser
19             IWebDriver driver = new ChromeDriver();
20             // navigate to URL
21             driver.Navigate().GoToUrl("http://127.0.0.1:8000/login");
22             Thread.Sleep(2000);
23             // identify the email box
24             IWebElement ele = driver.FindElement(By.Name("email"));
25             //enter the value in email box
26             ele.SendKeys("jayedchowdhury1234@gmail.com");
27             Thread.Sleep(2000);
28             // identify the password box
29             IWebElement ele2 = driver.FindElement(By.Name("password"));
30             //enter the password in box
31             ele2.SendKeys("123");
32             Thread.Sleep(2000);
33             //identify the log in button
34             IWebElement ele1 = driver.FindElement(By.Name("login"));
35             //click on the log in button
36             ele1.Click();
37             Thread.Sleep(2000);
38             IWebElement ele3 = driver.FindElement(By.Name("product"));
39             ele3.Click();
40             Thread.Sleep(2000);
41             //close the browser
42             driver.Close();
43             Console.WriteLine("test case ended ");
44         }
45     }
46 }
```

82 % No issues found Ln: 20 Ch: 32 SPC CRLF

6.3 Meetings

Meeting Date	Meeting Criteria	Object
01.12.2022	Checking of system features and quality attributes	<ul style="list-style-type: none">● Check the Functional & Nonfunctional requirements● System's working process
05.12.2022	Error & Bug Solving	<ul style="list-style-type: none">● After detecting bugs list them down● Solve the bugs● Preparation for safety
10.12.2022	Conclusive	<ul style="list-style-type: none">● Check the listed documentation● Recheck the requirements● Run the full system

7. TEST CASES/TEST ITEMS

Test Case 1: Client Registration

Project Name: Pick Up		Test Designed by: Easinul Abedin Sayem		
Test Case ID: Registration Client_01		Test Designed date: 08-12-2022		
Test Priority (Low, Medium, High): High		Test Executed by: Easinul Abedin Sayem		
Module Name: Registration		Test Execution date: 08-12-2022		
Test Title: Verifying registration client module				
Description: Test the Pick Up Registration Client website registration session				
Precondition (If any): 1. Need to use a username,shopname,email,address,phone number,password (Doesn't present in the system Database)				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1.Go to the site registration page. 2.Fill up the information.	Uname:Easnul shopname:SK Email: abc@gmail.com Address: Dhaka	Successful Registration	Pass registration for valid email	Pass

3. Click on the "Sign Up" button.	PhoneNumber: Password:12345			
Post Condition: User will go back to the login page.				

Test Case 2: Customer Registration

Project Name: Pick Up	Test Designed by: Easinul Abedin Sayem
Test Case ID: Registration Customer_02	Test Designed date: 08-12-2022
Test Priority (Low, Medium, High): High	Test Executed by: Easinul Abedin Sayem
Module Name: Registration Customer	Test Execution date: 08-12-2022
Test Title: Verifying registration Customer module	

Description: Test the Pick Up Registration Customer website registration session				
Precondition (If any): 1 Need to use a username, id,password,email,address,phone number (Doesn't present in the system Database)				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
3.Go to the site registration page 4.Fill up the information 3. Click on the "Sign Up" button	Uname:eufi Id:123 Password:1234 Email: abc@gmail.com Address: Dhaka Phone: 01856894644	Successful Registration	Pass registration for valid email	Pass
Post Condition: User will go back to the login page.				

Test Case 3: Login

Project Name: Pick Up			Test Designed by: Easinul Abedin Sayem	
Test Case ID: Login_01			Test Designed date: 08-12-2022	
Test Priority (Low, Medium, High): High			Test Executed by: Easinul Abedin Sayem	
Module Name: Login			Test Execution date: 08-12-2022	
Test Title: Verifying login module				
Description: Test the Pick Up Customer website login session				
Precondition (If any): 1. User need to register into the system				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the site login page 2. Fill up the information	Uname:Easnul Pass: 123456	Successful Login	Successful	Pass

3. Click on the "login" button.				
Post Condition: User will go into the Home page.				

