American International University-Bangladesh (AIUB)
Department of Computer Science
Faculty of Science &Technology (FST)
Spring 22-23
Section: K
Software Quality Assurance and Testing

Online Health Care Service

A Report submitted By

SN	Student Name	Student ID
1	**MD. ISMAIL KHALIL**	**20-42583-1**
2	**MD. TANVIR AHMMAD**	**20-43015-1**
3	**MD. RIFAT**	**20-42574-1**
4	**A.M NAZMUL HOSSAIN**	**20-43037-1**

Under the supervision of

MOHAMMAD ARIFUR RAHMAN
Faculty Designation
Professor.

Software Test Plan

for

Online Health Care Service

Version 1.0 approved

Prepared by

Md. Tanvir Ahmmed, Md. Ismail Khalil, Md. Rifat,
A.M NAZMUL HOSSAIN

American International University-Bangladesh

<05.03.2023>

Checked By Industry Personnel

Name:

Designation:

Company:

Sign:

Date:

Table of Contents

Revision History

Revision	Date	Updated by	Update Comments
0.1	2023.04.25	Md. Ismail Khalil	First Draft
0.2	2023.04.26	Md. Rifat	Second Draft
0.3	2023.04.28	MD. TANVIR AHMMAD	Third Draft
0.4	2023.05.22	A.M NAZMUL HOSSAIN	Final Draft

1. **TEST PLAN IDENTIFIER:**
   RS-MTP01.3

2. REFERENCES

[1] Fox, S. and Duggan, M., 2013. Health online 2013. *Health*, *2013*, pp.1-55.

[2] Rezaei Aghdam, A., Watson, J., Cliff, C. and Miah, S.J., 2020. Improving the theoretical understanding toward patient-driven health care innovation through online value cocreation: systematic review. *Journal of medical Internet research*, *22*(4), p.e16324.

INTRODUCTION

Background to the Problem

Acting as a communication bridge between providers and consumers, digital technologies have the potential to transform 'digital healthcare' by enabling consumers to receive care and support when and where they need it. It's hidden. The goal of this project is to automate or bring online the processes of routine tasks such as finding available hospitals, admitting patients, and assigning doctors and nurses. This initiative will continuously automate medical and emergency services. We have done our best to make the complex process of providing medical services as simple as possible using a structured modular approach and a menu-oriented interface. We have tried to design the software in such a way that it is easy for users to operate and allows additional extensions with little effort. The main goal of our software is to automate each task so that it can be done quickly and easily instead of doing it manually which is time consuming.

Health issues are very important for every human. Every day, we face many problems related to health issues. For example, when someone suddenly becomes ill, we may need doctors, medicine, nurses, ambulances, and many more. But managing that moment becomes tough. especially in rural areas. Hospitals and doctors, in particular, are in short supply. Many times, the necessary medicine is not available. Patients are often alone at home or have no one around them, so having a home delivery system is very important. Sometimes the patient is in such a critical condition that he cannot be moved, in which case the doctor or nurse has to be brought home. The reason for wasting a little time may be that the patient's physical condition worsens or that he often dies. For him, time management is much more important. Ambulance management has also been given much priority in our software. This is because an ambulance is needed quickly to move a patient. Ambulance service might be difficult to come by at times, and as a result, many people have suffered significant losses. There is no software in our country that brings all of the help of the health relay together. Most of them are demo-type software because there are not all kinds of updates in the database.

Solution to the Problem

As we mentioned in the previous paragraph, our main goal is to reduce the time spent on treatment and the death rate, and we can provide solutions to this problem. Thus, the first and unique system of our software is an emergency call system that allows the patient to immediately contact hospitals and doctors. Because most of the time, patients have no idea about hospitals or doctors suitable for primary care. This helps them minimize their time and quickly start primary care. Another function we implement in our software is the emergency service. They can easily access vehicles according to their location. Since many patients cannot get free vehicles at that time, their situation becomes critical. The last feature we are adding is an online drug delivery system. The reason is that some aging people find it difficult to go to the pharmacy to take their medicine. They can order their essential medicines at home.

