American International University-Bangladesh (AIUB)

Department of Computer Science

Faculty of Science &Technology (FST)

Summer 20-21

Section: C

Software Quality Assurance and Testing

COURSE MASTER

A Report Submitted By

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Faculty of Science and Technology
American International University Bangladesh

Software Test Plan

for

COURSE MASTER

Version 1.0 approved

Prepared by

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<American International University-Bangladesh>

<Created on 14 August ,2021>

Table of Contents

Revision History

Revision	Date	Updated by	Update Comments
0.1	2021.08.05	BORNIL MOSTAFA	First Draft
0.2	2021.08.08	MARIAM ISLAM	Second Draft
0.3	2021.08.10	SHARIAR SIJAN ALVI	Third Draft
0.4	2021.08.13	MARIAM ISLAM	Fourth Draft

1. TEST PLAN IDENTIFIER:RS-MTP01.3

2. REFERENCES

https://www.meistertask.com/blog/5-ways-apply-project-management-in-school/

https://www.pmi.org/learning/library/project-management-methodology-primary-schools-8376

https://www.coursera.org/

3. INTRODUCTION

Background to the Problem

The COVID-19 pandemic has introduced uncertainty into major aspects of national and global society, including for Education sections. It is uncertain when the educational institution will open. Even if the educational institution opens, there is a possibility that it will close again if the effect of COVID-19 increases. In this situation students can do various courses online from home to increase their knowledge. On the other hand, for higher studies there is many tutorials, or websites about this content. But maximum students visit those websites or YouTube but could not get proper learning experience due to lack of guideline. For higher education platform all subject isn't gather anywhere, all topic isn't organized, and there is no guideline or career path and step by step paths for engineering. For a complete guideline our system can be a perfect solution.

Solution to the Problem

We proposed a website which will offer courses and other benefits to the students. There will be course section and Exam section. After completing any course user can give tests. They will be able to ask question or share any type of problem they face during study in the help section. One user, who can perform both sides, one can earn through uploading videos as well as he/she can earn from viewing videos. He/ She can earn being active on help section. Where he will reply to the user text or solve problems.

User will earn virtual currency which is points. The more views he/she get more points will be earned; more video you will watch more points you will earn. By this points user can buy evaly, daraz, Bkash, nagad gift cards or offers. The sponsors will give their advertisements, we will show them via videos, so the more you watch video the more you earn. Moreover, one user can sell their content to others, but there will be no money exchanging, only points will be the media and we will get profit through it.

4. REQUEIREMNT SPECIFICATION

4.1 System Features

1. System Login

Functional Requirements

1.1 Software shall allow users to login with their specific username and password
1.2 If the login successful, the dashboard of user account will be displayed.
1.3 If the login unsuccessful, the random verification code will be generated and sent to user's email or mobile number address by the system to login again.
1.4 If the number of login attempt exceed 3 times, the system will block user account login for some times [1 hour].

Priority level: High.

Pre-condition: User have valid user id and password

2. User Administrator

Functional Requirements

2.1 View and Edit Users: View user name, group, membership, and associated authentication.

2.2 Add New Use: Add a user by assigning a unique name and password. Optionally, assign a group membership to the user.

2.3 View user properties.
2.4 Change user properties. Update the password or assign the user to one or more groups.
2.5 Delete one or more users.

Priority level: High

Pre-condition: Admin users have valid user id and password.

3. Enroll course

Functional Requirements

3.1 All courses: All course name will include in this function. The course will be sorted in this section. Visitor can search for his prophetic course.

3.2 Suggested: Top most viewed Subject will suggest the visitor.

3.3 All viewer: All viewer name of a particular subject will include in this function. And one viewer will see the other viewer profile.

Priority level: High

Pre-condition: Users have to login into the system.

4. Video Tutorials

Functional Requirements

    4.1 Latest: The latest upload video can be found here. So that the visitors can easily know about latest video.

    4.2 Exclusive: In this section, videos uploaded by the moderator or organizer can be found here.

    4.3 From viewer: Anyone can upload videos here but condition that must be accepted by moderator. Uploader can apply for delete his or her videos.

