American International University-Bangladesh (AIUB)
Department of Computer Science
Faculty of Science &Technology (FST)
Fall 22 23

Section: B

Software Quality Assurance and Testing

ONLINE DOCTOR SERVICES

A Report submitted by:

SN	Student Name	Student ID
1	MD. SAKIB HASAN MUBIN	19-40715-1
2	C.M ABDULLAH	18-38631-2
3	SHABRINA SHAHID NUR PRITY	19-40648-1
4	METHILA FARZANA	19-39692-1

Under the supervision of

Abhijit Bhowmik
Associate Professor & Special Assistant [OSA]
Department of Computer Science
Faculty of Science & Technology
American International University-Bangladesh

Software Test Plan

for

Online Doctor Services

Version 1.0 approved

Prepared by

Md. Sakib Hasan Mubin
C.M Abdullah
Shabrina Shahid Nur Prity
Methila Farzana

American International University-Bangladesh

05 December, 2022

Checked By Industry Personnel

Name: Md. Shajahan Islam Sani

Designation: Project Coordinator

Company: Brain Station 23 Ltd.

Sign:

Date: 11-12-2022

Contents

Revision History

Revision	Date	Updated by	Update Comments
0.1	03-10-2022	Mubin	1st Draft
0.2	10-10-2022	Abdullah	2nd Draft
0.3	17-10-2022	Prity	3rd Draft
0.4	24-10-2022	Methila	4th Draft
0.5	31-10-2022	Mubin	5th Draft
0.6	07-11-2022	Abdullah	6th Draft
0.7	21-11-2022	Prity	7th Draft
0.8	28-11-2022	Methila	8th Draft

1. TEST PLAN IDENTIFIER: TP_ Online Doctor Services_1.02

2. REFERENCES

- Software Requirement Engineering Document
- Software Quality and Testing Course PowerPoint Slides
- Types of software Testing- geeksforgeeks.org
- Team Gantt (Trello): Time Scheduling & Management
- Selenium Tool

3. INTRODUCTION

Background to the Problem

The Online Doctor Services is about finding doctors and emergency services online easily. When anyone need doctor emergency but it is so difficult to search a specific doctor that for needed. It is also hard to take appointment of a doctor by visiting a hospital. We can't identify right place to find out doctor services in a short time. So that, it going to be a time consuming and costly to get emergency doctor in a short time.

Solution to the Problem

By using Online Doctor Services, finding doctors and emergency services on online is so easy. People can find information about various doctors and their fees and schedules. Where a specific specialist doctor is available, people can find it by using Online Doctor Services. People can also take appointment of any doctor here. By using online Doctor Services, people can find many kinds of medical services like (find Medicine store, Emergency Ambulance Services).

4. REQUEIREMNT SPECIFICATION

4.1 System Features

1. Login

1.1. The system will allow users to login with their given username and password.

Priority Level: High
Precondition: user have valid user id and password

2. **Registration**

    2.1. User open an account by doing registration.
    2.2. Provide Name, User name, Age, Email, Password & Mobile.
    2.3. verify Name, User name, Age, Email, Password & Mobile.
    2.4. Sign up and create the account.

Priority Level: High
Precondition: verify all information

3. **Edit Profile**

    3.1. User can edit their profile by login.
    3.2. Provide Name, User name, Email, Gender & Date of birth.
    3.3. Submit the edited info

Priority Level: Medium
Precondition: verify all information

4. **View Profile**

    4.1. User can View their personal info by login.
    4.2. Click

Priority Level: Medium
Precondition: None

5. **Post Feedback**

    5.1. User can post Feedback by login.
    5.2. Click

Priority Level: Medium
Precondition: None

6. **Help Desk**

    6.1. User will get help from Help desk.
    6.2. Click

Priority Level: High
Precondition: verify all information

7. **View Other Services**

    7.1. User will get Other Services by login.
    7.2. Select more services.
    7.3. Click here.

Priority Level: High
Precondition: verify all information

8. See Doctor list

8.1. User can see doctor list of different department.
8.2. See Doctor's name, Appointment date, Available time.
8.3. Click