Our main goal of the software application is to provide health services based on the Internet, save valuable time, and bring patients under primary treatment. Many jobless people will get some work by providing home services like delivering medicines or nursing. Overall, Bangladesh will see a new era in its health care system.

As per our analysis, there is some software available in our area, but they are only providing the medicines. They have not been updated for quite some time, and they are not usable right now. Even so, no software has yet been developed to help a patient in a critical situation when he or she falls ill in a hurry.

3. REQUEIREMNT SPECIFICATION

2.1 System Features

1. System Registration

Functional Requirements

1. Need to choose an account type between admin, user and deliveryman and others.

2. System requires a password and user id or Email-ID for logged in.

3. System also requires password which is 8 character long with must to follow a Capital Letter, small letter, numerical number and special character.

4. Anyone can registration by entering their user id, password, phone number, Email address, address for users.

2. System Login

Functional Requirements

1. The software shall allow users to log in with their given valid Email-ID and password.

2. If the email and/or password have been inserted wrong more than three times, the random verification code will be generated by the system to retry the login.

3. If the number of login attempt exceed its limit (multiple-times), the system shall block the user account login for one hour. Then again try with authentic username and password.

3. Profile

Functional Requirements

1. After login into the ID user can set his/her age gender location.

2. If the user has previously experienced a medical problem, he/she can enter it.

3. User can set multiple contact number in case some kind of network issue.

4. System will verify if the number is correct or not and send a message if invalid number.

4. Update Personal Information

Functional Requirements

1. The user will be able to update their personal information in the profile section.

2. User can edit their email, mobile no, profile picture and the password.

3. The system will ask the user to enter password if the user chooses to delete existing information in their profile.

5. Emergency ambulance

Functional Requirements

1. User can call emergency vehicle for health service

2. This will allow user to choose different kind of vehicle like ambulance, air ambulance etc.

3. This system will also work under a certain location chosen by user

4. System will send a message to both consumer and provider when the vehicle is confirmed for the service.

6. Medicine Delivery

Functional Requirements

1. User can directly search for medicine writing the name of it.

2. All the shop list containing the desired medicine will be shown as list.

3. Users can select medicine for order.

4. System will send a message if the medicine is not available in the shop.

7. Health tips

Functional Requirements

1. User can select health tips depending on his health condition.

2. There will be audio and video options user can select between them.

3. Also user will get some contact number of doctors for free advice and also provide doctors availability on a specific time.

8. Payment Option

Functional Requirements

1. Users can payment their payment using the application.

2. There will several payment methods options like bKash, DBBL, visa card and other options.

9. Deactivate account

Functional Requirements

1. The user will be able to deactivate their account if they want.

2. To deactivate the account, the system will request a password and then send a verification code to the registered email address.

3. According to policy, if a user is not available at a specific time, the system will deactivate his or her account.

2.2 System Quality Attributes

Non-Functional Requirements:

There are two types of perspective of quality attributes
First one is user perspective. There are 8 important primarily quality attributes to user perspective.

1. **Availability**: The system shall be at least 98.5 percent available on every seven days a week between 12.00 am to 11.59 pm at local time.

2. **Efficiency**: There are at least 3.5 percent of the processor capacity, disk space 1.7 MB/S, memory 120MB and communication bandwidth 512kbps shall be available to properly run this system.

3. **Flexibility**: A maintenance programmer who has at least 8 months of experience shall be able to add new feature and function including code, modifications and testing into the system with no more than three hours.

4. **Integrity**: When user try to login into the system, there shall have to two step verification. One step is while user try to login into the system, the system will send a verification code to the user via mail and user shall have to use that verification code to login and the second step is user shall have to use their own password while they create the password to sign up this system.

5. **Interoperability**: When a user sign-up to the system the user has to give some their general information like user name, phone no., email. So, system need to justify the information whether the user given information. For that reason, the system shall be able to import valid information which shall have matched to the user given information. The system shall import the information from local election commission office.