Priority level: Medium

Pre-condition: Users have to login into the system.

5. Quiz

It is the place where one can host exam/test and those who are interested can participate on the quiz. The functional requirements are given bellow:

5.1   Users can host special quiz who have 300 followers.

5.2   Users can attend the quiz.

5.3   quiz time will be given.

5.4   The system will give the question when it is time to quiz.

5.5 2K points will be given among top three who got the highest marks and submitted first.

Priority Level: High

Preconditions: Users will need 300 followers to host test and participate will need to fill up the quiz form to attend the quiz.

6. Chat box

The Chat box is our Instant Messaging system that serves various purposes for all kinds of users on our website. The functional requirements are given bellow:

6.1 User to User**:** The chat box allows two or more learners to discuss and collaborate on problem solving endeavors. Messages, Images, videos and Documents will be relayed instantly.

6.2 User to Uploader*:* While, or after Viewing a video, a user can choose directly Message the uploader of the said video for further Clarification.

6.3 System Messages*:* The Chat box can also deliver automated messages directly from the system. It can welcome new members, notify them of future updates to our website, warn them of rule violations and warnings, and auto promote new videos from content Creators.

Priority Level: High

Preconditions: Users have to login into the system.

7. Marketplace

Functional Requirements

7.1 To activate the seller part of the marketplace, one user must have 200 followers.

7.2 A Seller can sell a service to another user, service like video editing, thumbnail making, Seller can sell his individual course on this platform.

7.3 one user can purchase the service through points or money.

7.4 One user can purchase the service through points or money.

Priority Level: Medium

Preconditions: Users will need points to purchase services.

4.2 System Quality Attributes

- **Usability:** A admin shall be able to register into the system and login
- **Readability:** A trained user (teacher/ student) shall be able to read every page perfectly.
- **Efficiency:** All functional purpose shall be fulfilled
- **Portability:** Shall be able to run on every device and a responsive UI.
- **Correctness:** All features shall be done the way stakeholders demanded.

4.3 System Interface

LOG IN PAGE

Course Master

User Name [   ]

Pssword [**********]

Forget Password

Contact Us   About us

DASHBOARD

Driections

HOME

VIDEO

Quiz

BLOG

Upload Videos

Shop

Log Out

Contact Us

Home

image **User Name**
XP 1000 points 999

Search search

FOLLWING	Featured	ALL

Bornil	Bornil	Bornil
Bornil	Mariam	Bornil
Bornil	ALVI	

VIDEO

Directions

HOME

VIDEO

Quiz

BLOG

Upload Videos

Shop

Log Out

Contact Us

VIDEO

Search [search]

Sort by [Sort by ▼]