Test Case 4: Logout

Project Name: Pick Up		Test Designed by: Easinul Abedin Sayem		
Test Case ID: Logout_01		Test Designed date: 08-12-2022		
Test Priority (Low, Medium, High): High		Test Executed by: Easinul Abedin Sayem		
Module Name: Logout		Test Execution date: 08-12-2022		
Test Title: Verifying logout module				
Description: Test the Pick Up website logout session.				
Precondition (If any): 1. User need to login into the system				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the site's	N/A	Successful	Successful	Pass

Dashboard page. 2. Click on the “logout” button.		Logout		
Post Condition: User will go back to the login page.				

Test Case 5: Add Product

Project Name: Pick Up		Test Designed by: Easinul Abedin Sayem		
Test Case ID: Add Product _01		Test Designed date: 08-12-2022		
Test Priority (Low, Medium, High): Medium		Test Executed by: Easinul Abedin Sayem		
Module Name: Add Product		Test Execution date: 08-12-2022		
Test Title: Verifying Add Product module				
Description: Test the Pick Up website Add Product session				
Precondition (If any): 1. User need to login as a client into the system.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1.Go to the site add	Product Name: Chips		Successful	Pass

product page 2.Input product name as well as product price and picture of A product 3.Press on "Upload" button	Price:100 Image:xyz.jpg	Successful Update Profile		
Post Condition: User will go into the product list page.				

Test Case 6: Add Product to cart

Project Name: Pick Up	Test Designed by: Easinul Abedin Sayem
Test Case ID: Add Product to Cart _01	Test Designed date: 08-12-2022
Test Priority (Low, Medium, High): Medium	Test Executed by: Easinul Abedin Sayem
Module Name: Add Product to Cart	Test Execution date: 08-12-2022
Test Title: Verifying Add Product to Cart module	

Description: Test the Pick Up website Add Product to Cart session				
Precondition (If any): 1. User need to login into the system				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the site list of product page 2.Click on the “add to cart” button	N/A	Successful Add to cart	Successful	Pass
Post Condition: User will go into the Home page.				

Test Case 7: Product Buy

Project Name: Pick Up	Test Designed by: Easinul Abedin Sayem
Test Case ID: Product Buy _01	Test Designed date: 08-12-2022
Test Priority (Low, Medium, High): Medium	Test Executed by: Easinul Abedin Sayem

Module Name: Product Buy		Test Execution date: 08-12-2022		
Test Title: Verifying Product Buy module				
Description: Test the Pick Up website Product Buy session				
Precondition (If any): 1. User need to login and add to cart into the system.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1.Go to the site cart page 2.Click on the “checkout” button	N/A	Successful product buy	Successful	Pass
Post Condition: User will go into the page and show the confirm message				

Test Case 8: Delete Product

Project Name: Pick Up	Test Designed by: Easinul Abedin Sayem
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Test Case ID: Delete Product _01		Test Designed date: 08-12-2022		
Test Priority (Low, Medium, High): Medium		Test Executed by: Easinul Abedin Sayem		
Module Name: Delete Product		Test Execution date: 08-12-2022		
Test Title: Verifying Delete Product module				
Description: Test the Pick Up website Delete Product session				
Precondition (If any): 1. User need to login as a client into the system.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1.Go to the site products list page 2.Click on the “delete” button	N/A	Successful Delete product	Successful	Pass
Post Condition: User will stay in products list page.				

Test Case 9: View Product

Project Name: Pick Up		Test Designed by: Easinul Abedin Sayem		
Test Case ID: View Product _01		Test Designed date: 08-12-2022		
Test Priority (Low, Medium, High): Medium		Test Executed by: Easinul Abedin Sayem		
Module Name: View Product		Test Execution date: 08-12-2022		
Test Title: Verifying View Product module				
Description: Test the Pick Up website View Product session				
Precondition (If any): N/A				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1.Go to the site 2.Go to the product list	N/A	Successful View product	Successful	Pass
Post Condition: User stay in products list page.				

8. ITEM PASS/FAIL CRITERIA

- With valid information, the registration should be done.
- The user/customers profile, client profile & service provider profile should be created.
- A valid user name and password should be given.