6. **Reliability**: The system shall no more than three experimental runs out of 800 can be lost.

7. **Robustness**: In the system, there are two kinds of users. One is an applicant, and another is recruitment. If the recruitment fails to edit their post before the applicant saves the post, the recruitment shall be able to recover all changes made in the post being edited and shall be able to publish that edited post within 20 seconds.

8. **Usability**: When the recruitment is posted, the system will be able to upload that post within 15 seconds. applicant sees the recruitment post and if the applicant wants to comment on the post. Within 2 seconds, the system should be able to display that comment to the recruitment.

And the last one is developer perspective. There are important primarily quality attributes to developer perspective:

I. **Maintainability**: Suppose there is a problem arise in the system that user can't upload their post. A maintenance programmer who has at least 8 months of experience can solve this problem within 3hour without any extra helping hand.

II. **Portability**: The system must shall able to run any platform or any operating system. Like Windows, Linux, Android, Apple, Unix, Ubuntu, Haiku, Rhapsody etc.

III. **Reusability**: The system functions shall have to be designed in such way that can be reasonable for different any other system.

IV. **Testability**: If users want to upload a post, the system should be able to do so within 15 seconds. If a user comments on a post, the system must display the comment within 2 seconds. If one user communicates with another via audio or video, the system must connect the users within 5 seconds. If the user refreshes the page, the system will refresh that page within 3 seconds.

Besides these two perspectives, there are also some quality attributes. Like:

I. **Performance**: If recruitment upload a file, the applicant shall able to download the file in 20 second or less over a 1MBps bandwidth connection. Here a condition that file size must be within 18 MB.

II. **Learnability**: The system user interface should be clearly and simply structured and free of all dead weight. It should explain to the user what the software system should do.

III. **Readability**: When a programmer will build the system with code. The code shall have to be well structured should be use comment, should be maintain the code alignment. This is that for reason when another programmer will see the system code that the programmer shall able to understand the codes very easily without any hassle.

IV. **Scalability:** The system shall able to handle load increases without decreasing performance or the possibility to rapidly increase the load.

