



American International University-Bangladesh (AIUB)

Department of Computer Science

Faculty of Science & Technology (FST)

Summer 22 23

Section: A

Software Quality Assurance and Testing

Shopno Super Shop

A Report submitted
By

SN	Student Name	Student ID
1	Mrinmoy Das	20-43856-2
2	N.S Salman	18-38488-2
3		
4		

Checked By Industry Personnel

Name:

Designation:

Company:

Sign:

Date:

Software Test Plan

for

Shopno Super Shop

Version 1.0 approved

Prepared by Mrinmoy Das, N.S Salman

American International University Bangladesh

10 August 2023

Checked By Industry Personnel

Name:

Designation:

Company:

Sign:

Date:

Table of Contents

Revision History	3
1. TEST PLAN IDENTIFIER: RS-MTP01.3	4
2. REFERENCES	4
3. INTRODUCTION	4
Background to the Problem.....	4
Solution to the Problem.....	5
4. REQUIREMENT SPECIFICATION	6
4.1 System Features	6
4.2 System Quality Attributes.....	9
4.3 System Interface.....	10
4.4 Project Requirements	14
5. FEATURES NOT TO BE TESTED.....	16
6. TESTING APPROACH.....	17
6.1 Testing Levels	17
6.2 Test Tools.....	19
6.3 Meetings.....	23
7. TEST CASES/TEST ITEMS	24
8. ITEM PASS/FAIL CRITERIA	29
9. TEST DELIVERABLES	29
10. STAFFING AND TRAINING NEEDS.....	29
11. RESPONSIBILITIES	30
12. TESTING SCHEDULE	32
13. PLANNING RISKS AND CONTINGENCIES	32
14. APPROVALS	33

Revision History

Revision	Date	Updated by	Update Comments
0.1	2023.08.01	Mrinmoy Das	First Draft
0.2	2023.08.03	Ehsanul Alam Sabbir	Initial Review
0.3	2023.08.03	N.S Salman	Introduction
0.4	2023.08.07	Ehsanul Alam Sabbir	Approved
0.5	2023.08.12	Mrinmoy Das, N.S Salman	Testing schedule, Test case
0.6	2023.08.16	Mrinmoy Das	Project Completion

1. TEST PLAN IDENTIFIER:RS-MTP01.3

2. REFERENCES

- <https://www.selenium.dev/selenium-ide/docs/en/introduction/getting-started>
- Software Testing And Quality Assurance – Theory and Practice - Kshirasagar Naik & Priyadarshi Tripathy

3. INTRODUCTION

Background to the Problem:

The need of a robust and dynamic e-commerce website arises from the limitations and challenges posed by conventional commerce methods. As society becomes increasingly interconnected and reliant on digital technology, the absence of a well-designed e-commerce platform can hinder economic growth, stifle innovation and curtail experiences.

- **Limited Accessibility:** Physical stores are confined to their operating hours. This can be inconvenient for individuals with busy schedules or those residing in remote areas.
- **Geographical Constraints:** Brick-and-mortar stores are restricted by their geographical locations, which is a challenge for a lot of customers. During heat waves, monsoon sometimes it is inconvenient and challenging for female customers to buy product physically from stores beside roads.

- **Travel Convenience:** Traditional shopping requires customers to travel, find proper parking which is a security issue in dhaka city and physically browse through products.
- **Limited Product Information:** Physical stores may not have the space to display detailed product information, leading to inadequate customer understanding and potentially impacting purchase decisions.
- **Lack of Price Comparison:** Price comparison of products is kind of convenient for customers to find the best deals.
- **Limited Payment Options:** Physical stores provide only cash payment options.

Solution to the Problem

As we embark on the journey of developing of an e-commerce website, our mission is to bridge the gap between traditional commerce limitations and the boundless possibilities of digital commerce. Our proposed project offers a feasible solution to meet the business objective by creating an innovative and user-centric online platform, we aim to empower business to thrive in the digital era while providing consumers with an enriched and seamless shopping experience.

- **Global Reach:** An e-commerce website can be accessed from any remote space with proper internet connection.
- **24/7 Accessibility:** Online platforms are not confined to only specific operating hours. Customers can gain the freedom to browse and purchase products at any time.

- **Comprehensive Product Information:**Detailed product descriptions,images and customer reviews empower shoppers to make confident purchase decisions.
- **Multiple Transactions Options:**Shoppers can pay through credit card,debit card,bkash,nagad,rocket.They will also have the option to pay cash on delivery.
- **Personalization and Engagement:** Recommends product through based on users browsing and purchase history,enhancing the personalized shopping experience.

4. REQUEIREMNT SPECIFICATION

4.1 System Features

i. End-user Registration

- The software shall allow users to registration by providing their full name, username, password, city, phone and email.
- If the username,phone and email already uses by anyone then the system shall not accept the credentials
- Every input field should be filled up.
- After a successful registration the user will be notified with a success pop-up message.
- The software shall redirect the user to the log-in page after a successful registration.