image | **User Name**
XP 1000 points 999

Graphics Design

Animation Design
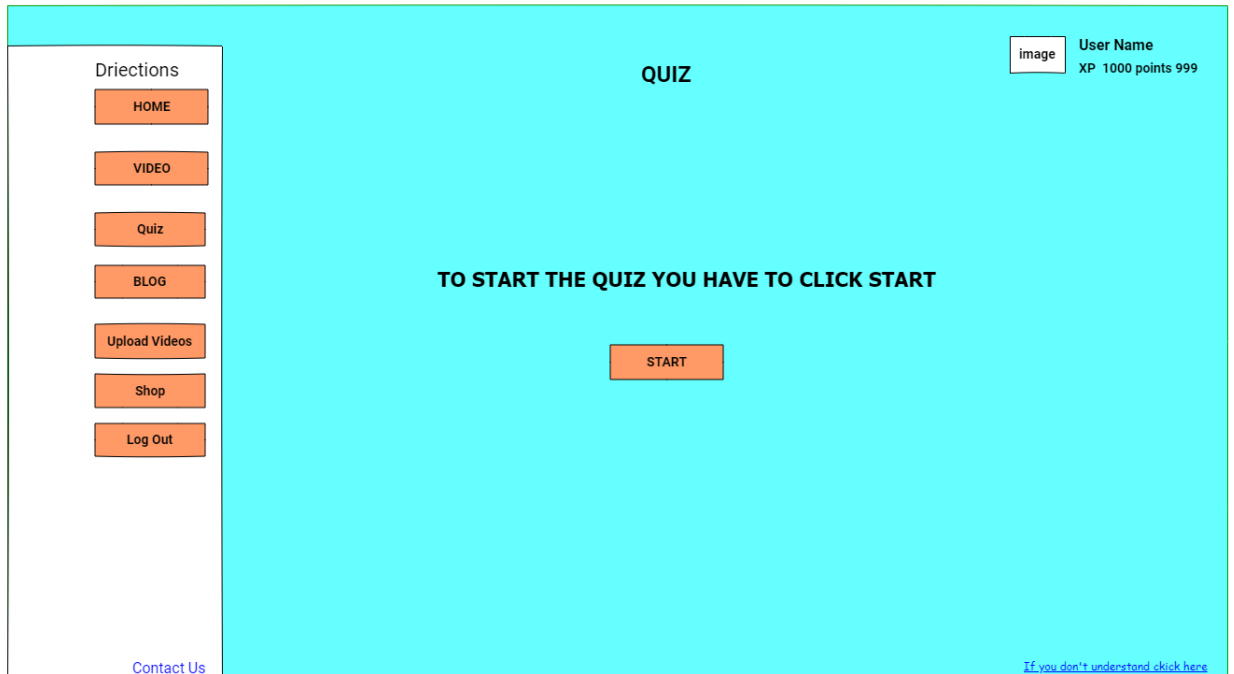
UI/UX Design

Python Programming

Data Science

Project Management

Web Developmet and Design

Machine Learning

If you don't understand ckick here

QUIZ

QUIZ

Driections

HOME

VIDEO

Quiz

BLOG

Upload Videos

Shop

Log Out

QUIZ

User Name
XP 1000 points 999

image

TO START THE QUIZ YOU HAVE TO CLICK START

START

Contact Us

If you don't understand ckick here

BLOG

Driections

HOME

VIDEO

Quiz

BLOG

Upload Videos

Shop

Log Out

BLOG

User Name
XP 1000 points 999

image

Search | search

Sort by | Sort by ▼

| Latest | From Course Master | From Users |

Blog 1

Blog 4

Blog 7

Blog 2

Blog 5

Blog 8

Blog 3

Blog 6

Blog 9

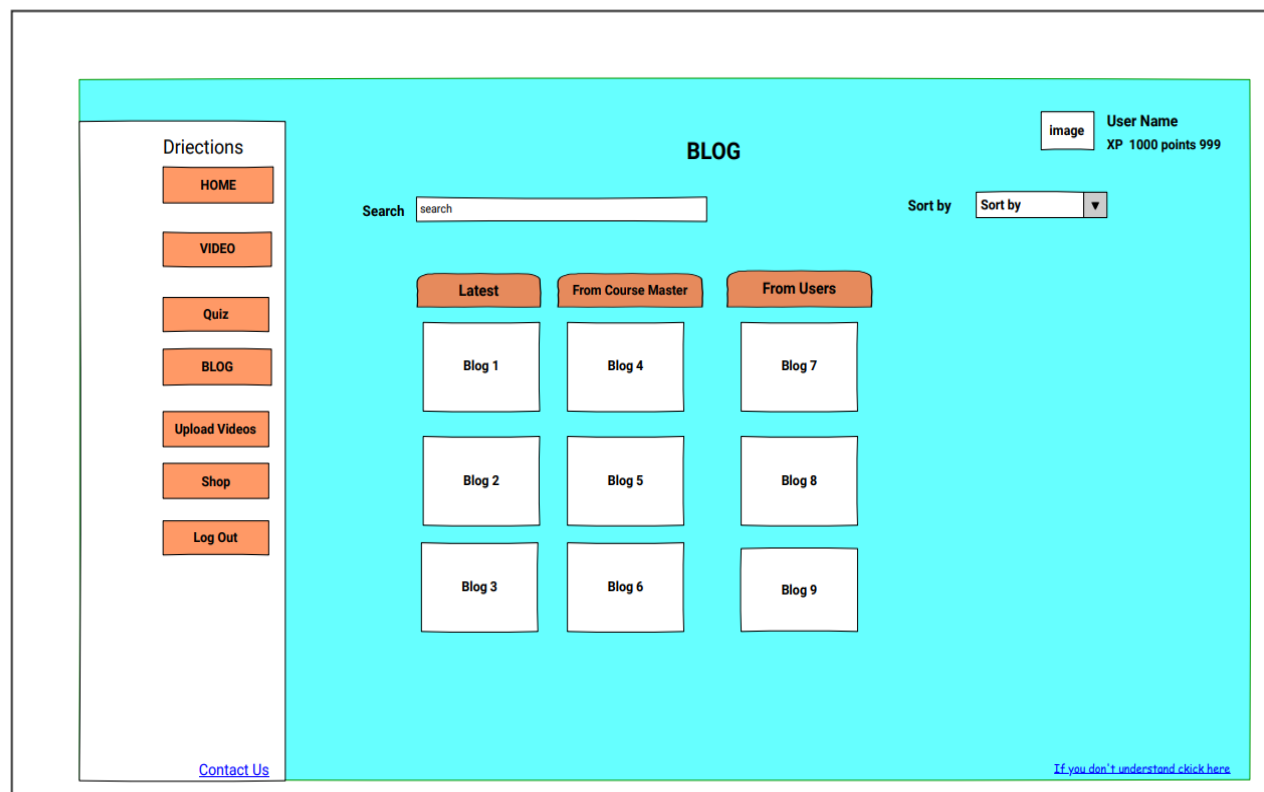Contact Us

If you don't understand ckick here

Upload Video

Driections

HOME

VIDEO

Quiz

BLOG

Upload Videos

Shop

Log Out

Contact Us

User Name
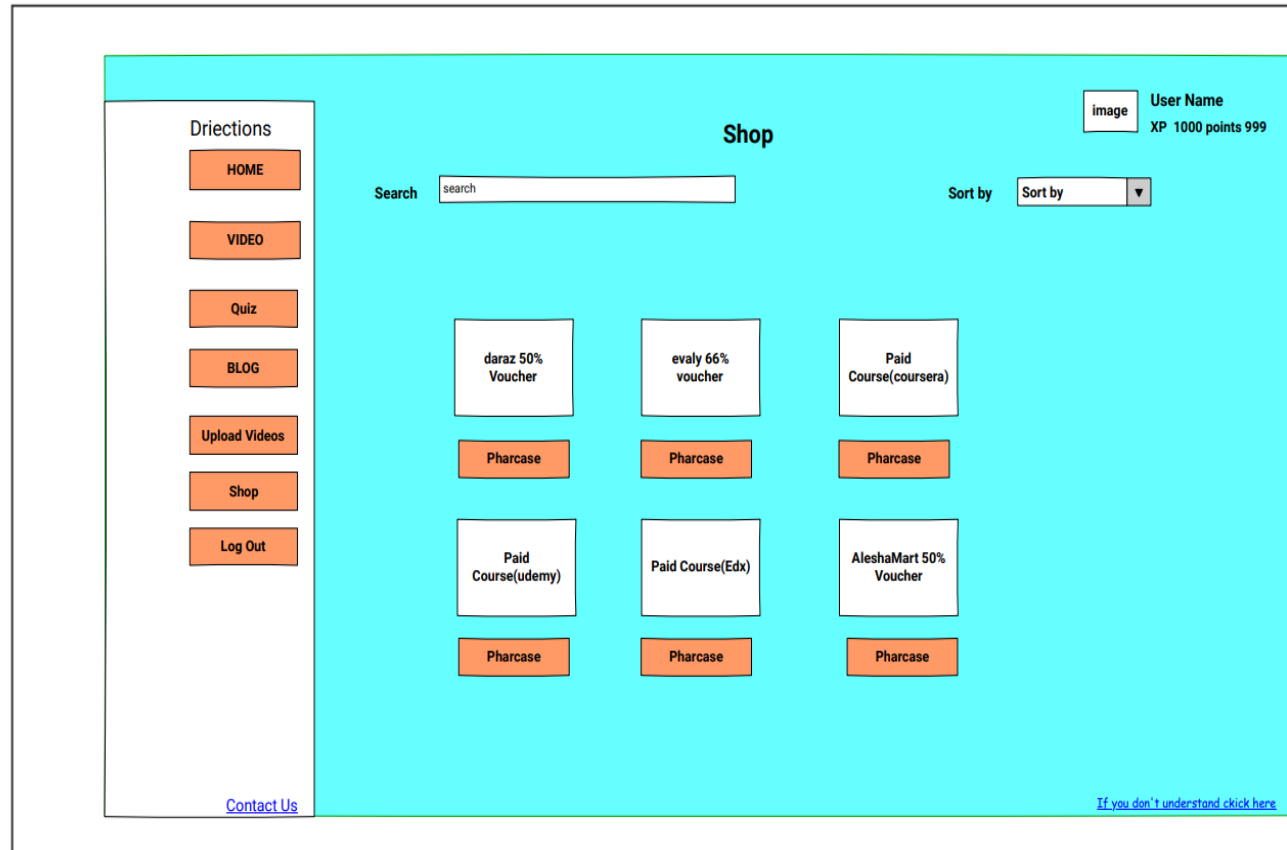**XP 1000 points 999**

image

please Upload your Video

Upload

Reset

If you don't understand ckick here

Shop

4.4 Project Requirements

- Total budget 1,60,000 BDT
- Total Development Time 8 months to 1 year.
- Resources: computers, office room, web developers, software quality assurance engineer.

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. For example:

- PC based spreadsheet analysis applications using Reassigned Sales data. Because these applications are completely under the control of the customer and are outside the scope of this project. The necessary data base format information will be provided to the customers to allow them to extract data. Testing of their applications is the responsibility of the application maintainer/developer.
