American International University-Bangladesh (AIUB)

Department of Computer Science

Faculty of Science &Technology (FST)

Fall 22-23

Section: E | Group #08

Software Quality Assurance and Testing

Web Based Smart Assistant Provider

A Report submitted

By

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Software Test Plan

for

Web Based Smart Assistant Provider

Version 1.0 approved

Prepared by

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American International University – Bangladesh
Date: 10/12/2022

Checked By Industry Personnel

Name:

Designation:

Company:

Sign:

Date:

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Revision History

Revision	Date	Updated by	Update Comments
0.1	2022.10.23	Md. Al- Amin Hossen	First Draft
0.2	2022.10.25	Tilottama Meem	Introduction updated
0.3	2022.10.23	Md. Al- Amin Hossen	System features updated
0.4	2022.10.23	Rezoan Morshed Walid	System Quality Attributes
0.5	2022.10.27	Md. Al- Amin Hossen	System Interface
0.6	2022.10.27	M.A. Shalah	Project Requirements
0.7	2022.10.29	Md. Masayeakh Islam	Testing Approach
0.8	2022.11.02	Md. Al- Amin Hossen	Test Cases/Test Items
0.9	2022.11.04	Tilottama Meem	Test Deliverables
1.0	2022.11.07	M.A. Shalah	Responsibilities update
1.1	2022.11.07	Md. Masayeakh Islam	Project schedule diagram
1.2	2022.11.09	Rezoan Morshed Walid	Planning risks and contingencies

1. TEST PLAN IDENTIFIER: TPLAN_ASSISTANT_PROVIDER_V1.01

2. REFERENCES

1. Software Testing and Quality Assurance – Theory and Practice - Kshirasagar Naik & Priyadarshi Tripathy
2. Software Quality Engineering: Testing, Quality Assurance and Quantifiable Improvement - Jeff Tian

3. INTRODUCTION

Background to the Problem

For every tour and travel, there should be a tour plan or guide. When someone wants to travel, they want to get from one place to another safely and easily. Generally, in our country, tourists face various problems while visiting any tourist spot including ticket purchase, advance hotel reservation, or tour guide booking. But still, there are no good online helping resources in our country where people can easily get complete guidelines. This project will help in providing complete guidance to the customers to act as an assistant to make their journey easy, safe, and worry-free.

"Smart Assistance Provider" is a travel software that helps travel companies in booking, package customization, and itineraries for travel products such as hotels, flights, and transfers, and automates sales and financials to increase bookings and revenue. If the customer wants to visit a tourist spot or make their journey easy, safe, and worry-free, they must book a travel guide that includes a complete travel guide with someone else's responsibility. The quality of the guide is therefore very essential for satisfying customers. A good guide can boost the travel experience and add additional value. While a lesser guide does the opposite: leaving customers disappointed and dissatisfied.

Solution to the Problem

Providing smart support to the customer is a smart marketing strategy. By using our system everyone has a clear knowledge of their desired tour and guide. We are including all tourist spots in our country. If someone wants to use our system then he has to register first or if someone wants to be a guide then he also registers for our system. Using our project anyone can reserve a hotel room, set up the desired destination guide, hire a tour guide, book bus/air tickets and check in restaurants.

This reduces costs because travel guidance demonstrations can be done without in-person meetings, and expensive presentations, in different time zones, without additional travel costs. Smart Support Provider will save you time and money. The main aim of this system is to provide complete facilities with many facilities for tourists to travel.

There are many travel websites on the internet. But many of them are lacking because some websites work only for a separate system like ticket booking, some work only for hotel reservations, etc. But our system will work for combined packages so that customers get all the benefits of a website. So, this system will make it easy for customers, where they can make reservations at a hotel, book plane/bus tickets, hire a guide for their desired tourist spots, and know all the information combined.

4. REQUEIREMNT SPECIFICATION

4.1 System Features

1. **Registration**

Functional Requirements

1.1 The system shall allow the new user to register with their personal information such as Email, Mobile Number, and Password.
1.2 The system shall allow the new user to create an account using social media logins.
1.3 User can set up their password that should be strong enough.
1.4 The system shall give an option to users to select if they agree the terms and conditions of the system.
1.5 The system shall provide a sign-up option for the user.
1.6 The user has to verify their Mobile number or Email address by a random code, which will be generated by the system. And the random code will be sent to the user's mobile number or email address.
1.7 The system shall allow the user to submit the verification code.
1.8 If the system records verify the code, the user account page will be displayed. If the records couldn't verify the code, the system will show an error message and an option to send the verification code again.

Priority Level: High.
Precondition: User must have valid email/phone number.
Cross-reference: N/A.

2. **System Login**

Functional Requirements

2.1 The system shall allow the users to login with their given Email and Password.
2.2 If the Email and/or Password has been inserted wrong for more than three times, the random verification code will be generated by the system to retry login.
2.3 If the number of login attempt exceed its limit (5 times), the system shall block the user account login for one hour.
2.4 If the number of login attempt exceed its limit (5 times), the system shall block the user account login for one hour.

