American International University-Bangladesh (AIUB)

Department of Computer Science
Faculty of Science & Technology (FST)
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Software Quality Assurance and Testing
Section: B
Project Title: *Go Green*

A Report submitted by
Yasmin, Shaila

SN	Student Name	Student ID
1	Shahrear, Faiyaz	18-38502-2
2	Rafid, Abrar	17-34795-2
3	Yasmin, Shaila	17-34815-2
4	Md. Ragib Al Nafid	17-34696-2

Under the supervision of
Mr. Abhijit Bhowmik
Senior Assistant Professor & Special Assistant
Office of Student Affairs, Dept. of Computer Science
Faculty of Science & Information Technology
American International University-Bangladesh (AIUB)

Software Test Plan

For

Go Green

Version 1.0 approved

Prepared by

Shahrear, Faiyaz

Yasmin, Shaila

Rafid, Abrar

Md. Ragib Al Nafid

American International university Bangladesh

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Table of Contents

Revision History

Revision	Date	Updated by	Update Comments
0.1	2021.8.9	Shahrear, Faiyaz	First Draft
0.2	2021.8.11	Yasmin, Shaila	Second Draft
0.3	2021.8.12	Rafid, Abrar	Third Draft
0.4	2021.8.14	Md. Ragib Al Nafid	Fourth Draft
0.5	2021.8.15	Yasmin, Shaila	Final Draft

1. **TEST PLAN IDENTIFIER:**
   TP_GoGreen_1.0

2. **REFERENCES**

   ➢ Slides & Class Notes
   ➢ Google Informative sites.

3. **INTRODUCTION**

➢ **Background of the problem:**

Environmental pollution kills an estimated seven million people worldwide every year. Furthermore, according to the most recent World Health Organization data, the air quality in Dhaka reaches a yearly average of 90 μg/m3 of PM2. Obviously, 168 - Unhealthy is just a yearly average, and the air pollution can reach much higher 300+ hazardous levels. Recently, Bangladesh reports surge of dengue fever in July, most in Dhaka. One of the main reason of this is we are not careful about our environment and we feel lazy to complain about it to the authority. So our goal is decrease this pollution. Sometimes, we face some inconveniences to solve issues regarding environment. We must take care our surroundings to lead a sound and healthy life.

➢ **Solution of the problem:**

We are trying to make a platform where people can report their issues or problems regarding environment which makes a disruption in their lives. Such as garbage management issues, drain management issues, construction causing sound and air pollution. Because of heavy rain water got stuck. These problems are very often in our lives.

But in our country, the actions are not very quick enough to solve and most importantly all of these problems cannot be solved in one platform. So, our main goal is to give them the best service and make a rapid action of these problems whenever any public is facing.

Through this project we can make our lives sound and healthy and earn money. We can provide some offers to those customers who could post or give information of where these problems are occurring. We can set offers by giving free services for 1 month to those people who have taken services from ours and also give us feedback whether it's good or bad.

4. REQUIREMENT SPECIFICATION

4.1 System Features

System Login

- This system allows the user login into the site just giving their registered phone no or email address and password.
- If the user gives wrong password 3 times the system will give a last time warning.
- After then if the user again types the wrong password the system will block the user for 1 hour from login.
- If user forget the password, they will be able to recover the password by using one time 4-digit code will have provided by the admin in user's email or phone no.

Problem Submission

- This system allows the user to submit a problem through image or video or text file.
- If the user gives wrong information user account will be banned by admin.
- User must submit the file by following the instructions.