- Networks
- Hardware
- User's Information (Name, Address, Contact)

6. TESTING APPROACH

6.1 Testing Levels

1. Unit Testing: Testing a single unit of the software is known as Unit Testing. This testing is done to see that the individual small units of software are working properly or not. Unit Testing is done during the development of a system by the developers.

2. Integration Testing: Integration testing is the phase in software testing in which individual software modules are combined and then tested as a group. Usually, after unit testing, the tested units are assembled and then tested. Integration testing is conducted to evaluate the consent of a system or component with specified Functional requirements. This Integration testing will be done by Tester.

 3. System Testing: Test the whole system which includes a wide spectrum of testing such as functionality, load. The main purpose of system testing is to evaluate the end-to-end system specifications. System testing will be done by Tester.

4. Acceptance Testing: Acceptance testing is a type of test which is conducted to determine if the requirements of a contract are met. The software is fulfilling the Customer's expectations from the system or not. It may involve chemical tests, physical tests, or performance tests. Acceptance testing will be done by our End-User.

6.2 Test Tools

1. Selenium Testing Tool will be used to manage test cases and reporting.
2. Microsoft Word will be used to write test cases.

6.3 Meetings

The test team will meet once every one weeks to evaluate progress to date and to identify error trends and problems as early as possible. The test team leader will meet with development and the project manager once every one weeks as well. These two meetings will be scheduled on different weeks. Additional meetings can be called as required for emergency situations.

7. TEST CASES/TEST ITEMS

Test Case 1

Project Name: COURSE MASTER	Test Designed by: BORNIL MOSTAFA
Test Case ID: TP_CM_1	Test Designed date: 1 August 2021
Test Priority (Low, Medium, High):High	Test Executed by:
Module Name: Login Session	Test Execution date:

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	Status

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: abcd Password: 321@	User should login into the application	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 2

Project Name: MASTER COURSE	Test Designed by: BORNIL MOSTAFA
Test Case ID: TP_CM_2	Test Designed date: 3 August 2021
Test Priority (Low, Medium, High): Medium	Test Executed by:
Module Name: Buying Gift card section	Test Execution date:
Test Title: verify User's currency to buy a service, verify users IP address is multiple or not!	
Description: Test website "Gift card purchase" option on Shop page	
Precondition (If any): User must have minimum 10,000 points.	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
3 Go to Shop Page 4 Choose a gift card 5 Click on Purchase	User's Point: 10,000 Ip address: 192.168.0.1	Users will be shown a text to check their Email.	As expected,	Pass

	Same Ip Address: No			

Post Condition: 10,000 points will be deducted from User's currency. The Purchased data will be stored in database.