Priority Level: High
Precondition: verify all information

9. Take Appointment

9.1. User can take appointment.
9.2. Select Doctor's name, Appointment date, Available time.
9.3. Click

Priority Level: High
Precondition: verify all information

10. Back to Other Services

10.1. User can back to see other services.
10.2. Click Back

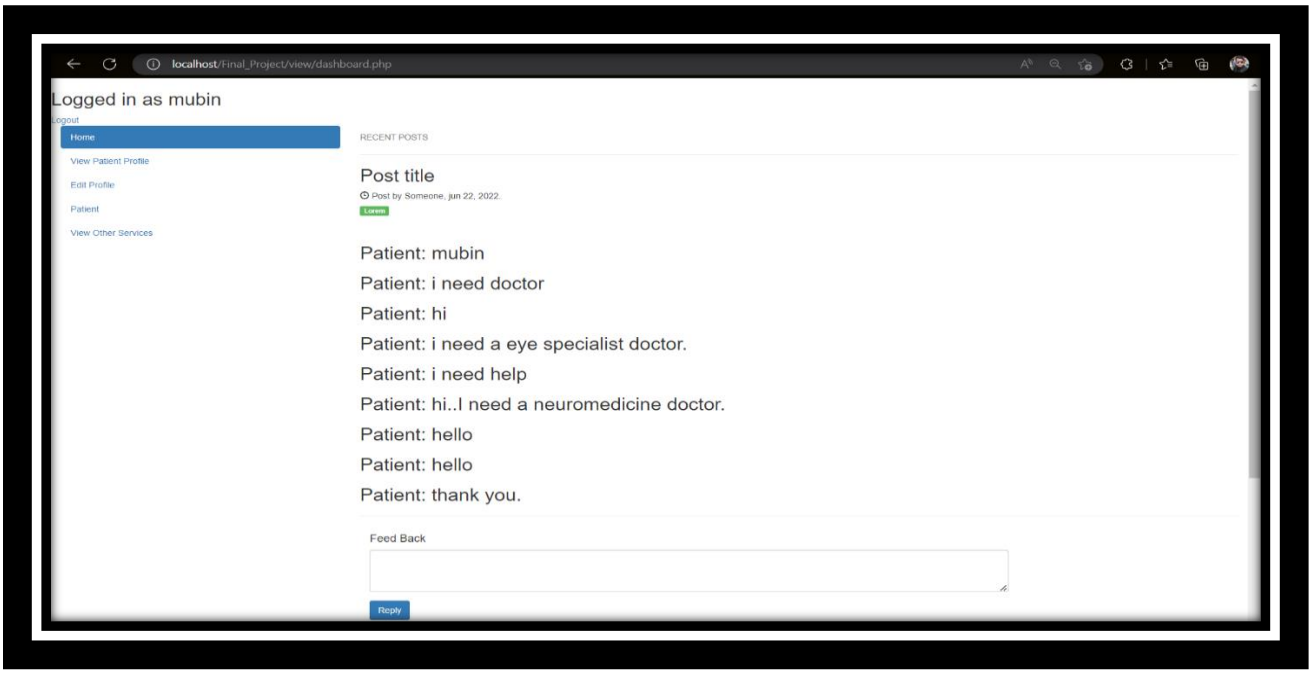
Priority Level: High
Precondition: None

4.2 System Quality Attributes

- **Performance:** Performance criteria specify how quickly or how successfully a system must carry out particular functionalities. throughput, capacity, and timeliness. It also discusses how a situation with too much users can affect the system's operation (when more users are trying to use it at a time).
- **Efficiency:** This characteristic specified how to use the system effectively. It deals with the hardware requirements for carrying out the various system operations. It consists of its processing power, storage capacity, and data transmission ability.
- **Usability:** The ease of usage can be used to gauge this. The software should be simple to use. Usability refers to how simple it is for the system's initial user, a student, to utilize and obtain services. This is required while users will use it at danger time.
- **Integrity:** Integrity, this element has to do with the integrity of the other system, for example, how easily it can cope up in mobile phone as well as computer.
- **Reliability:** How the system is reliable while using it. Whether it remains all day in maintenance or is it can provide its service without crashing most of the time.
- **Testability:** If the system encounters a bug or error, it must be able to test for that bug or error.
- **Security:** It prevents unauthorized access of random people so that the system data cannot be at risk. Only registered users can use the data.