Priority Level: High.
Precondition: User must provide a valid username and password.
Cross-reference: 1.1

3. **Set Up a Tour Destination**

Functional Requirements

3.1 The system shall allow the users to be able to use the system to search for different tourist destinations.
3.2 The system shall allow the user to able to search for any specific tour destination using the search box or select from the available destinations.
3.3 The system shall allow the user to click on any tour plan to see detailed information about the tour.
3.4 Detailed information will be presented in a well-structured table, which will contain Tour overview, Tour type, Tour duration, Available dates, Requirements and others.

3.5 At the end, the system shall allow the user to start the reservation process by filling the reservation form.

Priority Level: Medium.
Precondition: User must be verified and logged into the system.
Cross-reference: 4.1, 2.1

4. Tour Reservation Form

Functional Requirements

4.1 The system shall allow the user to fill the reservation form to make reservations for any tour.
4.2 The system shall allow the user to confirm the reservation date and number of travelers.
4.3 The system shall show different options (If available) to the user.
4.4 The reservation cost will be automatically calculated by the system.
4.5 The system will show the total cost at the end.
4.6 The system shall allow the user to proceed to confirm their reservation.

Priority Level: High.
Precondition: User must select any specific tour plan for reservation.
Cross-reference: 3.5, 2.1

5. Booking A Ticket

Functional Requirements

5.1 The system shall allow the users to be able to use the system to book bus/plane tickets for different destinations.
5.2 The system shall allow the user to able to select the Starting location, End location, Journey date, Return date (Optional) and Number of traveler and Class.
5.3 After completing required information, the system shall show the search option for available bus/plane.
5.4 The system shall allow the user to click on any searched result to see detailed information.
5.5 Detailed information will be presented in a well-structured table, which will contain Bus/Plane details, Fare summary, Travel duration, and other information's.
5.6 At the end, the system shall allow the user to start the reservation process by filling the reservation form.

Priority Level: Medium.
Precondition: User must be verified and logged into the system.
Cross-reference: 6.1. 2.1

6. Ticket Booking Form

Functional Requirements

6.1 The system shall allow the user to fill the reservation form to make reservations for any ticket.
6.2 The system shall allow the user to confirm their Name, Email, and Phone number.
6.3 The user must select number of tickets and class.
6.4 The system shall allow the user to proceed to make the payment.

Priority Level: High.
Precondition: User must select any specific searched result for reservation.
Cross-reference: 5.6, 2.1

7. Hiring A Guide

Functional Requirements

7.1 The system shall allow the user to hire a guide for tourist spots.
7.2 Firstly, the user must be able to searched for specific tourist spots to see available tour guides.
7.3 The system shall allow the user to see detailed information of the guide including their Name, Qualification, Experience, Fee by hour and other details as well.
7.4 The system allows the user to make reservation for the guide by filling the guide reservation form.
7.5 The user must confirm their Name, Email, and Phone number and select tour date to make the reservation.

Priority Level: Medium.
Precondition: User must be verified and logged into the system.
Cross-reference: 2.1

8. Hotel Room Reservation

Functional Requirements

8.1 The system shall allow the users to be able to use the system to search for different hotel for booking.
8.2 The system shall allow the user to able to search for available hotels by selecting City/hotel/resort/area, Check-in date, Check-out date, Number of rooms and, Number of guests.
8.3 The system shall allow the user to click on any hotel to see detailed information about the hotel rooms and other details.
8.4 Detailed information will be presented in a well-structured table, which will contain Hotel overview, Hotel location, Facilities, and other policies.
8.5 At the end, the system shall allow the user to start the reservation process by filling the reservation form.

Priority Level: Medium.
Precondition: User must be verified and logged into the system.
Cross-reference: 9.1

9. Making Payment

Functional Requirements

9.1 The system shall allow the user to be able to pay bills using different banking systems such as Credit/Debit cards, BKash, Rocket, and Nagad.
9.2 Finally, the system shall allow the user to confirm their reservation. And the system will generate an automatic invoice, which will be sent to the user.

Priority Level: High.
Precondition: Users must fill up the specific reservation form accordingly.
Cross-reference: 4.5, 6.4, 8.5

10. User Account

Functional Requirements

10.1 The system shall allow the user to update their information such as Name, Email, Phone number, Address.
10.2 Users can update or check their reviews.
10.3 System shall allow the user to track their reserved tour and hotel details.
10.4 System also allows the user to add or remove a coupon for a discount.

10.5 The system shall allow the user to update their payment options.
10.6 System shall allow the user to access available account security options.

Priority Level: Medium.
Precondition: The user must be logged in to the system.
Cross-reference: 2.1

11. Account Security

Functional Requirements

11.1 The system shall allow the user to change or update their password.
11.2 User may set up two-step verification for advance security.

Priority Level: High.
Precondition: The user must be logged in to the system.
Cross-reference: 2.1

12. Settings & Privacy

Functional Requirements

12.1 The system shall allow the user to update their location settings.
12.2 User may lock their profile from other users.
12.3 The system also allows the user to choose their preferred languages.
12.4 System shall allow the user to delete or deactivate their profile/account.