2.3 System Interface

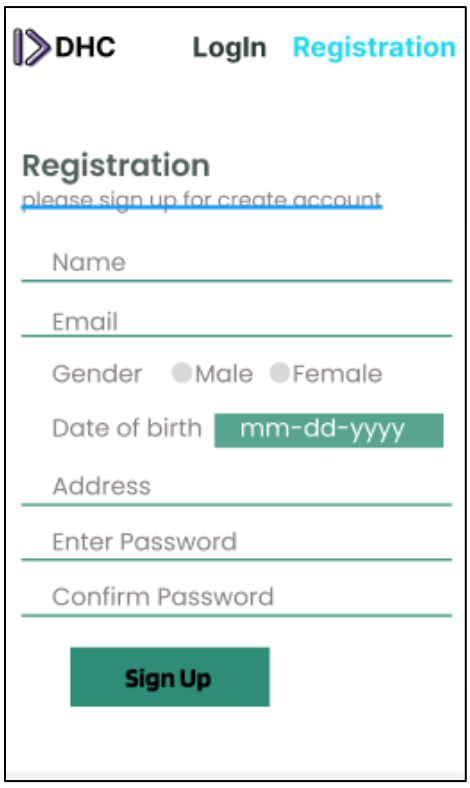

Figure: Registration Page

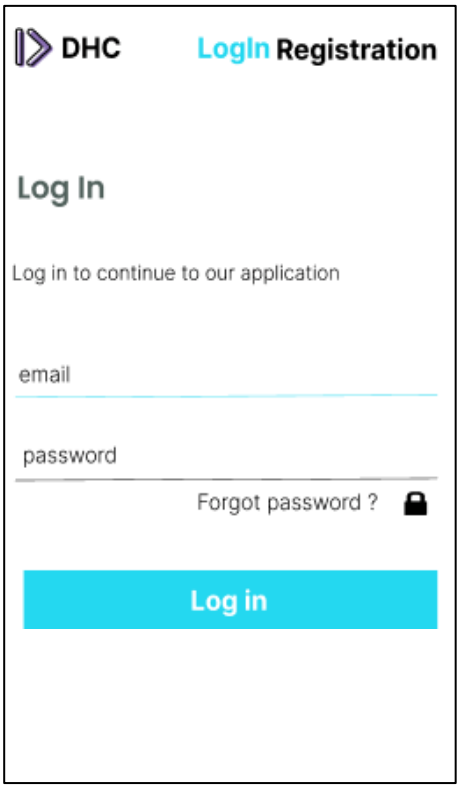

Figure: Login Page

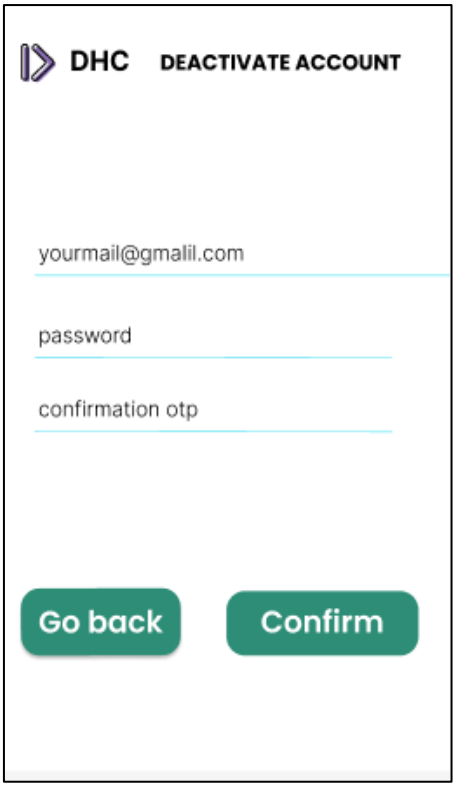

Figure: De-active account

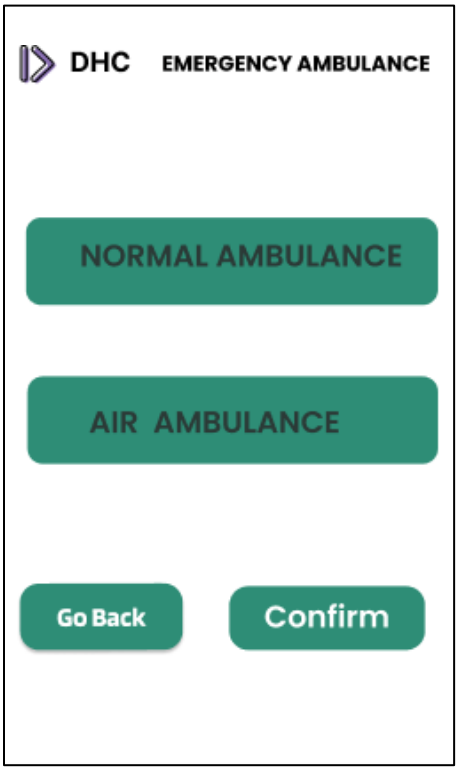

Figure: Emergency Ambulance

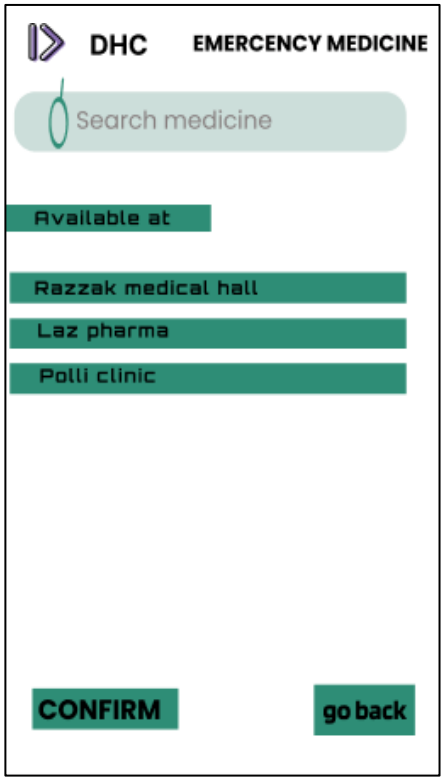

Figure: Emergency Medicine

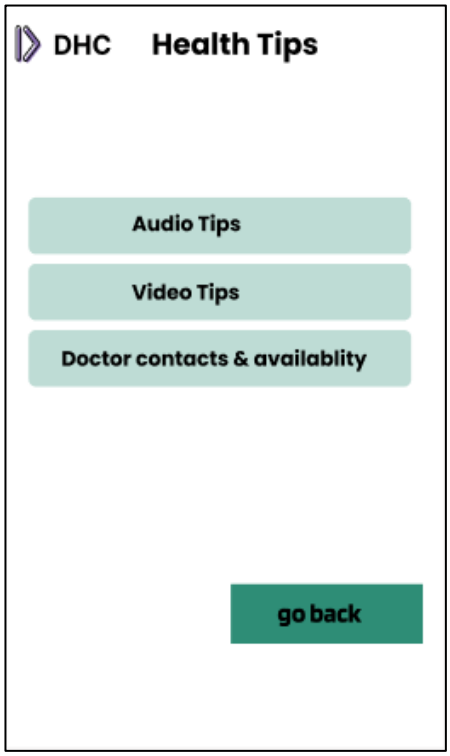

Figure: Health Tips

Figure: Payment

2.4 Project Requirements

Delivering the product on schedule, on budget and at the required quality level is our main goal in project management. The main obstacles are time, cost, scope, resources and environment.

We must complete our work on time, on schedule and on budget. We also need to add the necessary features to the system. We must conserve and effectively manage the necessary resources. If we manage each limit correctly, we get a nice result.

- By 12 weeks, a practical answer ought to be available.
- The program shouldn't consume more than 100 mb of storage after installation.
- Although developers prefer Visual Studio code, they can also use alternative editors.
- Git will be the de facto code management and version control system.
- The source code will be kept on GitHub, where many developers will work together.
- Unit testing will be done with Selenium.
- Unit testing will be done with Selenium. Interactive prototyping will be performed using a Figma.
- The estimated cost of the project is 2,000,00 BDT.

Time Estimation:

For creating prototype hours needed:100 hours. For Developing Hours needed: 880 hours.
For revision hours needed: 80 hours
For testing & debugging hours needed:220 hours Total working hour :1220
hours Daily working hour: 12 hours