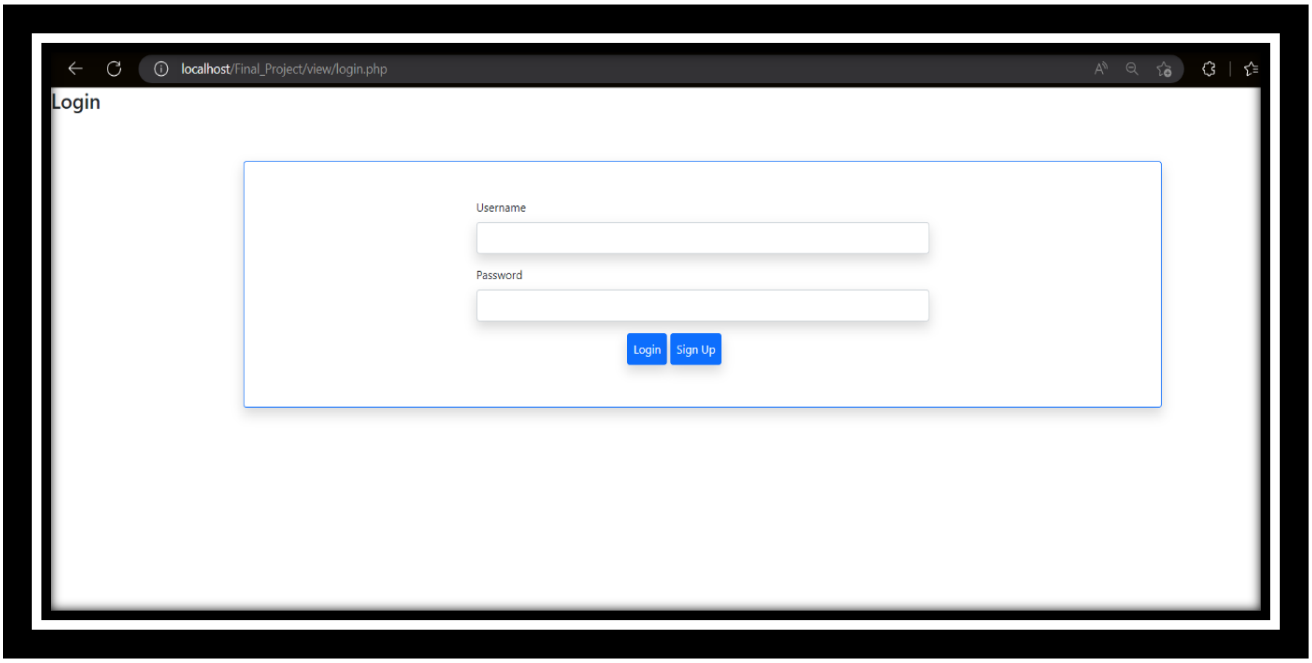
4.3 System Interface

4.3.1 Home Page



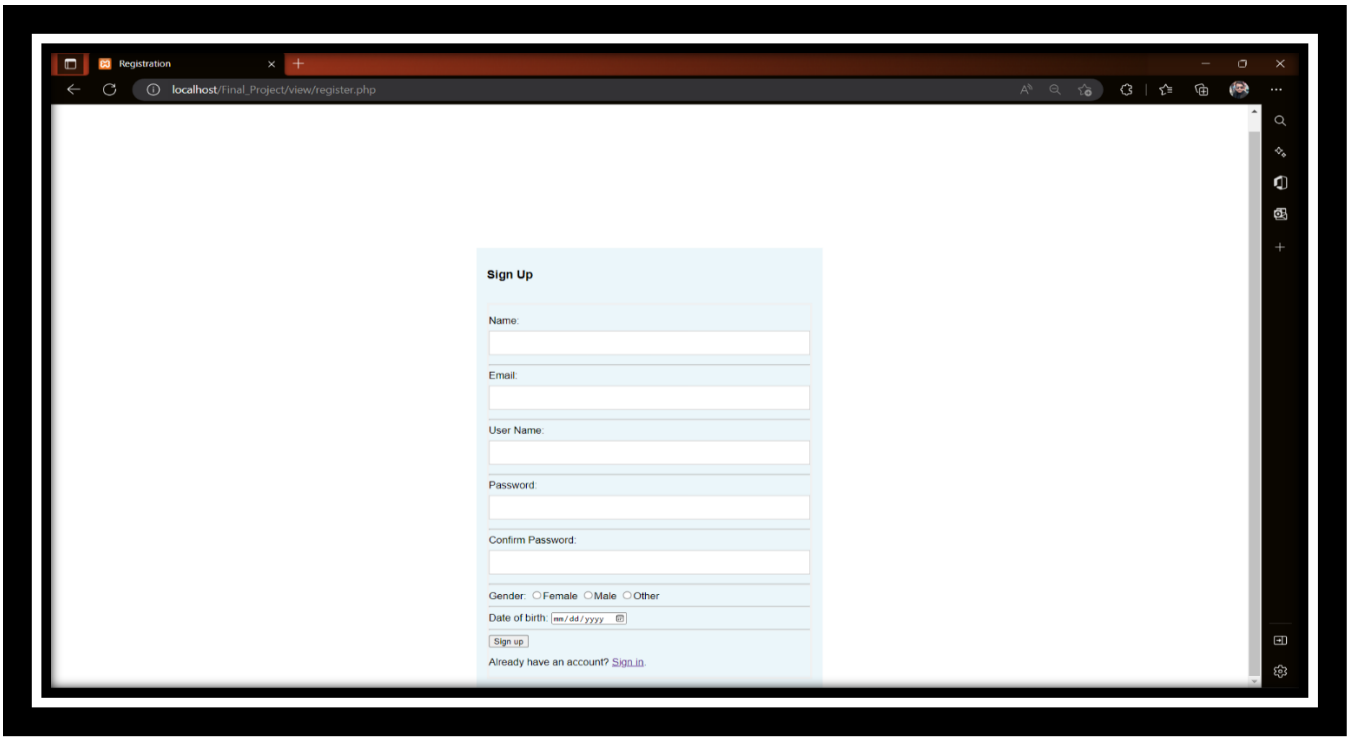
This is the home page of Online Doctor Services