Priority Level: High.
Precondition: The user must be logged in to the system.
Cross-reference: 2.1

4.2 System Quality Attributes

- **Usability:** The attribute usability means the ease with which each user can use the system to accomplish certain tasks. Our system is designed in such a way that users will easily understand how to use the system. Users can easily view all the features and also users can easily book flights/hotels from our system. The features are simply designed and developed so that users can easily understand them by seeing them.
- **Security:** This attribute enables the system to control unauthorized persons to access the system. Users who have valid usernames and passwords can only log into the system. This attribute is important since security denotes the ability of the system to protect the data from unauthorized persons.
- **Reliability:** These attributes are defined as how a system is expected to perform its intended functions with required precession. We have implemented our system in such a way that user gets their intended function like when they want to view flight/hotels schedule/fare, they can see them. No error gets generated. We have made sure that the user gets the correct output. Besides, our system also doesn't take much time to respond to users' actions.
- **Flexibility:** We have made our system flexible enough to modify. It is adaptable to other functionalities and easy to add code to the system and upgradation for new features.
- **Maintainability:** It means the effort required to locate and fix a bug and modification to any functionality. Our team members can fix the bug and can also add new features if any changes are made in the system.

- **Testability:** It is the suitability for allowing the programmers to follow for program execution and for debugging. The testability of software depends on its modularity. Since we have developed our system module-wise, there was less chance of getting errors. Whenever we encountered bugs, we checked that module to fix the bug.