Priority Level: High

Precondition: User must have filled all required fields

ii. End-user Log-in

- The software shall allow users to login with their given username and password
- If the username and/or password has been inserted wrong then the user will be notified with an error pop-up message.
- If the number of login attempt exceed its limit (5 times), the system shall block the user account login for one hour [optional function]

Priority Level: High

Precondition: user have valid username and password

iii. Admin Log-in

- The software shall allow admin to login with their given username and the admin-code given by the organization

Priority Level: High

Precondition: Admin must collect the admin code from organization

iv. Admin can perform CRUD operation on all user's information

- The software shall allow the admin to update or delete any kind of information.
- Admin should be able to search any user's information in real time.
 - Admin can terminate an user from system

- The software shall notify the user when the admin edits or update the transaction history. Without the approval admin cannot edit the transaction history.

Priority Level: Medium

v. Users can update their information, password and profile picture

- After a successful login the software shall allow the users to update their information and profile picture
- The software shall allow the user to update password.
- The user shall be logged out automatically after updating their information.
- The user shall be redirected to the log in page after a successful password or information update.

Priority Level: Medium

vi. Receipting and Acknowledgement

- The software shall automatically generate receipt for each purchase.
- The software shall send receipt and acknowledgement to the shopper for confirmation.

Priority Level: High

Precondition: User must execute the transaction successfully

VII.Sign out

- The software shall allow users to sign out by pressing the sign out option

Priority Level: Low

Precondition: user should have valid ajkerdeal account with verified email and password

VIII.Adding Items to Cart

- User shall be able to put multiple products on cart before placing order.

Priority Level:High

Precondition:User must have a valid account to place an order

ix.Payment options

- User should be able to pay online by any preferred method(card,bkash,nagad)

Priority Level:High

Precondition:User must have valid card,transection accounts and should have sufficent balance to pay online.

4.2 System Quality Attributes

Quality attributes, also known as non-functional requirements.Here in this system it describes how well it meet the needs of its users beyond the basic functional requirements. Some key quality attributes for e-commerce website include:

- **Security:** The system should be designed with strong security features to protect sensitive information(credit,debit card info) and prevent unauthorized access, such as encryption of data and secure payment processing.
- **Reliability:** The system should be reliable with a 24/7 fully functioning assurance.

- **Scalability:** The system should be able to handle an increasing volume of data overflow and users over time, without compromising performance or functionality.
- **Usability:** The system should be user-friendly, with intuitive interfaces and easy navigation to allow users to manage purchase and browse products easily. A shopper should be able to go through and make purchase and payment within 3 minutes
- **Maintainability:** The system should be easy to maintain, with a well-documented codebase and an efficient development process to enable timely updates and bug fixes.
- **Performance:** The system should be designed with optimal performance, to ensure fast response times, and minimal latency.
- **Compatibility:** The system should be compatible with different web browsers, devices, and operating systems to allow shoppers to access the website from different platforms.

4.3 System Interface

Username: Enter your name

Username not available

Email: Enter your email

Invalid email

Image: No file chosen

Image required

Address: Enter your address

Address required

Contact: Enter your phone no

Invalid phone number

Date of Birth: Enter Date of Birth

Date of birth required

Password: Enter your password

Your password must contain at least 8 characters

Confirm password: Confirm your password

Password didn't match

Already have an account?? [Login](#)

Login your account

Username: Enter your username

Username required

Password: Enter your password

Password required

Don't have an account?? [Register Now](#)

[Forget Password](#)

Forget Password???

Enter Email

SUBMIT

Shopno Super Shop

The best you can get in your budget

Welcome mrinmoy Logout



Iphone

Iphone 13 Pro Max

Price: 219

Add to cart

View more



Fresh Apples

Fresh Apples From Hansen Fruits

Price: 700

Add to cart

View more



Galaxy S23

Samsung Galaxy S23

Price: 94500

Add to cart

View more



Samsung A23

Discover the latest in electronic & smart appliance technology with Samsung.

Price: 25000

Add to cart

View more

Brands

Ecstasy

Walton

Samsung

Apple

Hansen Fruit


Stemilt Growers, WA

Category

Clothings

The best you can get in your budget

Welcome mrinmoy Logout

Product title	Product image	Quantity	Total price	Remove	Operations
Fresh Apples		<input type="text"/>	700	<input type="checkbox"/>	<p>Update Cart</p> <p>Remove Cart</p>

Total: 700

continue shopping

checkout

Welcome mrinmoy Logout

My Profile



Pending Orders

All orders

Payment History

Edit Account

Delete Account

Payment id	Order id	Invoice_number	Amount	Payment mode	Date
3	16	1792704415	75000	Bkash	2023-03-13 11:41:49
4	17	598430527	1638	Nagad	2023-03-13 12:05:18
5	18	238459368	700	Bkash	2023-03-14 00:46:46

Welcome mrinmoy Logout

My Profile



Pending Orders

All orders

Payment History


Edit Account

Delete Account

Order List

Sl no	Amount due	Total Products	Invoice Number	Date	Complete/Incomplete	Status
1	700	1	238459368	2023-03-14 00:46:46	Complete	Paid

Username not available



Choose File

No file chosen

EMAIL

Invalid email

PHONE NO

Invalid phone number

ADDRESS

CHANGE PASSWORD

Update

Figure:Update Profile Interface

4.4 Project Requirements

i. **Environment & resources**

- Microsoft Windows 10
- Intel Core i3 or higher. (The 7th generation)
- 8 GB of RAM (minimum).
- 128 GB of free disk space for installation, plus extra space for temporary files during test runs.
- Mouse and keyboard

ii. **Software Requirements:**

- Automated Testing tool: selenium.
- AS/400 • Web Browsers: Internet Explorer/ Mozilla Firefox/ Google Chrome.
- Database: MySQL (phpMyAdmin)
- Eclipse, Microsoft Visual Studio code.