Multiple option

- The visitor can visit the site as visitor without login. They will be able to see all options and but cannot submit any problem issues.
- User gets various categories in homepage. Each category contains different types of problem domain.
- Homepage contains a search bar by which user can easily search solution of problem which is done by admin.
- Visitors and user will be able to see the new news and site update under 'What's New Solution' option.
- User can give the site rating from one to five and then can give suggestion or write their comment about the site under suggestion section.
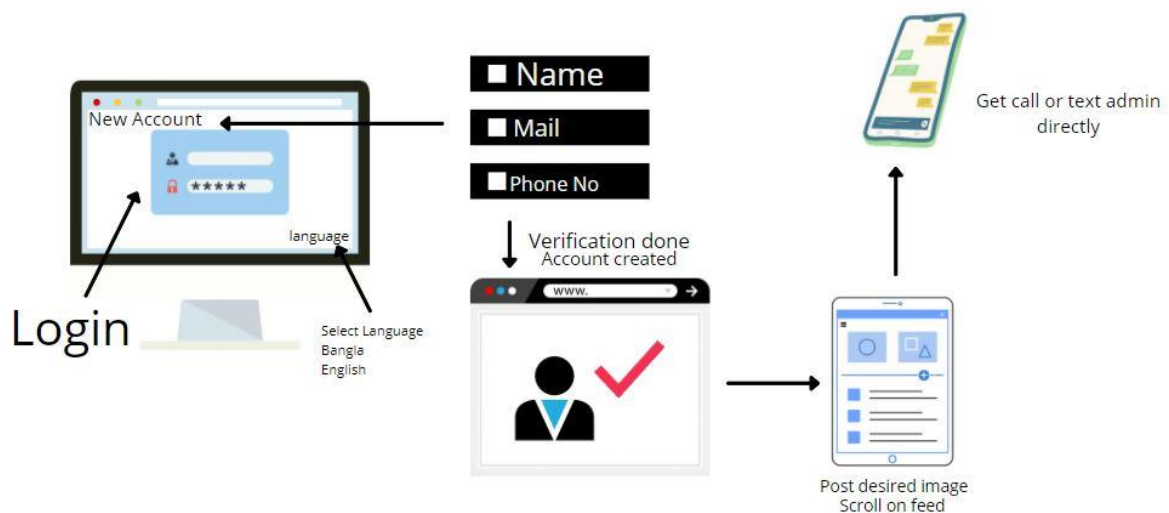
Location Features

- The user can type their location manually or easily keep the phone GPS on and let the app automatically track the location.
- Admin get the location and send a team to solve problem.

4.2 System Quality Attributes

At first a user will log in into the application. If he/she is a previously registered user then have to just type email or phone and password and then login. If the user is new then he/she have to create a new account and complete the blank section by giving some basic information. Then the system will take the user to home page and show all the options there. From there the user can submit their problem. They can also check the recent work which is done by authority. After confirm the submission user will view a thank you page. And also contribution points will be added to user account. After this admin will send a team to visit that area and try to solve that problem. Admin will send a notification to the user after solving an issue.

4.3 System Interface

Fig: User Interface

4.4 Project Requirements

- ➢ Total estimated time 1 Year

- ➢ Total estimated cost 4,60,000 BDT

- ➢ Total estimated people 70

- ➢ 5 Coders

- ➢ 2 Testers

- ➢ 2 Team Lead

- ➢ 2 Strategy planners

- ➢ 1 Business analyst

- ➢ 2 Accounts officers

- ➢ 50 employees (working on reported issues)

- ➢ 1 Project manager

- ➢ 3 post & Media

5. FEATURES NOT TO BE TESTED

- Checking User Credentials
- Database Checking
- User's Information
- Hardware
- Networks

6. TESTING APPROACH

6.1 Testing Levels

Testing for a rapid web-based system for Public and environment safety will consist of Unit
System/Integration (combined) and Acceptance test levels.
1. System/integration testing will be done by at least one full time developer.

2. Unit Testing will be done by the developer and will be approved by the development team lead.
3. Finding all the features meet the criteria or not.
4. All unit test information will also be provided to the test person.
5. System/Integration Testing will be performed by the test manager and development team leader
6. The system will enter in the System/Integration test after all critical defects have been corrected.
7. It will check that all the features are working correctly or not.
8. Acceptance Testing will be performed by the actual end users with the assistance of the test manager and development team leader.
9. The acceptance test will be done for a period of 20 days after completion of the System/Integration test process.