4.3 System Interface

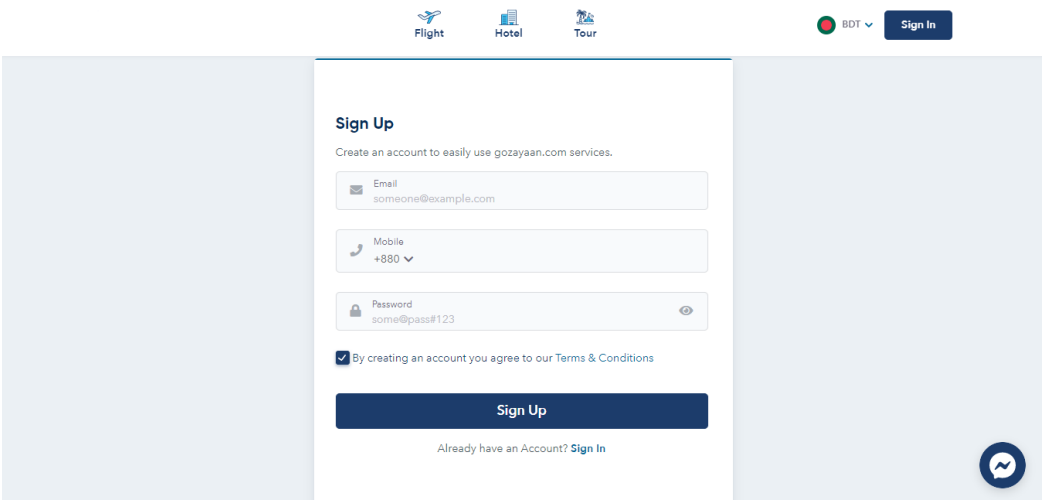

Fig: Registration Page

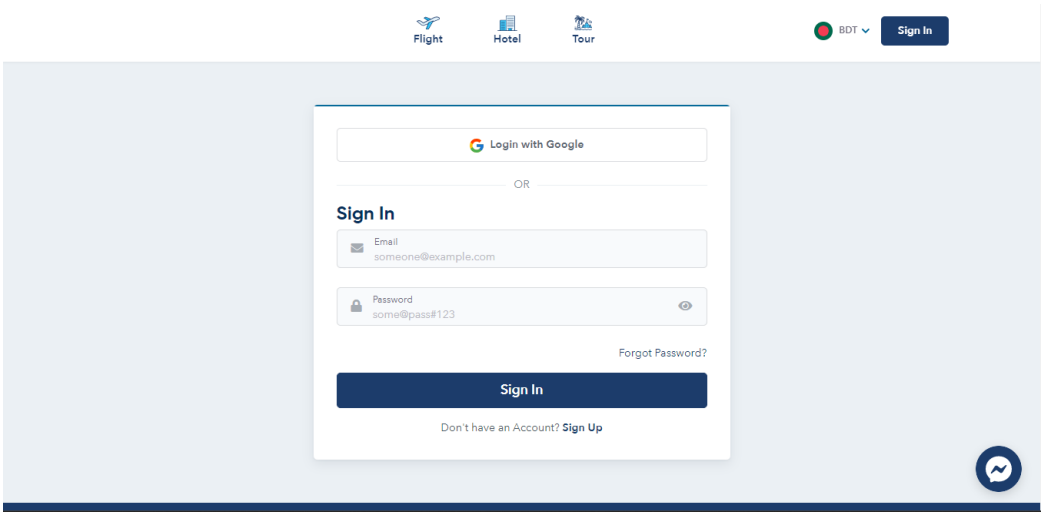

Fig: Login Page

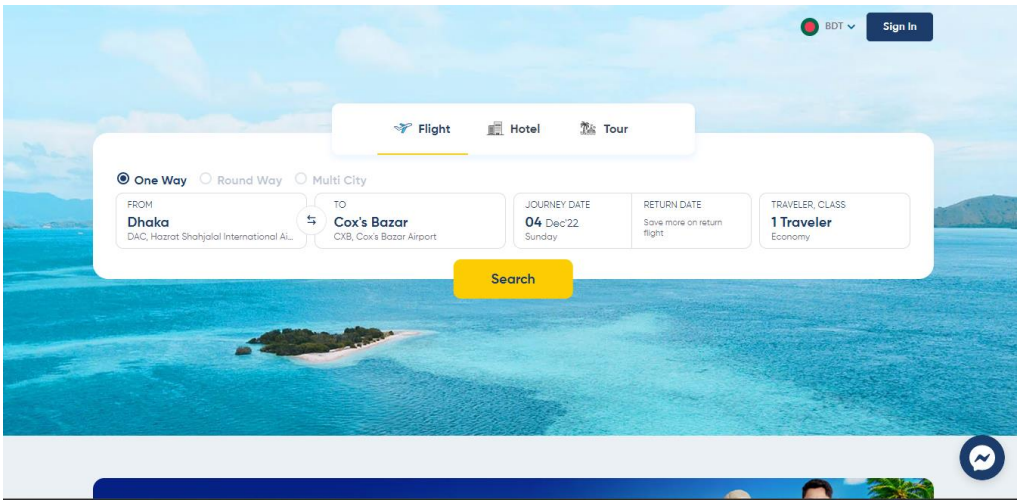

Fig: Booking Ticket Page

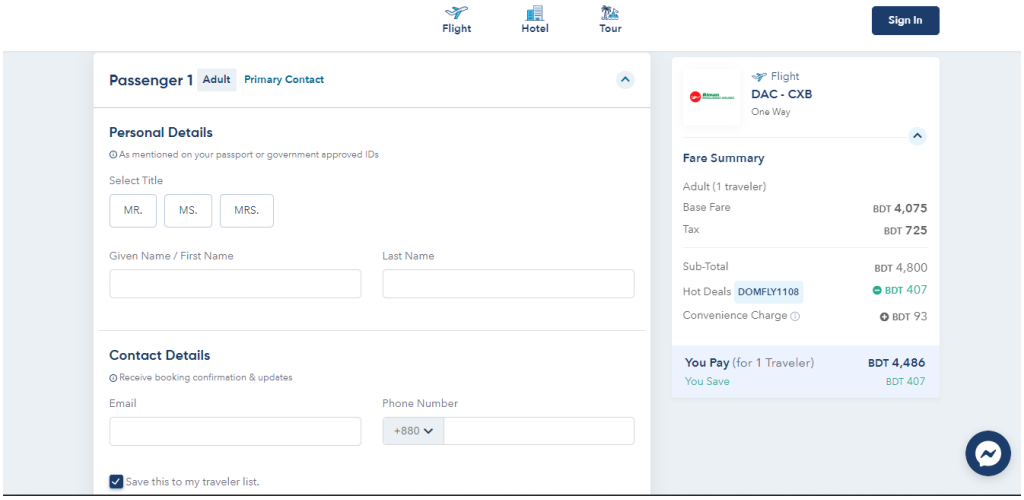

Fig: Booking Ticket Form

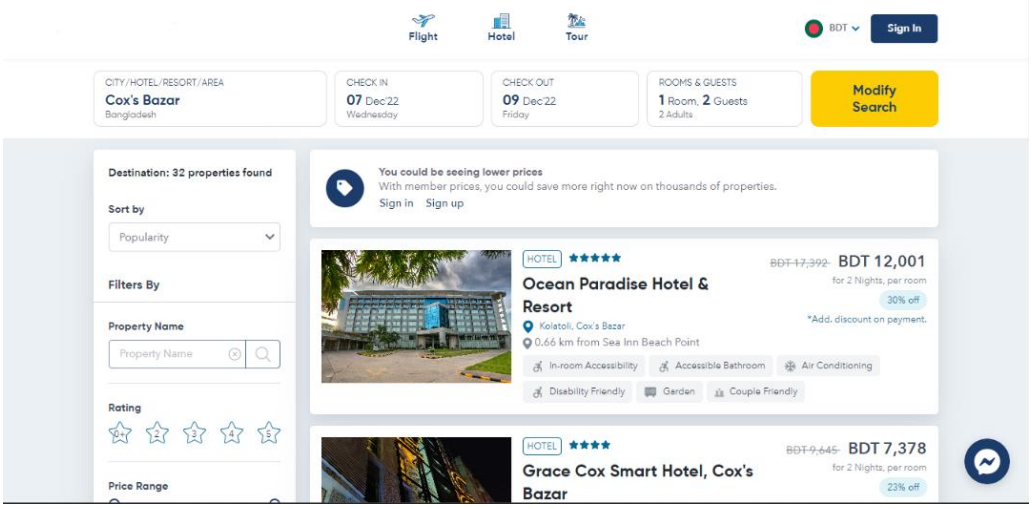

Fig: Hotel Room Reservation

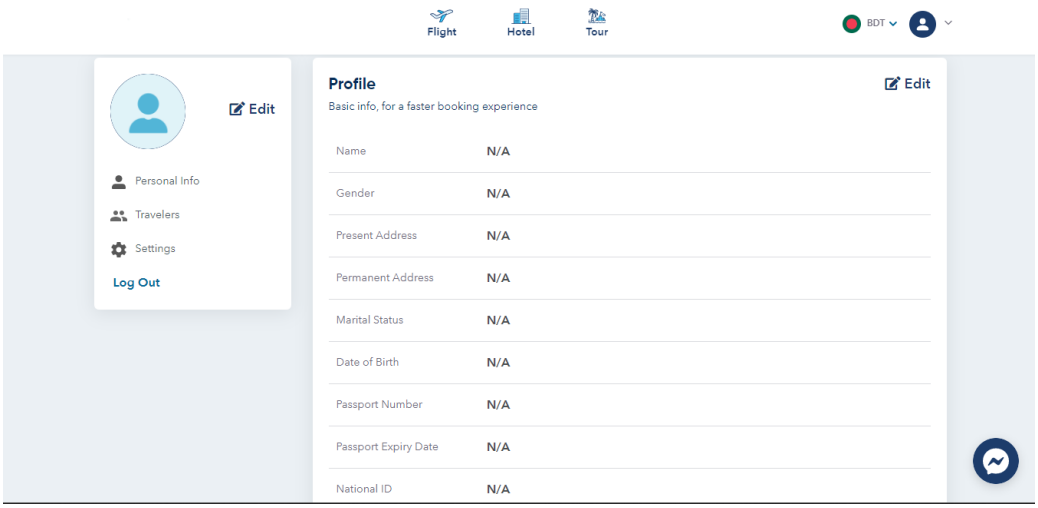

Fig: User Account

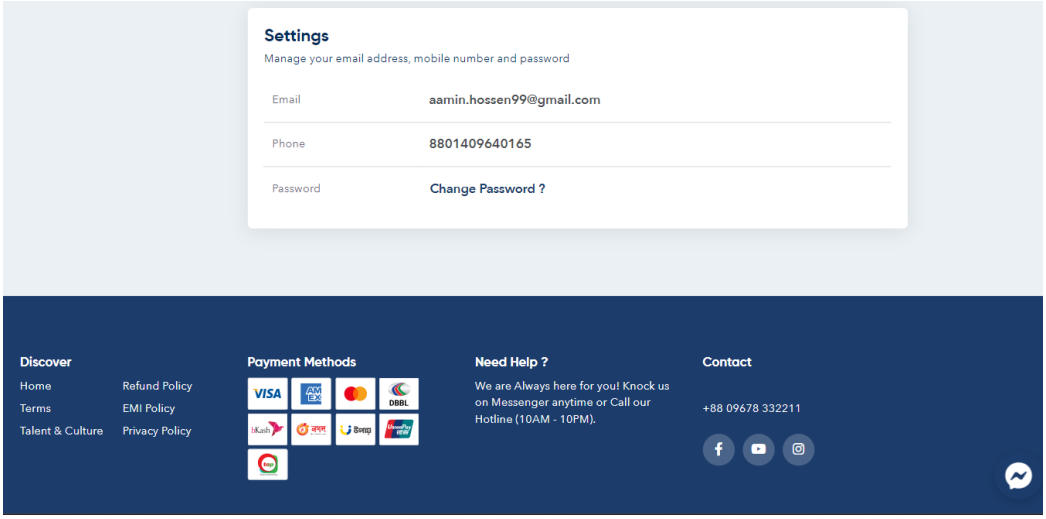

Fig: Settings & Privacy

4.4 Project Requirements

Considering,
Project testing time = 4 months
Number of people for testing = 5 members

Estimating Budget:
Working days = 6 days in a week
Working hours per day = 6 hours
Working hours in 1 week = (6*6) = 36 hours

Salary for each member:
Per hour = 300 Taka
Per week = (300*6*6) = 10800 Taka
For 4 weeks = (4*10800) Taka = 43,200 Taka
For 4 months = (4*43,200) Taka = 172800 Taka

Now, Salary for 5 members for 4 months = (5*1,72,800) Taka = 8,64,000 Taka
Office rent for 4 months = (4*10,000) = 40,000 Taka
Electricity and other bills = 30,000 Taka
Maintenance Cost = (4* 5* 1000) = 20,000 Taka

Total Estimated Cost = (8,64,000 + 40,000+ 30,000 + 20,000) = 9,54000 Taka
20% profit of total estimated cost = (0.2*9,54000) = 1,90,800 Taka

Total Estimated Budget is = (864000 +190800) = 11,44800 Taka

5. FEATURES NOT TO BE TESTED

Since we are testing from the customer's perspective, some features may be avoided or those areas will not be specifically addressed. With these criteria and some other features that will not be tested…

1. **Registration as a guide:** The registration system will not be tested as a guide, as we are only testing from the customer's perspective.