Total days need:1220/12=101 days or 3.5 months or 14 weeks.

Resources:

2 app developers, 2 software testers, 4 Custom Built PCs, 5 Android mobile smartphones, 4 LAN Connection.

Language & Database:

Programming Language: Java, Dart. Mobile UI Framework: Flutter, Database: MySQL.

Environment: We need an environment to build this software. So, we can create an office space.

Budget: Total budget 2,000,00 BDT

Total Development Time **3** Months Or 12 Weeks.

5. FEATURES NOT TO BE TESTED

All the Features in this software need to be tested.

6. TESTING APPROACH

6.1 Testing Levels

Our system testing phase will be partitioned into several steps. It starts with the Unit testing and ends with the Acceptance testing. There will be at least one full-time independent test person for system/integration testing. Most testing will be done by the test manager with the development teams' participation.

UNIT TESTING: Unit Testing will be done by the developer and will be approved by the development team leader. Proof of unit testing (test case list, sample output, data printouts, defect information) must be provided by the programmer to the team leader before unit testing will be accepted and passed on to the test person. All unit test information will also be provided to the test person.

INTEGRATION TEST: The second level of testing is integration testing. the present level. The modules or features will be linked together one at a time. The leader of our development team will oversee this testing and determine whether or not the data transmission between these modules is accurate. At this level, we'll use strategies like the sandwich strategy, big bang approach, bottom-up integration, and top-down integration.