4.3.2 Login Page



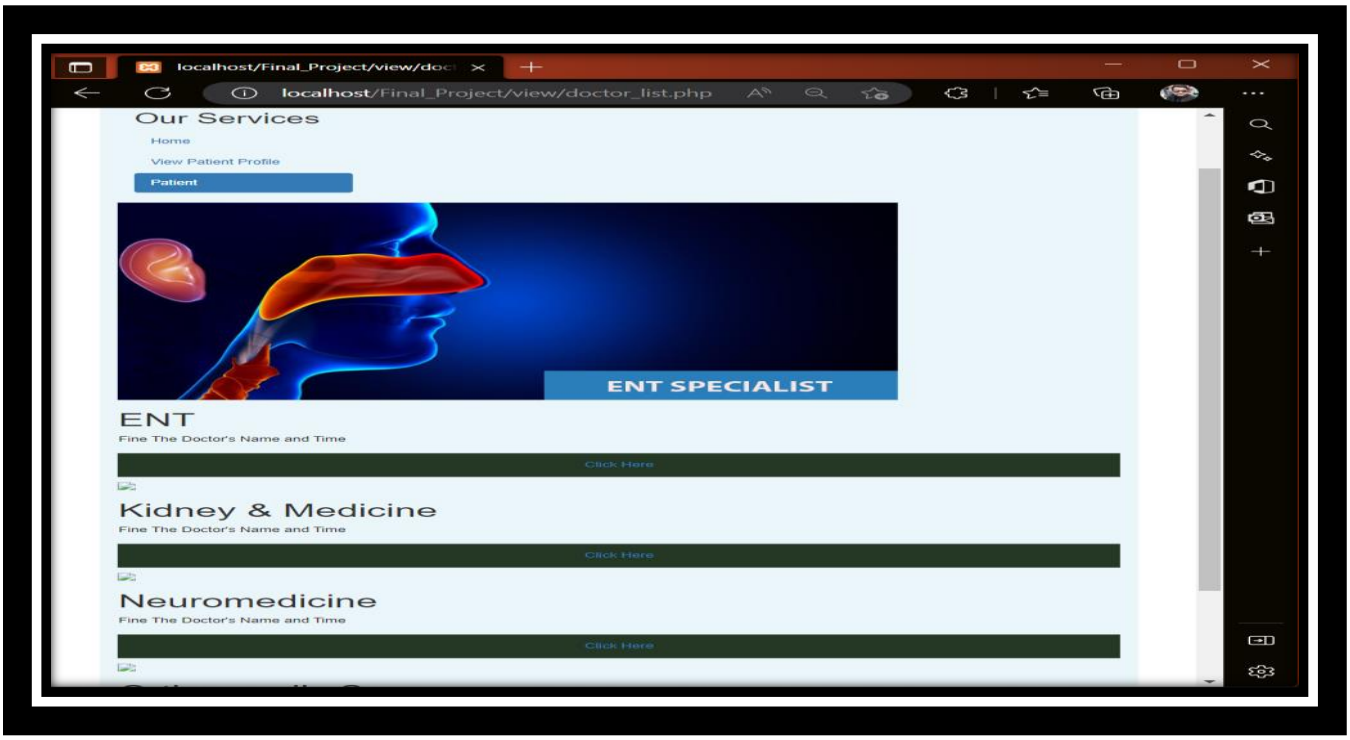
This page indicates the login interface of this website