2. **Tour Customization:** Tour customization features will not be tested, as this feature will be updated in the next system update.

3. **Making Payment:** Payments will not be checked as some payment methods including BKash/Rocket are unavailable at this time.

6. TESTING APPROACH

6.1 Testing Levels

We will test our built-in features in six testing levels. These are 1. Unit Testing, 2. Integration Testing, 3. System Testing, 4. Beta Testing, 5. Load Testing and 6. Acceptance Testing.

- **Unit testing:** As we build our system, we will run this test first which will include testing individual software modules for finding errors. This testing technique is employed by QA teams and software developers. The purpose of this test is to verify that each piece of software code works as intended. This will essentially be a white box test where no code is executed.

- **Integration testing:** After the unit testing, we will do the integration testing part. Integration Testing will be performed by the Test Manager and Development Team Leader with support from individual developers as needed. During this testing, we will ensure that each software component is logically integrated, holistically tested, and functional. This level of testing looks for issues with how different software components interact when they are combined.

- **System testing:** System testing will be done by the test manager to ensure that the product meets the business requirements and runs accordingly in various operating environments. We will test a fully functional, seamlessly integrated system through system testing. Then we will check if it meets all the requirements. Therefore, we will use the "Black Box Testing" method at this level.

- **Beta testing:** The beta testing process is very simple and convenient. It can move and change quickly to meet our evolving needs by improving our understanding of how the product works in practical situations. We can improve both our monitoring capabilities and other cost areas. Based on the feedback from the beta, we may make several changes.

- **Load testing:** The performance of a system, software product, or software application is evaluated during load testing, a type of performance test that simulates real-world load conditions. In short, load testing determines how the application will behave when many people use it simultaneously, and the responsiveness of the system as it is evaluated under different load conditions. Both medium and high load conditions will be tested during the load-testing process.

- **Acceptance Testing:** This is the last stage of our test. We will perform this test to determine if our product is acceptable. This test will be done to see if any errors have been overlooked during the functional testing phase. After completion of system/integration testing, approval testing will run parallel to the original manual ZIP/FAX process for one month.

6.2 Test Tools

"Web Based Smart Assistant Provider" is a web-based application. Which will be a user-friendly application based on different requirements. The testing tools that will be used to test this software are,

- Visual Studio IDE (For writing testing code and execution)
- Selenium (Test framework)
- Web Browser (Google Chrome, Mozilla Firefox)

6.3 Meetings

We provide a valuable forum for various functions, helping our test members share ideas, make decisions, build team relationships and even feel less alone at work. A successful system can be created only by the proper distribution of work among members so that work is completed on time. A testing team needs to find the bugs/defects so that the system remains bug-free and the customer gets a product that is a quality worthy. So, to make our project successful our testing team organizes a meeting every week to test each module to evaluate progress and find bugs. The QA team also met with the development team and the project manager to monitor system development. Meetings are also organized in case of urgent problems.

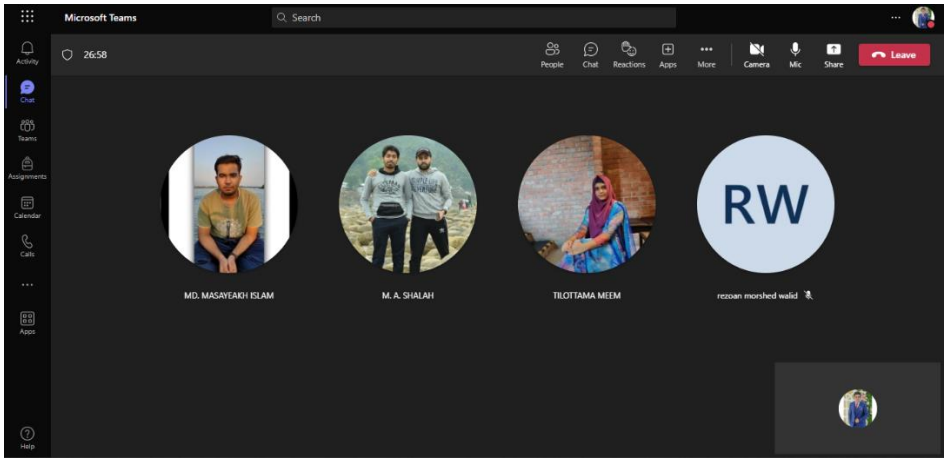

Fig: Team meeting (Microsoft Teams).

7. TEST CASES/TEST ITEMS

Project Name: Web Based Smart Assistant Provider		Test Designed by: Hossen, Md Al Amin		
Test Case ID: FR_1		Test Designed date: 15/10/2022		
Test Priority (Low, Medium, High): High		Test Executed by: Tilottama Meem		
Module Name: System Registration Verification		Test Execution date: 07/11/2022		
Test Title: Verification of registration with valid mobile number or email address				
Description: Test system registration verification				
Precondition (If any): The user must have to provide the verification code				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1) Go to the system registration page. 2) Fill up the form with the required information. 3) Confirm verification code from user mobile number/email address. 4) Confirm registration.	Verification Code: 249685	The user can register for the system without any difficulties.	As expected,	Pass
Post Condition: The system will automatically generate a verification code and send it to the user's phone/email. And the user has to provide the code while registering.				