iii. **Cost analysis:**

Terms used – PM (Person Months), DM (Development time in Months), SLOC (Source Line of Code)

This project is an Organic Project. So, the coefficient will be Coefficient is 2.4

■ **Effort Estimation** = PM = Coefficient*(SLOC/1000) ^P

$$= 2.4(4600/1000) ^ 1.05$$

$$= 12$$

$$\blacksquare \text{ Development time} = DM = 2.50*(PM)^{.38}$$

$$= 2.50*(12) ^ .38$$

$$= 6$$

$$\blacksquare \text{ Required number of people} = ST = PM/DM$$

$$= 12/6$$

$$= 2$$

$$\blacksquare \text{ Designing \& Coding} = 6*15*6 \text{ [6 months, 15 days, 6 h]}$$

$$= 540 \text{ h}$$

$$\blacksquare \text{ Total salary (developing and testing team)}$$

$$= 540*800 \text{ [1h salary = 800 tk]}$$

$$= 432000 \text{ taka (1 developer and 1 tester salary = } 432000/2 \Rightarrow 216000 \text{tk)}$$

$$\text{Per month salary} = (216000/6) = 36000 \text{ taka}$$

$$\blacksquare \text{ Maintenance} = 3*6*4*2000 \text{ [per week 3h, 6 months]} = 144000 \text{ taka}$$

$$\blacksquare \text{ Testing tool subscription} = 6*4000 = 24000 \text{ taka}$$

$$\blacksquare \text{ Testing Cost} = 15000*6 = 90000 \text{ taka [per month 15000 taka]}$$

■ **Utilities Expenses** = $3000 \times 6 = 18000$ taka.

■ **Training/Hardware** = $6000 \times 6 = 36000$ taka

■ **Total Cost** = $(432000 + 144000 + 24000 + 90000 + 18000 + 36000)$ taka
= 744000

■ **Profit margin** = $744000 \times 30\%$
= 223200 taka

Total bill for client = 967200 taka

5. FEATURES NOT TO BE TESTED

The following is a list of the areas that will not be specifically addressed. All testing in these areas will be indirect as a result of other testing efforts.

- **Non-functional requirements:** Non-functional requirements, such as performance, scalability, and security, are typically not tested by the QA team but are instead the responsibility of specialized testing teams or experts.
- **User acceptance testing:** User acceptance testing (UAT) is typically conducted by the client's QA team and the end-users or stakeholders to ensure that the system meets their needs and requirements.
- **Third-party integrations:** Third-party integrations, such as payment gateways or customer relationship management (CRM) systems.
- **Design:** Usability of the UI/UX will not be tested differently
 - **Database:** Couldn't test database as we did Whitebox testing.

6. TESTING APPROACH

6.1 Testing Levels

6.1.1 Unit Testing:

Unit testing will be done by the developer who has implemented the component where individual units or components of a software are tested. The test will be approved by the team leader. Proof of unit testing (test case list, sample output, data printouts, defect information) must be provided by the programmer to the team leader before unit testing will be accepted and passed on to the test person. All unit test information will also be provided to the test person.