4.3.3 Registration Page



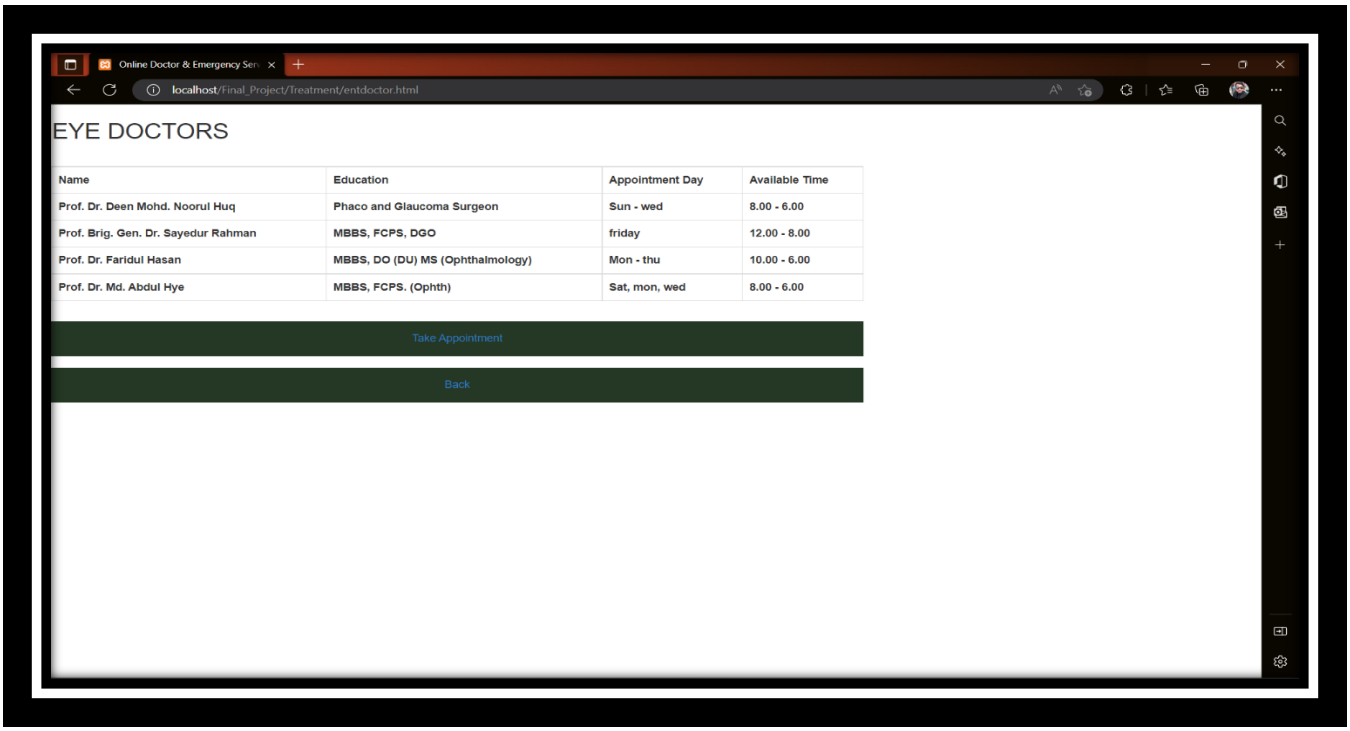
This is the Registration interface of this website

4.3.4 Other Services Page



This page shows the Services of the Online Doctor Services

4.3.5 Doctor's list



This page shows the doctor's list and details about appointment

4.4 Project Requirements

An algorithmic software cost estimating methodology is the Constructive Cost Model (COCOMO). The kind of software project we'll be employing is an **Organic** one. It is a software project that has to be worked on in a setting that is tightly tied to hardware.

Constructive Cost Model

4.4.1 Effort Estimation:

Our project is to develop an application named "Online Doctor Services".
Software project type: Organic
Coefficient<Effort Factor> = 2.4
So, **P** = 1.05 and **T** = 0.38
SLOC = 2000 Lines

Persons-months, PM = Coefficient<Effort Factor> * (SLOC/1000) ^P
= 2.4 * (2000/1000) ^1.05
= 4.96

Development time, DM = 2.50 * (PM)^T
= 2.50 * (4.96) ^0.38
= 4.29 = 4 months
= 4*4 = 16 weeks
= (16*5*9) = 720 Working hours

Required number of people, ST = PM/DM
= 4.96/4
= 1.24 = 2 people

We Have, number of peoples = 4
2 members required 4 months
So, 4 member should be required 2 months
Development Time = 2 Months Required

4.4.2 Budget Estimation:

Employee's salary is = 1600 Taka/Hours
Total Salary = (1600*720) Taka
= 1152000 Taka

Expense	Amount	Total Amount
Salary for 4 employees		1152000 Taka
2 months office rent	2*20000	40000 Taka
Electricity and other costs		6000 Taka
2 months Maintenance cost	4*10000	40000 Taka
Travel Cost	2*10000	20000 Taka
Total Cost		1258000 Taka
20% of the total cost(profit)		251600 Taka
Now total budget is		1509600 Taka

5. FEATURES NOT TO BE TESTED

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

6. TESTING APPROACH

6.1 Testing Levels

- **Unit Testing:** This level of testing is done by the developers to ensure that the functionality developed by the developers is working correctly according to the expectation. In this level the lead developer approves the module and integrates it with the system level and passes it to the SQA team. In this process, it only finds out the defects for this particular unit and needs to work around to make the unit functional to meet the expectation.
- **System/ Integration Testing:** In this level, all the modules are integrated and a system level test will be conducted by the test manager and SQA engineers to find out the existing bugs which were not able to detect on unit testing. This level of testing is time consuming and expensive. By this level of testing most of the major defects have been detected and need to work around the application to remove the bug and make the system properly functional.
- **Acceptance Testing:** This level of testing is done by some of the potential users, business personnel of the department and the project lead to ensure that the application meets the stockholders' expectations. This testing is only conducted to find out defects rather to ensure that the application meets the acceptance criteria. After the System/Integration test is completed, the acceptance test will run in parallel with the existing creating user manuals and instructions processes for one month.