Project Name: Web Based Smart Assistant Provider		Test Designed by: Hossen, Md Al Amin		
Test Case ID: FR_2		Test Designed date: 15/10/2022		
Test Priority (Low, Medium, High): High		Test Executed by: Tilottama Meem		
Module Name: System Login		Test Execution date: 07/11/2022		
Test Title: System Login with valid email address and password				
Description: Test system login				
Precondition (If any): The user must have to provide the valid email address and password				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)

1) Go to the system registration page. 2) Fill up the form with the required information. 3) Confirm verification code from user mobile number/email address. 4) Confirm registration.	Email address: aamin.hossen99@gmail.com Password: @abc123	The user can login for the system without any difficulties.	As expected,	Pass
Post Condition: Email address and password will be validated with the database and successfully login to account. And the account login details will be stored in the database.				

Project Name: Web Based Smart Assistant Provider		Test Designed by: Hossen, Md Al Amin		
Test Case ID: FR_3		Test Designed date: 17/10/2022		
Test Priority (Low, Medium, High): Medium		Test Executed by: M.A. Shalah		
Module Name: Set Up a Tour Destination		Test Execution date: 17/11/2022		
Test Title: Set up tour destination by searching or selecting from the list				
Description: User shall able to search for specific tour destination or select from the list.				
Precondition (If any): The user must have to provide the searched keyword or select item				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1) Go to the tour destination search page. 2) Type the searching keyword or select from the list. 3) Click on search button.	Searched Keyword: Cox's Bazar	The user can view the list of available tour destination (If available).	As expected,	Pass
Post Condition: User must type the correct keyword for better output suggestion.				

Project Name: Web Based Smart Assistant Provider	Test Designed by: Hossen, Md Al Amin
Test Case ID: FR_4	Test Designed date: 17/10/2022
Test Priority (Low, Medium, High): High	Test Executed by: M.A. Shalah
Module Name: Filling up Tour Reservation Form	Test Execution date: 17/11/2022
Test Title: Reservation of Tour Testing	

Description: User shall able to reserve a specific tour destination.				
Precondition (If any): The user must be signed in and select the specific tour destination.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1) Go to the specific tour details page. 2) Fill up the form with the required information. 3) Click on Continue button.	Journey Date: 12 Jan, 2023 Travelers: 1	The user can start a reservation process for the tour.	As expected,	Pass
Post Condition: User must provide the correct information which will be stored in the system database.				

Project Name: Web Based Smart Assistant Provider	Test Designed by: Hossen, Md Al Amin
Test Case ID: FR_5	Test Designed date: 17/10/2022
Test Priority (Low, Medium, High): High	Test Executed by: Md. Masayeakh Islam
Module Name: Booking a plane ticket	Test Execution date: 17/11/2022

Test Title: System plane ticket booking testing.				
Description: Test system login				
Precondition (If any): The user must be signed into the system.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1) Go to the system flight booking page. 2) Fill up the form with the required information. 3) Click on Search button to continue the process. 4) Select from the search result. 5) Fill the customer details form and click on continue.	From: Dhaka To: Cox's Bazar Journey Date: 08 Jan, 2023 Traveler: 2 Name: Md Al Amin Email: aamin.hossen99@gmail.com Phone: 0123456789	The user can book their plane ticket easily.	As expected,	Pass
Post Condition: User must provide the correct information for reservation and these information's will be stored in the system database.				

Project Name: Web Based Smart Assistant Provider			Test Designed by: Hossen, Md Al Amin	
Test Case ID: FR_6			Test Designed date: 19/10/2022	
Test Priority (Low, Medium, High): High			Test Executed by: Md. Masayeakh Islam	
Module Name: Add Coupon Code Testing			Test Execution date: 19/11/2022	
Test Title: Verification of Adding Coupon code.				
Description: Test coupon code adding in user account				
Precondition (If any): User must be signed in and go to option of adding coupon codes.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1) Go to User Coupon Code adding page. 2) Enter required information. 3) Click on "Submit."	Coupon: NEWUSER20	Coupon will add with user account.	As expected,	Pass
Post Condition: Coupon has been verified with the database and assigned with the user account.				

Project Name: Transportation Vehicle Ordering System			Test Designed by: Hossen, Md Al Amin	
Test Case ID: FR_7			Test Designed date: 19/10/2022	
Test Priority (Low, Medium, High): Medium			Test Executed by: Rezoan Morshed Walid	
Module Name: Settings and Privacy			Test Execution date: 19/11/2022	
Test Title: Verification of settings and privacy.				
Description: Change the old password and set a strong password for privacy.				
Precondition (If any): User must be signed in and click on setting and privacy				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Click on "Settings and Privacy." 2. Go to "Change password." 3. Enter current password. 4. Enter new valid password. 5. Select "Confirm."	Current pass: @1245 New Pass: @4512	User's system password shall change successfully	As expected,	Pass
Post Condition: Current password must be verified with the system's database and updated.				