Test Case 3

Project Name: COURSE MASTER	Test Designed by: BORNIL MOSTAFA
Test Case ID: TP_CM_3	Test Designed date:8 August 2021
Test Priority (Low, Medium, High): High	Test Executed by:
Module Name: Homepage Session	Test Execution date:

Test Title: verify login with valid username and password

Description: Test website Home page(Blog)

Precondition (If any): User must have valid username and password & successfully logged in.

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 the Homepage 6. Click Blog	Found latest videos, Video uploaded or accepted by moderator or not.	All functions should work.	As expected,	Pass

Post Condition: User is validated with database and successfully login to account. The Homepage session details are logged in the database.

Test Case 4

Project Name: COURSE MASTER			Test Designed by: Mariam Islam	
Test Case ID:TP_CM_4			Test Designed date:1 August 2021	
Test Priority (Low, Medium, High): High			Test Executed by:	
Module Name: Quiz			Test Execution date:	
Test Title: It is the place where one can host quiz and those who are interested can participate on the Test.				
Description: Test website quiz page				
Precondition (If any): Users will need 300 followers to host quiz and participate will need to fill up the quiz form to attend the quiz.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Go to the quiz page For attend quiz: 3. Select give quiz 4. Fill up a form 5. Click submit 6. Join quiz 7. Submit quiz For Host Quiz: 8. Select Host quiz 9. Upload question and set time	Filled form of participate Followers:>=300	User should give or Arrange quiz into the application		
Post Condition: Result and prize will be chosen by quiz maker.				

Test Case 5

Project Name: COURSE MASTER		Test Designed by: Mariam Islam		
Test Case ID: TP_CM_5		Test Designed date: 4 August 2021		
Test Priority (Low, Medium, High): High		Test Executed by:		
Module Name: Chat box		Test Execution date:		
Test Title: Verify if Users can use all the functionalities of chat box or not				
Description: Test Chat box functionality on Learn loft				
Precondition (If any): All 3 types of Users are required in multiple numbers				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
6 Simulate real time user to user chat. 7 Send a test grade system message to all users 8 Use multiple groups of all tier users to test a group chat	User types: 3 System messages: Active Group media: Shared	Users will be able to use all the functionalities of the chat box without any hassle.	As expected,	Pass
Post Condition: The test chat log will be stored in the database, which might be misleading if not categorized separately.				

Test Case 6

Project Name: COURSE MASTER	Test Designed by: SHARIAR SIJAN ALVI

Test Case ID: TP_CM_6	Test Designed date: 7 August 2021
Test Priority (Low, Medium, High): High	Test Executed by:
Module Name: Login Session	Test Execution date:

Test Title: Verify login with valid username and password

Description: User personally identifiable
information (PII) confidentiality should be very
strict. Attack success should be very less.

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	Third party can access or not.	Make sure user data is protected.	As expected,	Pass

Post Condition: Unwanted access should be restricted immediately. Report should be generated and sent to admin.

Test Case 7

Project Name: COURSE MASTER		Test Designed by: SHARIAR SIJAN ALVI		
Test Case ID: TP_CM_7		Test Designed date: 11 August 2021		
Test Priority (Low, Medium, High): High		Test Executed by:		
Module Name: Reliability, availability & maintainability		Test Execution date:		
Test Title: verify availability & maintainability in system and it is reliable or not				
Description: Test website "Gift card purchase &, marketplace " option on Shop page				
Precondition (If any): User must have to log in to perform & 300 followers to action.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
9 Go to Shop Page 10 Choose a gift card 11 Click on Purchase 12 Go to marketplace 13 Choose a service 14 Click on purchase	User's Point is minimum price rate or not. Availability - Yes/No Same Ip Address: Yes/ No Users service's availability is Yes/No	Users will be shown a text to check their Email. If availability is no, it will fix within 3 days. If users service is no more, then it will be maintained within 12 hours	As expected,	Pass
Post Condition: 10,000 points will be deducted from User's currency. The Purchased data will be stored in database.				