SYSTEM TEST: Our quality assurance team will carry out this testing level once the unit test and integration test have been completed. Our quality team will check the complete system against the customer's specification once our full program has been developed. These testing methods are known as black boxes. Various testing methods will have been used at this testing level. In addition to performing functional testing, our testing team also performs nonfunctional testing such as volume, load, and performance testing.

ACCEPTANCE TESTING: This testing will be performed by the actual end users with the assistance of the test manager and development team leader. The acceptance test will be done in parallel with the existing manual ZIP/FAX process for a period of one month after completion of the System/Integration test process.

6.2 Test Tools

The only test tools to be used are the standard AS/400 provided utilities and commands.

The Program Development Manager (PDM) will be used as the source version configuration management tool in conjunction with the in-house check-in/check-out control utility. The check-in/out utility is part of each developer's standard AS/400 access menu.

The initial prototypes for the new screens will be developed using the AS/400 Screen Design Aid (SDA). The initial layout and general content of the screens will be shown to the sales administration staff prior to proceeding with testing and development of the screens.

6.3 Meetings

Every week, the quality assurance team leader will set up a meeting to assess the progress being made on our application. We will also regularly perform code reviews and code walks through in order to find errors and bugs as soon as possible. Each week our project manager will meet with our quality assurance team lead to go over the status of our project. Every two weeks, all of our staff members who are involved in the project will participate in the inspection section.

7. TEST CASES/TEST ITEMS

Table 1: Test Case for Registration

Project Name: Online Health care services			Test Designed by: MD. ISMAIL KHALIL	
Test Case ID: FR_1			Test Designed date: 4/25/2023	
Test Priority (Low, Medium, High): High			Test Executed by: MD. ISMAIL KHALIL	
Module Name: Registration			Test Execution date: 4/25/2023	
Test Title: User sign up process				
Description: Test the app's registration page to see if the user can successfully register their information.				
Precondition (If any): User must give proper information.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Click on Signup button 3. Fill up the form 4. Click submit	User id: ismail91 Password: ismail99# Email: ismail.k.aiub@gmail.com Phone number: 01725640626	User should sign up to the application	As expected	Pass
Post Condition: User is validated with database and successfully sign up with account. The account session details are added in the database.				

Table 2: Test case for Login

Project Name: Online Health care services		Test Designed By: MD. ISMAIL KHALIL		
Test Case ID: FR_2		Test Designed Date: 4/25/2023		
Test Priority (Low, Medium, High): Medium		Test Executed By: MD. TANVIR AHMMAD		
Module Name: Login Session		Test Execution Date: 4/25/2023		
Test Title: Verify login module with valid email and password.				
Description: Test the app login page to see whether the user can successfully log in to the application.				
Precondition (If Any): User must have valid email and password.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the app login page 2. Enter email id 3. Enter password 4. Click on Login	Email id: ismail.k.aiub@gmail.com Password: ismail99#	User should properly login to their account.	As expected,	Pass.
Post Condition: User is validated with database and successfully registered into the application. The account session details are logged in the database.				

Table 3: Test case for Dashboard

Project Name: Online Health care services		Test Designed By: A.M NAZMUL HOSSAIN		
Test Case ID: FR_3		Test Designed Date: 4/26/2023		
Test Priority (Low, Medium, High): Medium		Test Executed By: MD. TANVIR AHMMAD		
Module Name: Dashboard page		Test Execution Date: 4/26/2023		
Test Title: Verify the accessibility in all the option.				
Description: Test all the option is functional which are in profile page.				
Precondition (If Any): User should have valid username and password.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the app Login page. 2. Put email and password and click on Login. 3. Click on Emergency option. 4. Click on Emergency call option. 5. Click on Emergency vehicle option. 6. Click on Medicine option. 7. Click on Payment option. 8. Click on Health Tips option.	Email id: ismail.k.aiub@gmail.com Password: ismail99#	User should properly access all the page by clicking on them.	As Expected,	Pass
Post Condition: User log activity should be tracked properly.				