8. ITEM PASS/FAIL CRITERIA

Here, if the test phase is completed successfully and the expected result is 95% effective without any critical errors, then the test phase is considered successful. If a test step cannot be completed or is completed but the expected result is not obtained, or if the expected result cannot be verified from the record, the test step is considered failed and the requirement is not verified. For the software to pass the test, all paths must be thoroughly tested.

9. TEST DELIVERABLES

- Test strategy
- Acceptance test plan
- System test plan
- Integration test planning
- Unit test plan
- Load test plan
- Beta test plan
- Test cases/suites
- Screen prototype
- Requirements Traceability Matrix (RTM)
- Error/Incident Reports and Summary
- Test execution report
- Release notes

10. STAFFING AND TRAINING NEEDS

It is preferred that at least one full-time tester is on the project for the structure and deployment phases. To help with evaluation, a person should be hired part-time at the beginning of the project and then full-time after a month. The project Manager/Exam Manager will take charge if there is no separate candidate. The following preparation-related issues need to be addressed to conduct a thorough and appropriate study. For the time being, a decision has been taken to recruit staff for this project. Most of the team will probably participate in specific research activities, which are covered in more detail in the responsibilities section.

11. RESPONSIBILITIES

RESPONSIBILITIES	SHALAH	AL-AMIN	MASAYEAKH	REZOAN	MEEM
Project proposal	✓	✓	✓	✓	✓
Requirement		✓	✓		
Planning	✓			✓	✓
System design		✓		✓	✓

Implementation	✓		✓		✓
Test Case		✓	✓	✓	
Test Case Implementation			✓		✓
Unit testing	✓		✓		
Integration testing		✓		✓	
System testing		✓			✓
Load testing	✓		✓		
Beta testing	✓			✓	✓
Acceptance Testing		✓	✓		✓
Report Bugs & make summary	✓			✓	
Documentation	✓	✓		✓	

12. TESTING SCHEDULE

Time has been allocated within the project plan for the following test activities. Specific dates and times for each activity are defined in the project planning timeline.

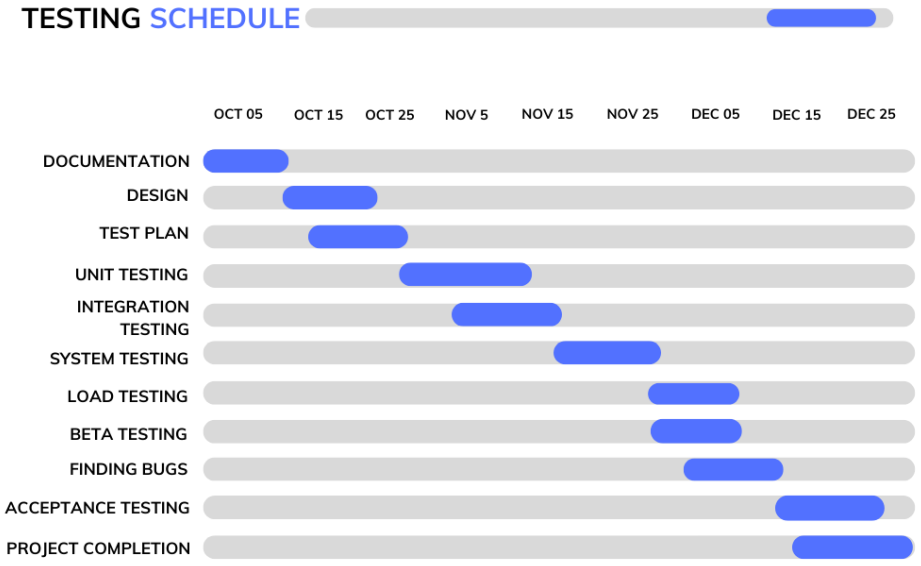

Fig: Testing Schedule.

13. PLANNING RISKS AND CONTINGENCIES

There may be some potential risks with a chance of happening that could result in development losses.

- Lack of personnel resources when testing is to begin.
- Delays in training on the application and/or tools.
- Late delivery of the hardware or tools.
- Coming to change requests frequently.
- Lack of availability of required hardware, software, data, or tools.
- Project schedules get slipped when project tasks and schedule release risks are not addressed properly.

Some specific tasks must be completed at certain times throughout various events. If these modifications are made, the following steps will be taken:

- The number of tests performed will be reduced to a certain amount.
- The development and test schedules will be extended by the necessary number of days. This rarely occurs, as most projects tend to have fixed delivery dates.
- The scope of the plan may be changed.
- The test team will work overtime.

14. APROVALS

Designation	Name	Sign	Date
Project Sponsor	Tuhin Emon		
Project Manager	Al Rafy		
Test Manager	Lucifer		
Development Team Manager	Tasnova Jahan		
Sales Representative	Sazzad Islam		
Order Entry EDI Team Manager	Arifur Rahman		