Test Case 8

Project Name: COURSE MASTER	Test Designed by: Mariam Islam

Test Case ID: TP_CM_8	Test Designed date: 6 August 2021
Test Priority (Low, Medium, High): High	Test Executed by:
Module Name: Performance	Test Execution date:
Test Title: Verify Performance of the software	
Description: Test the application and check how much time it takes to complete the given task.	
Precondition (If any): N/A	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
10. Go to the website 11. Enter username 12. Enter password 13. Click submit 14. Go to the home page 15. Click quick view 16. Click blog 17. Click quiz 18. Click chat box 19. Click gift card	how much time it takes? It will be tested 100 times	It should not take more than 3 second to load initial screen. If it takes, than there is maximum 3 times it will happen		

Post Condition: N/A

Test Case 9

Project Name: COURSE MASTER	Test Designed by: Mariam Islam
Test Case ID: TP_CM_9	Test Designed date:10 August 2021

Test Priority (Low, Medium, High): High			Test Executed by:	
Module Name: Webpage Session			Test Execution date:	
Test Title: Verify usability of the website				
Description: Test webpage(usability) and how many times it fails.				
Precondition (If any): User must have valid username and password & successfully logged in and fulfill the functional requirement.				
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 the Homepage 6. Click quick view. 7. Click blog. 8. Click Quiz. 9. Click chat box 10. Click gift cards	All the features (Quick view, Blog, Quiz, Chat box, Gift cards) and Run 80 time	All functions will work. Maximum 3 times output will be failed, and minimum is zero.		
Post Condition: User is validated with database and successfully login to account. The Homepage session details are logged in the database.				

8. ITEM PASS/FAIL CRITERIA

- At the Unit test level-
  - ✓ All test cases completed.
  - ✓ Individual module testing is completed.
  - ✓ All cases completed with a percentage containing some minor defects since it is impossible to get 100% tested.

- At the Integration test level-
  - ✓ Interaction between integrated unit is tested.
  - ✓ All test cases are checked.
  - ✓ A specific number of plans are completed without errors.

- At the System test level-
  - ✓ System's compliance with specific requirements is checked.
  - ✓ All lower-level plans are completed.

- At the Acceptance test level-
  - ✓ User acceptance is checked.
  - ✓ Specified percentage of acceptance criteria.

- Compare the total defects.
- Determine the severity of the defects.

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
- Test Cases
- Test Data
- Test Defect Report
- Test Summary Report
- Test Status Report

- Error Corrective Actions
- Execution Logs Files

10. STAFFING AND TRAINING NEEDS

There will be one full time tester for the system testing, acceptance testing and integration testing. This testing will continue at the end of the project. The testing will be on both automated and manual. Some test will be manual and some of the integration testing will be automated. Automated testing will be on selenium software and test studio. Those who are connected with the testing will be trained with the software for testing purpose. The automated testing is very sensitive so training is the first concern for this program. This full process will be observed by test manager.