Table 4: Test case for Reset Password

Project Name: Online Health care services		Test Designed By: MD. ISMAIL KHALIL		
Test Case ID: FR_4		Test Designed Date: 4/26/2023		
Test Priority (Low, Medium, High): Medium		Test Executed By: MD. ISMAIL KHALIL		
Module Name: Reset Password		Test Execution Date: 4/26/2023		
Test Title: Verify getting warning and receiving the new password				
Description: Test app login page whether user gets warning when they input wrong password and gets new password when they click forget password button.				
Precondition (If Any): User must have an account.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the app login page. 2. Click Forget Password button. 3. Provide Email Id 4. Click Reset Password	Email id: ismail.k.aiub@gmail.com Password: ismail99#	User should get waring and get the new password by email.	As expected,	pass
Post Condition: N/A				

Table 5: Test case for Update Personal Information

Project Name: Online Health care services			Test Designed by: MD. TANVIR AHMMAD	
Test Case ID: FR_5			Test Designed date: 4/26/2023	
Test Priority (Low, Medium, High): High			Test Executed by: MD. ISMAIL KHALIL	
Module Name: Update Information			Test Execution date: 4/26/2023	
Test Title: Test the procedure of user account information Update				
Description: update: Verify user information update process				
Precondition (If any): User must have registered DHC Email-ID& Password				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open the software 2. Select Profile from dashboard section 2. Select Information Update from profile section. 3. User need to provide the necessary Information which he/she wants to update. 4. Then DHC will check those data and confirm the information update.	Email-ID: ismail.k.aiub @gmail.com Password: ismail99#	DHC will successfully update user's information.	As expected,	Pass
Post Condition: User successfully updated his/her account information.				

Table 6: Test Case for Medicine

Project Name: Online Health care services			Test Designed by: Md. Rifat	
Test Case ID: FR_6			Test Designed date: 4/26/2023	
Test Priority (Low, Medium, High): High			Test Executed by: MD. ISMAIL KHALIL	
Module Name: Medicine			Test Execution date: 4/26/2023	
Test Title: Test website medicine page				
Description: Asking for medicine providing shop name, medicine name with payment information.				
Precondition (If any): User must be registered and logged in with valid information.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Click "Emergency Medicine" button 3. Search Medicine 4. Select shop name. 5. Click "Confirm" button 6. Provide payment details.	Location: Bashundhara R/A Shop Name: Bolaka Pharma Medicine name: Tufnil - 20 Payment option: Cash on delivery	User should be able to order Tufnil-200 medicine in Bashundhara R/A.	As Expected,	Pass
Post Condition: The medicine shop and location will be updated anytime in the database when user select his current location.				

Table 7: Test Case for Payment Getway

Project Name: Online Health care services			Test Designed by: MD. ISMAIL KHALIL	
Test Case ID: FR_7			Test Designed date: 4/27/2023	
Test Priority (Low, Medium, High): High			Test Executed by: MD. ISMAIL KHALIL	
Module Name: Payment Option			Test Execution date: 4/27/2023	
Test Title: Test website Payment Option page.				
Description: Complete payment with valid account number.				
Precondition (If any): User must have valid mobile banking account for online payment.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website. 2. Click on “Medicine” 3. Select medicine and related information. 4. Click on “Confirm” 5. Select “Bkash” 6. Insert account number. 7. Insert amount 8. Click on “Pay” button.	Account number: 01725640326 Amount: 450	User should be able to pay properly.	As Expected,	Pass
Post Condition: N/A				

Table 8: Test Case for Emergency Ambulance

Project Name: Online Health care services			Test Designed by: MD. ISMAIL KHALIL	
Test Case ID: FR_8			Test Designed date: 4/27/2023	
Test Priority (Low, Medium, High): High			Test Executed by: MD. ISMAIL KHALIL	
Module Name: Emergency Vehicle			Test Execution date: 4/27/2023	
Test Title: Test website Emergency Vehicle page				
Description: Complete Calling for vehicle by providing user location and vehicle Type				
Precondition (If any): User must have registered into the website				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Click “Emergency Vehicle” 3. Select “Normal Ambulance” 4. Click “Confirm” button	Location: Bashundhara R/A Vehicle Type: mini Ambulance	User should be able to call City hospital for their ambulance.	As Expected,	Pass
Post Condition: The phone number and location will be updated anytime in the database when user select his current location or changes his contact number.				