6.1.2 System/Integration Testing:

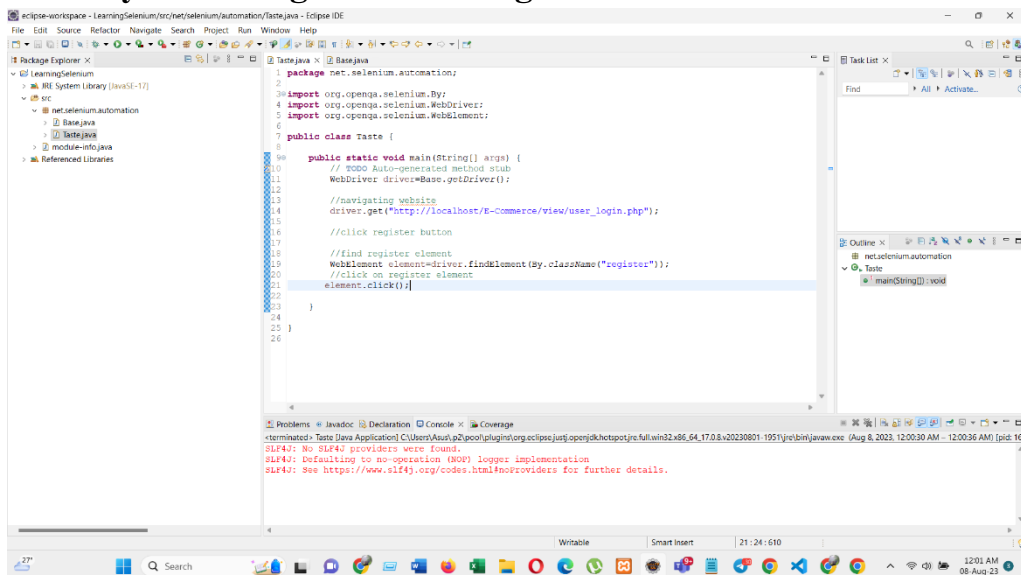


Figure: AutomationTesting of Registration Module Using Selenium

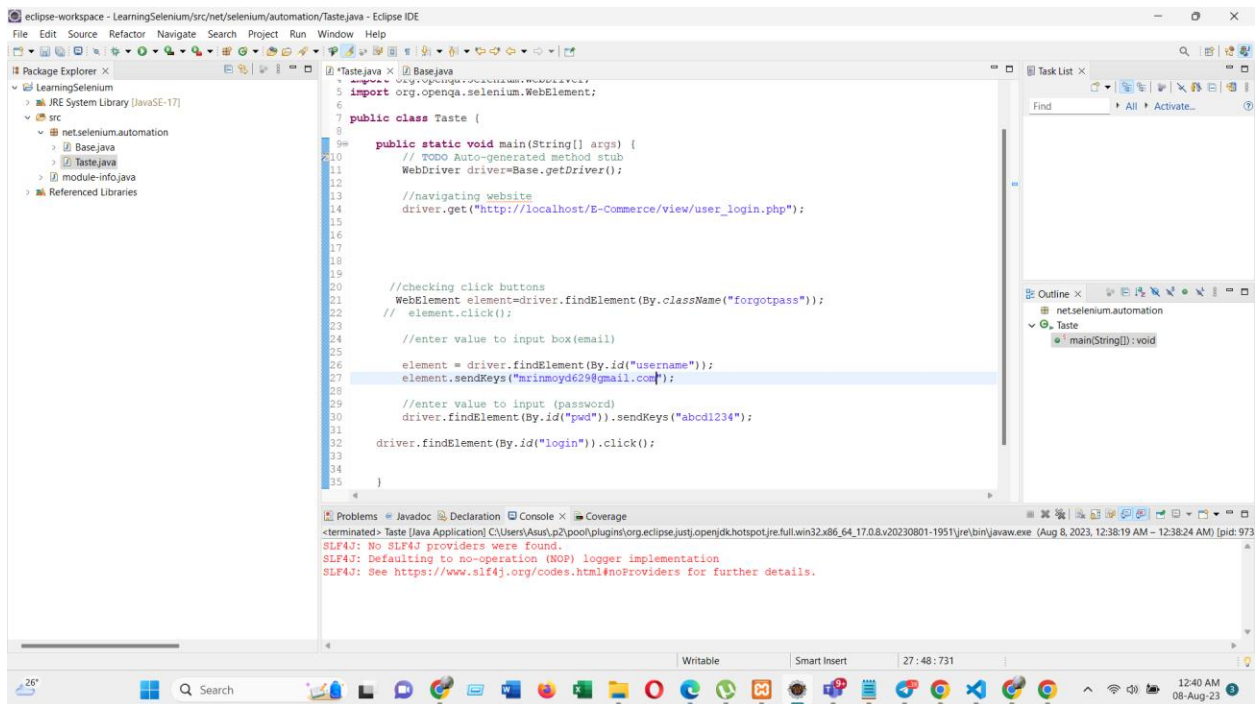


Figure:Automation Testing of Login Module Using Selenium

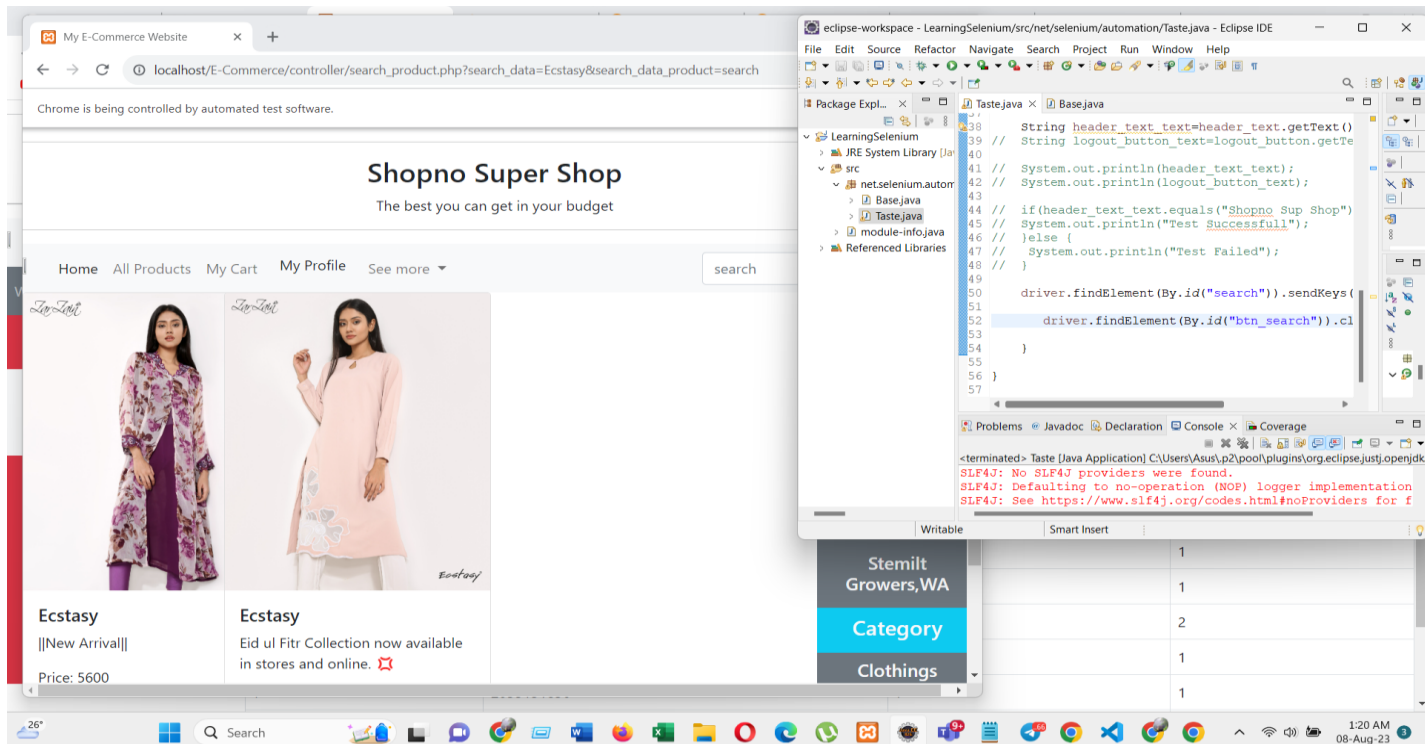


Figure:Automation Testing of Search Module Using Selenium

6.1.3 Acceptance Testing:

Test Plan Table

Introduction: Acceptance Test plan for registration module
<p>Acceptance Test Category: UAT</p> <p>For each category of acceptance criteria:</p> <p>a. Operation environment: Visual Studio</p> <p>b. Test case specification:</p> <ul style="list-style-type: none">i. Test case Id: DMS01ii. Test Title: Verify successful registration/sign-upiii. Test objective: Enter registration information and successfully registeriv. Test procedure:<ul style="list-style-type: none">1. Go to website2. Click Sign-up3. Fill up required fields4. Click Submit
Schedule:
Human resources: Developers

Introduction: Acceptance Test plan for log-in module

Acceptance Test Category: UAT

For each category of acceptance criteria:

c. Operation environment: Visual Studio

d. Test case specification:

v. Test case Id: DMS02

vi. Test Title: Verify log-in with correct username and password

vii. Test objective: Enter registration information and successfully register into the donation management system

viii. Test procedure:

1. Go to website
2. Click Log-in
3. Enter username
4. Enter password
5. Click Log-in

Schedule:

Human resources: Developers

6.2 Test Tools

AS/400 is for testing purpose

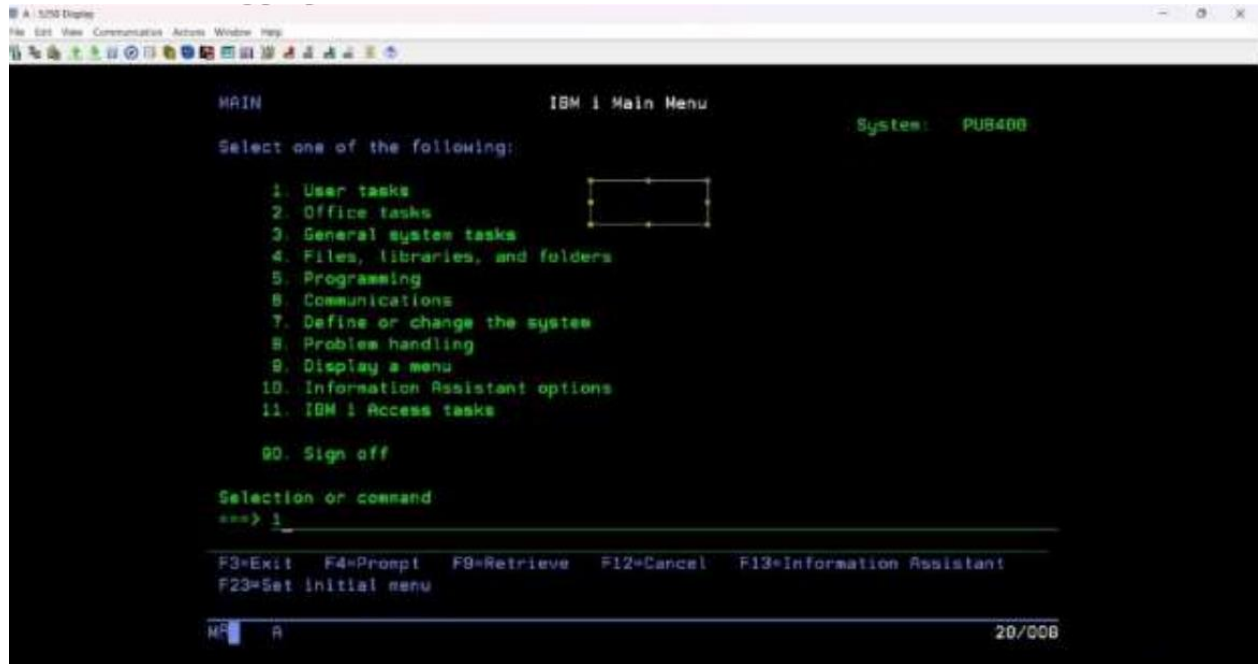


Figure- : IBM I Main Menu of AS 400

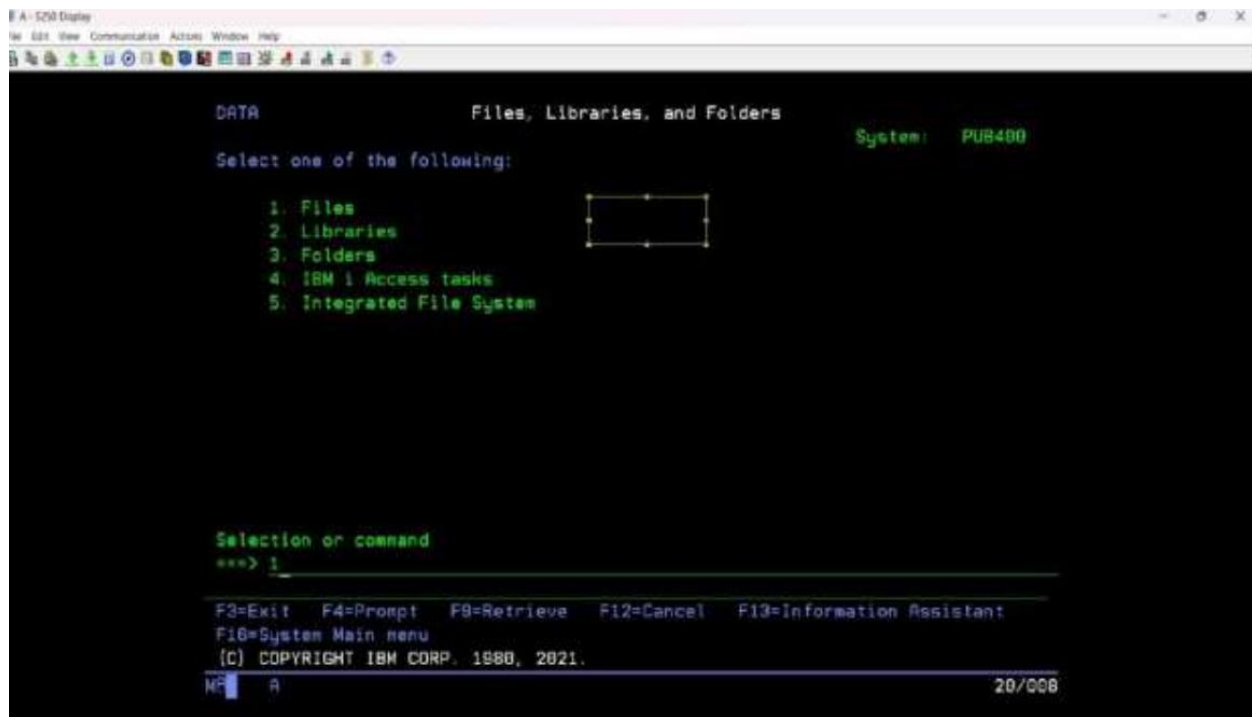


Figure- : Files, Libraries and Folders of AS 400

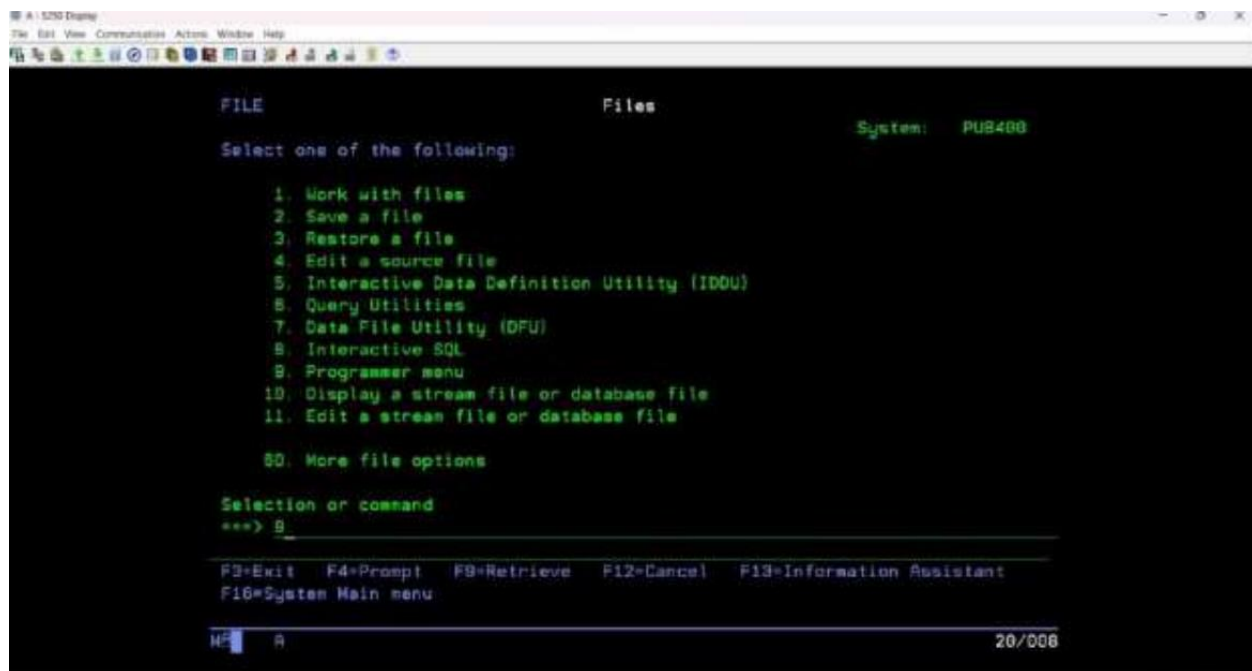


Figure- : Programmer Menu of AS 400

6.2 Meetings

Topics	Keypoints	Time	Date
Introduction	Introduction between client and project associates.Openning thought about projecct is dicussed	30 Minutes	25-07-23
Requirements Gathering and Analysis	Review and clarification about projecct requirements,goals and risks	60 Minutes	28-07-23
Design and Architecture Review	Evaluation of system architecture,components,maintainability and interfaces	40 Minutes	1-08-23
Outstanding issues	Brainstorm on issues that are unsolved	60 Minutes	8-08-23
Release and deployment	Communication with stake holders and end users about released and upcoming released module	25 Minutes	12-08-23
Client and stakeholder meetings	Any kind of change needed or not	15 Minutes	15-08-23
The End	Final Submission and documentation	1.5 Hours	17-08-23

7. TEST CASES/TEST ITEMS

Test Case – 1: Registration Module

Project Name: Shopno Super Shop		Test Designed by:Mrinmoy Das		
Test Case ID: FR_1		Test Designed date:20 July 2023		
Test Priority (Low, Medium, High): High		Test Executed by: N.S Salman		
Module Name: Registration session		Test Execution date:21 July 2023		
Test Title: verify successful registration				
Description: Enter registration information and successfully register into the system				
Precondition (If any): User must have filled all the required fields.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Click Sign-up 3. Fill up required fields 4. Click Submit	Sign-up as: Shopper Full-name: Mrinmoy Das Username: mrinmoy_765 Password: abcd1234 City: Faridpur Email: mrinmoyd629@gmail.com Phone: 01787082223	User will be redirected to Log-in page with a successful message.	As expected, Successfully registered and redirected to log in page	Pass
Post Condition: The user is successfully registered in the system database.				

Test Case – 2: Log-in Module

Project Name: Shopno Super Shop		Test Designed by:Mrinmoy Das,N.S Salman		
Test Case ID: FR_2		Test Designed date:20 July 2023		
Test Priority (Low, Medium, High): High		Test Executed by:Mrinmoy Das		
Module Name: Login Session		Test Execution date:21 July 2023		
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 submit	Username: mrinmoy_765 Password: abcd1234	User should login into the application and redirected to home page	As expected,	Pass
Post Condition: User is validated with database and successfully login to account. The account session details are logged in the database.				