- Users/customers should be able to add to cart their products and remove their products.
- Clients add products and delete products which is properly done in the system.
- There is no error when a customer orders products and confirms products.
- Service Provider accepts the request from the customer which functionality smoothly works.
- The test cases should be properly documented.
- All reports should be maintained.
- All problem documents should be viewed by the valid user account.
- Item pass/fail criteria depends on Test Cases. 100% defect free system is not possible.
- If 98% or above 98% test cases are passed then the system is passed.

- If below 98% test cases are passed then the system is failed.

Here we have implemented a total of 9 test cases. At first, when applied the test case to the system, 60% of the test cases were passed successfully and 40% failed. The test cases were failing due to some logical errors and query related issues on the database. When the test case was applied after solving query related problem, all the test cases passed successfully.

9. TEST DELIVERABLES

- Test Documentation
- Test Plan
- Test Strategy
- Test Scenario
- Test Designs
- Test Cases
- Test data
- Test Results
- Errors
- Bug report
- Test Summary Report
- Test Status report
- Test Scripts

10. STAFFING AND TRAINING NEEDS

Depending on the project, different methods will be used for staffing and training. If this section is a component of a Master Test Plan, it should specify the stages of the project lifecycle at which various staffing levels and skill sets are required. Where one full time tester assigned for the project for the system/integration and acceptance testing phases of the project. If this is an iteration test plan, the primary attention should be on the potential training locations and activities. The EDI interface's fundamental functions will need to be taught to the developers and testers. The project manager assumed that for the project needs the developers and testers are hire and properly give training to done the project.

The test team frequently needs the assistance and expertise of other team members who are not formally a part of the test team. System administrators, database administrators, and developers must be scheduled appropriately in the plan in order to support the testing activities.

11. RESPONSIBILITIES

Name	Role	Responsibility
MD Rokon Islam Emon	Project Manager	<ol style="list-style-type: none">1. Ensure the completion of the Project in due time.2. Conduct required interactions with customers.

		<p>3. Manage the whole project and team.</p> <p>4. Match the completed project with the requirements.</p>
H.M. Jayed Chowdhury Rabby	Senior Developer	<p>1. Research, design, implement and manage software programs.</p> <p>2. Write and implement efficient code.</p> <p>3. Deploy software tools, processes, and metrics.</p>
MD Bakhtiar azim niloy	Lead Quality Assurance Engineer	<p>1. Create test plans, test forms, test cases, and test information.</p> <p>2. Develop test cases and prioritize testing activities.</p>

		3. Prepare all reports related to program testing carried out.
Easinul Abedin Sayem	Lead Quality Control Engineer	<p>1. Characterize the testing activities of test planning.</p> <p>2. Check if all the tools and fundamental assets are available to execute the test cases.</p> <p>3. Execute all the test cases and report defects.</p>

12. Testing Schedule

Task Name	Duration (Weeks)	Responsible
Design	4	Project Manager & Senior Developer
Writing Code	10	Senior Developer

Test Plan	4					Lead Quality Assurance Engineer & Project Manager	
Unit testing	3					Senior Developer, Junior Developer	
Test Case	4					Lead Quality Control Engineer	
Test Case Report	3					Test Engineer	
Test/weeks	1-2	3-4	5-6	7-8	9-10	11-12	13-14
1: Design							
2: Writting Code							

Test/weeks	15-16	17-18	19-20	21-22	2-24	25-26	27-28
3: Test plan							
4: Unit testing							
5: Test case							
6: Test case report							

13. PLANNING RISKS AND CONTINGENCIES

Risk	Probability	Impact	Mitigation
Error in function execution	Medium	Medium	Test the web app frequently and maintain daily backup.
Error due to invalid input	High	Low	Train user to use right data type in each input field.
Loss of encrypted data(password)	Medium	High	Maintain security check and backup
Database query execution error	Low	High	Recheck the queries and logics.

14. APPROVALS

Position	Assigned
Project Manager	Development Plan
Development Management	Integration test
Design Manager	Interface
Test Team Lead	Test Plan
Test Engineer	Functionality test

QA Manager	Review Test Case
Client	Acceptance Testing