6.2 Test Tools

6.2.1 Selenium

Base.java

```
package testing.assignment;

import org.openqa.selenium.WebDriver;


public class Base {

    public static WebDriver getDriver() {

        System.setProperty("webdriver.chrome.driver", "E:\\AIUB\\12th Semester\\SOFTW
        WebDriver driver = new ChromeDriver();
        return driver;

    }

}
```

Testing.java

```
package testing.assignment;

import org.openqa.selenium.By;

public class Testing {

    public static void main(String[] args) throws InterruptedException {

        WebDriver driver = Base.getDriver();

        driver.get("http://localhost/Final_Project/view/login.php");

        driver.findElement(By.id("username")).sendKeys("19-40715-1");
        Thread.sleep(2000);
        driver.findElement(By.id("password")).sendKeys("Mm01616051126*");
        Thread.sleep(2000);
        driver.findElement(By.name("submit")).click();
        Thread.sleep(2000);

        driver.findElement(By.id("username")).sendKeys("mubin");
        Thread.sleep(2000);
        driver.findElement(By.id("password")).sendKeys("Mm112233@");
        Thread.sleep(2000);
        driver.findElement(By.name("submit")).click();

    }

}
```

Test a module on Selenium Tool

6.3 Meetings

Meeting Date	**Meeting Criteria**	**Object**
14-11-22	Checking of system features and quality attributes	● Check the Functional & Nonfunctional requirements ● System's working process
21-11-22	Error & Bug Solving	● After detecting bugs list down ● Solve the bugs ● Preparation for safety
28-11-22	Conclusive	● Check the listed documentation ● Recheck the requirements ● Run the full system

7. TEST CASES/TEST ITEMS

Test Case 1: Registration

Project Name: Online Doctor Services	Test Designed by: Md. Sakib Hasan Mubin
Test Case ID: Registration_01	Test Designed date: 14-11-2022
Test Priority (Low, Medium, High): High	Test Executed by: Md. Sakib Hasan Mubin
Module Name: Login	Test Execution date: 16-11-2022
Test Title: Verifying login module	
Description: Test the Online Doctor Services website login session.	

Precondition (If any): 1. User need to register into the system

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website registration page 2. Fill up the information 3. Click on the "sign up"button.	Name: Mr. Mubin Email: mubin@gmail.com Username: mr. mubin Password: Mm112233@ Confirm Password: Mm112233@ Gender: Male Date of birth: 11/13/1999	Successful Login	Failed Login for invalid Password	Fail

Post Condition: User will go back to the login page by clicking login/sign in.

Test Case 2: Login

Project Name: Online Doctor Services	Test Designed by: Md. Sakib Hasan Mubin
Test Case ID: Login_01	Test Designed date: 14-11-2022
Test Priority (Low, Medium, High): High	Test Executed by: Md. Sakib Hasan Mubin
Module Name: Login	Test Execution date: 16-11-2022
Test Title: Verifying login module	
Description: Test the Online Doctor Services website login session.	

Precondition (If any): 1. User need to register into the system

Test Steps	**Test Data**	**Expected Results**	**Actual Results**	**Status (Pass/Fail)**
4. Go to the site loginpage 5. Fill up theinformation 6. Click on the "login"button.	Username : mr. mubin Password: mm112233	Successful Login	Failed Login for invalid Password	Fail

Post Condition: User will go into the Home page.

Test Case 3: Logout

Project Name: Online Doctor Services	Test Designed by: Md. Sakib Hasan Mubin
Test Case ID: Logout_01	Test Designed date: 14-11-2022
Test Priority (Low, Medium, High): High	Test Executed by: Md. Sakib Hasan Mubin
Module Name: Logout	Test Execution date: 16-11-2022
Test Title: Verifying logout module	
Description: Test the Online Doctor Services website logout session.	

Precondition (If any): 1. User need to login into the system

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the site's home page. 2. Click on the "logout" button.	N/A	Successful Logout	Successful	Pass

Post Condition: User will go back to the login page.

Test Case 4: Edit Profile

Project Name: Online Doctor Services	Test Designed by: Md. Sakib Hasan Mubin
Test Case ID: EditProfile_01	Test Designed date: 14-11-2022
Test Priority (Low, Medium, High): Medium	Test Executed by: Md. Sakib Hasan Mubin
Module Name: Edit_profile	Test Execution date: 16-11-2022
Test Title: Verifying edit profile module	
Description: Test the Online Doctor Services website profile edit session	

Precondition (If any): 1. User need to login into the system.

Test Steps	**Test Data**	**Expected Results**	**Actual Results**	**Status (Pass/Fail)**
1. Go to the site home page 2. Click on the "edit profile" button 3. Change theprofile information 4. Press on "save"button	Old Name: Mr. Mubin New Name : Mubin	Successful Update Profile	Successful	Pass

Post Condition: User will go into the Home page.