Test Case – 3: Profile Update Module

Project Name: Shopno Super Shop		Test Designed by: Mrinmoy Das,N.S Salman		
Test Case ID: FR_3		Test Designed date: 22 July 2023		
Test Priority (Low, Medium, High): High		Test Executed by: Mrinmoy Das		
Module Name: Profile Update Module		Test Execution date: 24 July 2023		
Test Title: Verify the successful update of user information				
Description: Update all the fields and upload a picture(picture upload optional)				
Precondition (If any): User must be signed in				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Click on profile picture 2. Click browse 3. Select default picture 4. Click upload 5. Click ‘Done’ 6. Update desired fields 7. Click save	Full-name: Mrinmoy Das Username: mrinmoy Password: 0001234 City: Faridpur Email: mrinmoydas121@gmail.com	User will be redirected to updated profile page.	As expected,	Pass
Post Condition: User must have a valid account in the system				

Test Case – 4: Profile Update Module(Profile Picture)

Project Name: Shopno Super Shop		Test Designed by: Mrinmoy Das,N.S Salman		
Test Case ID: FR_4		Test Designed date:28 July 2023		
Test Priority (Low, Medium, High): Medium		Test Executed by: Mrinmoy Das		
Module Name: Profile Update Module		Test Execution date:30 July 2023		
Test Title: verify successfully profile picture upload				
Description: Update a new profile picture without changing other fields				
Precondition (If any):				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Click on profile picture 2. . Click browse 3. Select default picture 4. Click 'Done' 5. Click upload 6. Click save	Choose any jpg,png file	Profile picture should be changed	As expected,	Pass
Post Condition: Must have to log-in again after saving the update.				

Test Case – 5:Cart Module

Project Name: Shopno Super Shop		Test Designed by: Mrinmoy Das,N.S Salman		
Test Case ID: FR_5		Test Designed date:02 August 2023		
Test Priority (Low, Medium, High): Medium		Test Executed by:Mrinmoy Das		
Module Name: Cart Module		Test Execution date:03August 2023		
Test Title: Verify Cart System				
Description: User will be able to add products to cart and also can update cart later				
Precondition (If any):				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Enter username 3. Enter password 4. Click submit 5. Go to home page 6. Click on add to cart 7. Click Remove from cart	Username: mrinmoy Password: 00001234	User should be able to add items to cart and also remove items from cart	As expected,	Pass
Post Condition:				

8.ITEM PASS/FAIL CRITERIA

Item is considered as passed if it passes 95% of test cases with medium or low defects. Otherwise it's considered as a failure.