In order to provide complete and proper testing the following areas need to be addressed in terms of training.
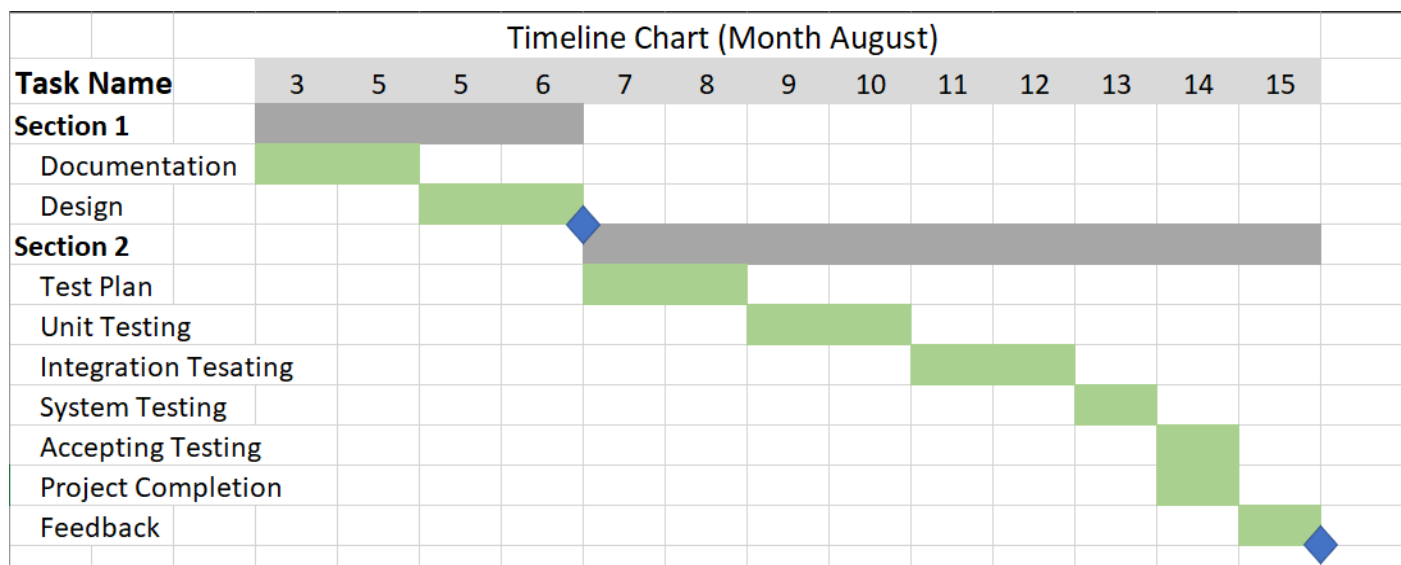
- ❖ The developers and the testers must be trained on selenium and test studio. Also trained on the electronic data interchange [EDC] interface.

- ❖ Specification of test items which is to be tested and who tested that part. And the training   program will be arranged by test manager.

- ❖ Unit testing will be handled manually but the integration testing will be on both manually and automated

11. RESPONSIBILITIES

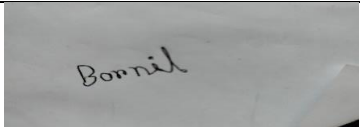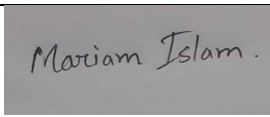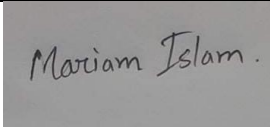|	TM	PM	DEV TEAM	TEST TEAM	CLIENT
Unit test Documentation & Execution			X		
Unit Test of Project Planning & Responsibilities	X	X		X	X
System Design Revies			X		
Detail Design Reviews		X		X	X
Test procedures and Rules Check	X		X		X
Test Plan Affordability		X	X		
Screen & Prototype Reviews			X	X	X

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. The persons required for each process are detailed in the project timeline and plan as well. Coordination of the personnel required for each task, test team, development team, management and customer will be handled by the project manager in conjunction with the development and test team leaders.

Task Name	3	5	5	6	7	8	9	10	11	12	13	14	15
Section 1													
Documentation													
Design													
Section 2													
Test Plan													
Unit Testing													
Integration Tesating													
System Testing													
Accepting Testing													
Project Completion													
Feedback													

Timeline Chart (Month August)

13. PLANNING RISKS AND CONTINGENCIES

- Planning should be as early as possible

- The tasks should be performed as soon as possible

- The test team should follow the instruction of   test manager command for testing case

- The automated testing should be performed correctly

- Using agile scrum and connecting with the client.

- Agile Kanban information updated to the client.

- Server connection

- Requirement specification.

- Requirement elicitation

- Design analysis

- Systems features check

14 APROVALS

Role	Name	Signature
Project Manager	BORNIL MOSTAFA	Bornil
Test Lead	MARIAM ISLAM	Mariam Islam.
Development Manager	MARIAM ISLAM	Mariam Islam.
Analyst	SHARIAR SIJAN ALVI	Alvi