Testing Type	Testing Method	Person	Reason
Unit Testing • Account • Password • Register	White-box testing	Programmer	Individual units/ components of a software are tested at least once. All logical decisions verified
			on their true and false values. All loops executed at their boundaries.
Integration Testing	Gray-box testing	Programmer And Tester	Test case list, sample output,data printouts and defect information.
System Testing	Black-Box Testing	Tester	Validate Id and password. Validate input and output. Validate if the system is working or not.

Acceptance Testing	Performance Testing	Development team and users	Formal testing with respect to user needs. The acceptance criteria to enable the user. Customers or other authorized entity to determine whether or not to accept the system

6.1 Meetings:

The test team will meet once every two 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 theproject manager once every two weeks as well. These two meetings will be scheduled on differentweeks. Additional meetings can be called as required for emergency situations.

Date:	Meeting Name:	Purpose:
17.07.21	System Checking	To monitor the system either working properly or not
28.07.21	Bug Fixing	To resolve all the stated bugs in the console
10.08.21	Final Meeting	To clear out all the anomalies and rechecking the requirement specifications.

7. TEST CASES/TEST ITEMS

Project Name: Go Green	Test Designed by: Yasmin, Shaila
Test Case ID: GG_01	Test Designed date: 10th August, 2021
Test Priority (Low, Medium, High): High	Test Executed by:
Module Name: Login Interface	Test Execution date:
Test Title: Verify login with valid user phone no. or email andpassword	
Description: Test application 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 theapplication 2. Enter user phone no.or email 3. Enter password 4. Click next	User Phone no:123456789 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 sessiondetails are logged in the database.

Project Name: Go Green	Test Designed by: Shahrear, Faiyaz
Test Case ID: GG_02	Test Designed date: 12th August, 2021
Test Priority (Low, Medium, High): Medium	Test Executed by:
Module Name: Registration Interface	Test Execution date:
Test Title: Verify registration with valid user information	
Description: Test application register page	
Precondition (If any): User must have a valid phone number or email id.	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the application 2. Press the register button 3. Enter user valid information 4. Click next	User Name: Faiyaz Shahrear User Phone no: abcdegh Email: dsfj@gmail.com Nid:58421244 Password: 2580 Address: Dhaka	Sorry, can't register. Number should be numeric.	As expected,	Pass

Post Condition: User will back to register page and submit the validated data.

Project Name: Go Green	Test Designed by: Rafid, Abrar

Test Case ID: GG_03	Test Designed date: 11th August, 2021
Test Priority (Low, Medium, High): High	Test Executed by:
Module Name: Problem Submission	Test Execution date:
Test Title: Verify the submission	
Description: Test application problem submission page	
Precondition (If any): User must have a valid user id of go green.	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Login into the system 2. Go to the problem submission button 3. Submit the form 4. Click submit	Area: Kuratoli Date: 11/08/21 Attachment: a image file attached	User can see a successful message	As expected,	Pass

Post Condition: User will receive a notification about his/her submission.

Project Name: Go Green	Test Designed by: Al Nafid, Ragib
Test Case ID: GG_04	Test Designed date: 9th August, 2021
Test Priority (Low, Medium, High): Low	Test Executed by:
Module Name: View solving cases	Test Execution date:
Test Title: Verify view of problem solving issues done by admin	
Description: Test problem solving view page	
Precondition (If any): User must login into the system	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)

1. Go to the new solution page 2. Scroll down for see all the successful work 3. Click next for next page	N/A	User should view the successful work and scroll down	Showing some error and can't view the details.	Fail
Post Condition: N/A				

8. ITEM PASS/FAIL CRITERIA

This section shows the generic pass/fail criteria for the tests covered in this plan. They are supplemented by pass/fail criteria in the test design specification. Note that "fail" in the IEEE standard terminology means "successful test" in our terminology.