Test Case 5: Help desk

Project Name: Online Doctor Services	Test Designed by: Md. Sakib Hasan Mubin
Test Case ID: Help Desk_01	Test Designed date: 14-11-2022
Test Priority (Low, Medium, High): Medium	Test Executed by: Md. Sakib Hasan Mubin
Module Name: Help Desk	Test Execution date: 16-11-2022
Test Title: Verifying post title & reply module	
Description: Test the Online Doctor Services website Help Desk session.	

Precondition (If any): 1. User need to login into the system.

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the site home page. 2. Write something to the Help desk module. 3. Click submit button.	Patient: Hello. I need a Neuromedicine doctor.	N/A	Successful	Pass

Post Condition: N/A

Test Case 6: Feed Back

Project Name: Online Doctor Services	Test Designed by: Md. Sakib Hasan Mubin
Test Case ID: Feed Back_01	Test Designed date: 14-11-2022
Test Priority (Low, Medium, High): Medium	Test Executed by: Md. Sakib Hasan Mubin
Module Name: Feed Back	Test Execution date: 16-11-2022
Test Title: Verifying post title & reply module	
Description: Test the Online Doctor Services website Feed Back session.	

Precondition (If any): 1. Admin need to login into the system.

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the site home page. 2. Write something to the Help desk module. 3. Click Reply button.	Admin: Please.. click View Other Services to view our services.	N/A	Successful	Pass

Post Condition: N/A

Test Case 7: View Other Services

Project Name: Online Doctor Services	Test Designed by: Md. Sakib Hasan Mubin
Test Case ID: View Other Services_01	Test Designed date: 14-11-2022
Test Priority (Low, Medium, High): High	Test Executed by: Md. Sakib Hasan Mubin
Module Name: View Other Services	Test Execution date: 16-11-2022
Test Title: Verifying View other services module	
Description: Test the Online Doctor Services website View other services session.	

Precondition (If any): 1. User need to login into the system.

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the site home page. 2. Go to the other sevices page. 3. Choose any services 4. Click "Click Here" button.	"Click Here" for ENT	Can see the Doctor list & appointment date	Successful	Pass

Post Condition: Take Appointment or back to home page.

Test Case 8: Take Appointment

Project Name: Online Doctor Services	Test Designed by: Md. Sakib Hasan Mubin
Test Case ID: Take Appointment_01	Test Designed date: 14-11-2022
Test Priority (Low, Medium, High): High	Test Executed by: Md. Sakib Hasan Mubin
Module Name: Take Appointment	Test Execution date: 16-11-2022
Test Title: Verifying Take Appointment module	
Description: Test the Online Doctor Services website Take Appointment session.	

Precondition (If any): 1. User need to login into the system & go to the View Other Services.

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the site home page. 2. Go to the other sevices page. 3. Choose any services. 4. Go to the Appointment Now page. 5. Give Name, Doctor Name & Appointment Date. 6. Click "Confirm Appointment button.	Name: Mubin Doctor Name: Prof. Dr. Md. Abdul Hye Day & Time: Sun(9.00-5.00)	File Appended Successfully	Failed to append file for invalid Day & time	Fail

Post Condition: Take the Appointment or back to the home page.

8. ITEM PASS/FAIL CRITERIA

- With valid information, the registration should be done.
- The user profile should be created.
- A valid user name and password should be given.
- Users should be able to edit their profiles.
- The Home page should be smooth.
- Other Services and take appointments can be viewed, edited and deleted smoothly.
- Admin can view the statistical data without any compilation errors.
- Admin is able to block any type of user and delete posts.
- The test cases should be properly documented.
- All reports should be maintained.
- All problem documents should be viewed by a valid user account.
- Item pass/fail criteria depend on Test Cases. 100% defect-free system is not possible.
- If 98% or above 98% of test cases are passed then the system is passed.
- If below 98% of test cases are passed then the system is failed.

Here we have implemented a total of 08 test cases. At first, when applied the test case to the system, 75% of the test cases were passed successfully and 25% failed. The test cases were failing due to some logical errors and query-related issues on the database. When the test case was applied after solving query-related problems, all the test cases passed successfully.

9. TEST DELIVERABLES

- Test Documentation
- Test Plan
- Test Strategy
- Test Scenario

- Test Designs
- Test Cases
- Test data
- Test Results
- Bug report
- Test Summary Report
- Test Status report
- Test Scripts

10. STAFFING AND TRAINING NEEDS

Depending on the project, different methods will be used for staffing and training. If this section is a component of a Master Test Plan, it should specify the stages of the project lifecycle at which various staffing levels and skill sets are required. If this is an iteration test plan, the primary attention should be on the potential training locations and activities. The EDI interface's fundamental functions will need to be taught to the developers and testers.