9.TEST DELIVERABLES

- ✓ Acceptance test plan
- ✓ System/Integration test plan
- ✓ Unit test plans/turnover documentation
- ✓ Screen prototypes
- ✓ Report mock-ups
- ✓ Defect/Incident reports and summaries
- ✓ Test logs and turnover reports

10.STAFFING AND TRAINING NEEDS

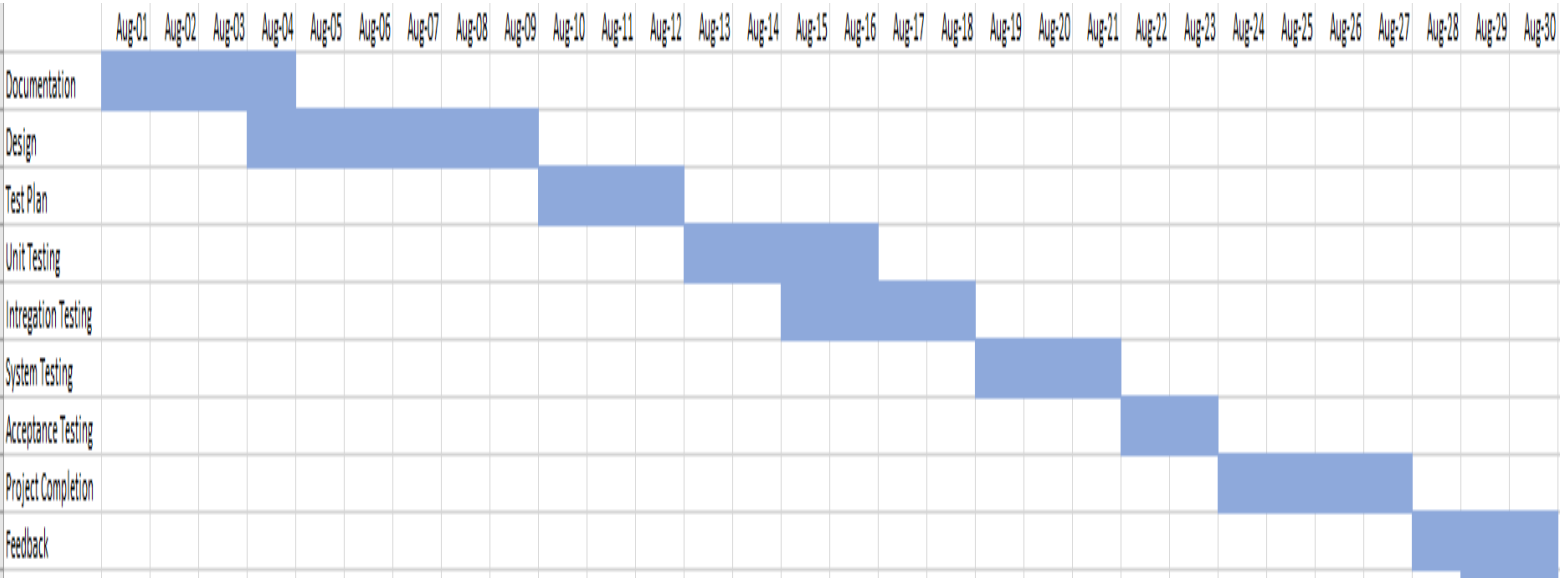
As per the Total Lines of Coding & Cost Analysis, there will be a need of 1 developer and 1 quality tester. A trainer will be added if needed

11.RESponsibilities

	TM	PM	Dev Team	Test Team	Client
Acceptance test Documentation & Execution	Mrinmoy Das	Ehsanul Alam Sabbir		Mrinmoy Das, N.S Salman	Third Party vendor
System/Integration test Documentation & Exec	Mrinmoy Das		Mrinmoy Das, N.S Salman	Mrinmoy Das	
Unit test documentation & execution	Mrinmoy Das		Mrinmoy Das	Mrinmoy Das	
System Design Reviews	Mrinmoy Das	Ehsanul Alam Sabbir	Mrinmoy Das, N.S Salman	Mrinmoy Das, N.S Salman	Third Party Vendors

Test procedures and rules	Mrinmoy Das	Ehsanul Alam Sabbir	Mrinmoy Das	Mrinmoy Das,	
Screen & Report prototype reviews			Mrinmoy Das, N.S Salman	Mrinmoy Das, N.S Salman	Third Party vendor
Change control and regression testing	Mrinmoy Das	Ehsanul Alam Sabbir	Mrinmoy Das, N.S Salman	Mrinmoy Das, N.S Salman	Third Party vendor
Detail Design Reviews	Mrinmoy Das	Ehsanul Alam Sabbir	Mrinmoy Das	Mrinmoy Das, N.S Salman	Third Party vendor

12.TESTING SCHEDULE



13.PLANNING RISKS AND CONTINGENCIES

Security	Data theft,unauthorized access or hacking which could lead to leak sensitive information of customers	Conducting security tests,implementing strong security measures such as password encryption
Incomplete Requirements	Incomplete requirements can lead to many defects or funtionality gaps in system	Requirements gathering process are conducted vey carefully
Compatibility Issues	System may be used by users on various web browsers, devices, and operating systems, which could result in compatibility issues	Testing the system on a range of platforms and conducting thorough compatibility testing.
Performance Issues	Slow response time	Conducting load testing

14.APROVALS

Project Sponsar	MD.Hasibul Hasan
Development Management	Sharifa Rania Mahmud
EDI Project Manager	Ehsanul Alam Sabbir
RS Test Manager	Sadman Shahriar Alam
RS Development Team Manager	Md Malek
Reassigned Sales	Md Sazzad
Order Entry Team Manager	Tanvir Ahmed