1. Component Pass/Fail criteria

Tests executed on components only pass when they satisfy the signatures, constraints, and interfaces dictated by the Object Design Specification for that component. This includes positive tests, negative and stress tests, and boundary tests.

2. Integration Pass/Fail criteria

Tests executed on integrated components only pass when they satisfy the signatures, constraints, and interfaces dictated by both the object design specification and the system architecturespecification. This includes positive tests, negative and stress tests, boundary conditions, and teststhat explicitly manipulate the interface environment (such as the physical connection to the database server).

3. System Pass/Fail criteria

Tests executed against the system use the functional requirements, non-functional requirements, and use cases as the oracle to determine pass or fail.
If a test exhibits a product failure to meet the objectives of any of the functional requirements, non-functional requirements, or the use cases, it will fail and a defect/issue will be reported in the defecttracking system for review by the triage team.

TEST DELIVERABLES

When we will be launching the project as mobile app/ desktop app, it will go through numerous stages of testing. Software development and testing which will help the effectiveness and the quality of the product. During each of the phases the team lead or the manager prepares multifarious documents and reports for their team, which also help them to improve communication among team members and other stakeholders of the project. These reports and documents are an integral part of software development/testing life cycle and are commonly known as test deliverables.

- Software Testing Strategy
- Software Testing Plan
- Software Test Scenarios and Test Cases
- Software Test Metrics
- Product Metrics
- Process Metrics
- Software Test Documentations
- Software Testing Reports
- Daily Test Status Reports
- Incident Reports
- Final (Test Project Closure) Test Status Report.

STAFFING AND TRAINING NEEDS

1.1 Staffing Needs

During the first quarter of the task the venture/test chief can assume the job of a full time Test engineer with low maintenance test architect to help with the audit and introductory arranging of the project. After the underlying form has been done, the approval and check testing need 2-full time analyzer and one of them should be the individual associated with undertaking from the origins helping analyzer.

1.2 Training Needs

Here in training needs the Test administrator and Project Manager needs to team up with an organization workforce also, train on the inward working of a course portion stream and find out about accessible courses and essential course needs.

Responsibilities	Test manager	Project Manager	Development Team	Test Team	Client
Acceptance Testing, documentation and execution	*	*	*	*	
System testing, documentation and execution	*	*	*	*	
Integration Testing, documentation and execution	*		*	*	
Unit testing, documentatio	*		*	*	

n and execution					
System layout review	*	*	*	*	*
User Interface Review	*	*	*	*	
Test procedures rules	*	*		*	
Data validation	*	*		*	*

TESTING SCHEDULE

We have fixed the time for 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.

JULY TIMELINE — GO GREEN

MONTHLY TASKS	WEEK 1	WEEK 2	WEEK 3	WEEK 4
Executiom				
System testing				
Test Procedures and rules				
Validation of data				
Final Project completion				
User Interface Review				

Planning Risks and Contingencies:

Sometimes it might happen that requirements of users are changed. In the certain cases the mail is fixed. So, the user can change only change his mail by himself/herself. This can be the case where user cannot change his own mail. So, this might be the new feature to be added.

So, to prevent this, the developer team should keep some other features that can be added when needed. So, the developer team should suggest the customer fewer features. If any change of this test plan occurs, then others risks might be added later. And there is a huge chance of simulating views. Because in this generation simulating view is getting easier. So, developers should make a cool down feature for every id. Which can prevent this type of illegal behavior. And not only that every moderator will verify the orders before sending products to the buyers.

Approvals

Approval	Personnel
Documentation and execution	Test manager then project manager
System structure	Development team leader and project
Acceptance testing	test manager
Test procedures and rules	Project manager and test manager
Validation of data	Administration personnel
Final project completion	Project manager then test manager then administration personnel
User interface review	Test manager then development team then client