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

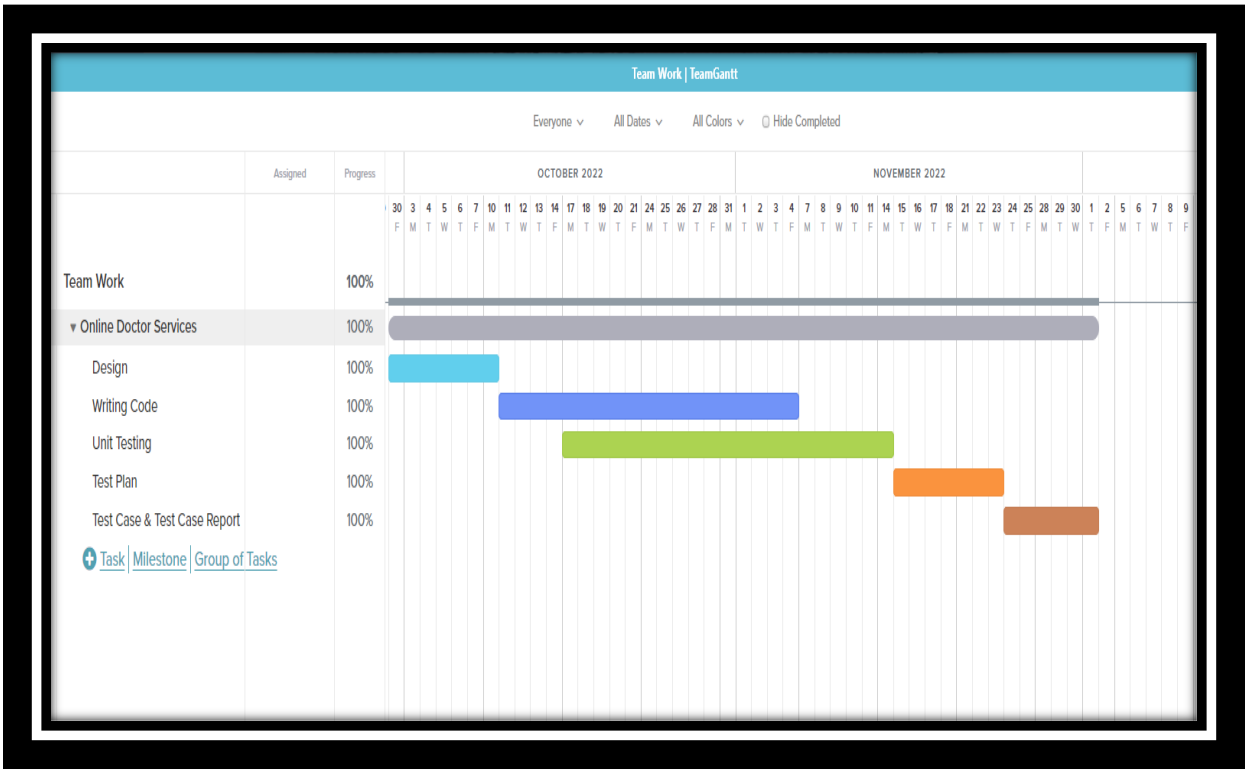
11. RESPONSIBILITIES

Name	Role	Responsibilities
C.M Abdullah	Project Manager	1. Ensure the completion of the Project in due time. 2. Conduct required interactions with customers. 3. Manage the whole project and team. 4. Match the completed project with the requirements.

Md. Sakib Hasan Mubin	Senior Developer & Lead Quality Control Engineer	1. Research, design, implement and manage software programs. 2. Write and implement efficient code. 3. Deploy software tools, processes and metrics. 4. Characterize the testing activities of test planning. 5. Check if all the tools and fundamental assets are available to execute the test cases. 6. Execute all the test cases and report defects.
Shabrina Shahid Nur Prity	Lead Quality Assurance Engineer	1. Create test plans, test forms, test cases and test information. 2. Develop test cases and prioritize testing activities. 3. Prepare all reports related to program testing carried out.
Methila Farzana	Test Engineer	1. Characterize the testing activities of test planning. 2. Check if the fundamental assets are available to execute the test cases. 3. Execute the test cases and report defects.

12. TESTING SCHEDULE

Task Name	Duration	Responsible
Design	8 days	Project Manager & Senior Developer
Writing code	24 days	Senior Developer
Unit testing	26 days	Senior Developer, Junior Developer
Test plan	10 days	Lead Quality Assurance Engineer & Project Manager
Test case & Test case report	10 days	Lead Quality Control Engineer, Test Engineer



Testing Schedule with Progress Gantt Chart

13. PLANNING RISKS AND CONTINGENCIES

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

14. APPROVALS

Project Sponsor	PASS
Development Management	PASS
EDI Project Manager	PASS
RS Test Manager	PASS
RS Development Team Manager	PASS
Reassigned Sales	PASS
Order Entry EDI Team Manager	PASS