Table 9: Test case for Log out

Project Name: Online Health care services			Test Designed by: MD. ISMAIL KHALIL	
Test Case ID: FR_9			Test Designed date: 4/27/2023	
Test Priority (Low, Medium, High): Medium			Test Executed by: Md. Rifat	
Module Name: Log Out			Test Execution date: 4/27/2023	
Test Title: Test Webpage for Log Out				
Description: Verify user can logged out properly				
Precondition (If any): User have to logged in first with his/her valid information				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Click Log out	User id: ismail99 Password: ismail76#	User should easily log out from the system	As expected,	Pass
Post Condition: User will log out from system				

8. ITEM PASS/FAIL CRITERIA

This method is used to determine whether a test case passed or failed: Recommendations are issued when all test cases are successfully completed. The team leader makes these decisions based on the test results. The software framework cannot be removed until all bugs are fixed. When the final program is released, there will always be some bugs in the system. Therefore, the test manager and project manager decide on the release of the program and which test numbers pass. Only the test manager and the project manager are responsible for this. If 98% of the test cases are successfully executed during the test session, we will proceed with the software release.

9. TEST DELIVERABLES

The Software Quality and Testing Plan defines the technical and managerial processes necessary for the system's development and delivery.

- First, an acceptance test plan, which functions as a contract between our project and the creators of the project to be published.

- Then we'll need a system integration strategy. Because system integration is described as a process, we may utilize it to connect various computer systems or software applications to a single, bigger system, allowing each solution to work functionally together.

- In the unit test strategy part, we must assess the system that will be tested.

- Screen prototypes are made up of many papers. That single prototype is a redesigned Iterative Prototyping. Iterative prototyping entails developing a prototype based on the product design, evaluating it for usability and functioning, and then modifying what didn't work. Following the completion of testing, the research team will develop and produce a fresh version for testing.

- Mockup reports provide a framework for entering and copying graphics, as well as the opportunity to experiment with different formats of charts, graphs, and illustrations and arrange them in such a way that the reader does not have to switch back and forth in the report to match a copy of the exemplary artwork.

- Here are discussed the design goals, high-level system decomposition, concurrency identification, hardware and software platforms, acceptance test plan, system integration plan, screen prototypes, software control implementation, and report mock ups. Incident reports are critical for employee safety and developing best practices in the workplace. Proper incident documentation contributes to the success of a project. We created a report and a complete explanation of our project in our project. A test

manual that details the unit and system tests performed on the system prior to delivery, as well as the expected results.

- The test log records events that occurred during a test run or planned run, as well as the status of each checkpoint. In our project, we updated each checkpoint and collected data on our activities and methods. An employee turnover report is a summary of the number of dismissed workers among current employees in a company. It is the monthly analysis report, which is generated monthly, and the average for the year is determined. As a result, it is critical to our initiatives and plays a vital role.

10. STAFFING AND TRAINING NEEDS

It is advised that this project have at least one full inspector due to the structure and stages of project distribution. For the assessment, the person will need to be given some time at the beginning of the project, and then, roughly six months later, they will need to be provided full-time. The project/test manager will take over if a different tester is not available. To include a thorough and pertinent study, the following preparation-related topics should be considered. The personnel for this project have long been planned. The majority of the group will participate in particular research tasks, which are covered in greater depth in the section on responsibilities.

- The developers and testers will need to be taught Java, Dart, Flutter, and MySQL.
- Automation tester should gain the proper knowledge and also have the experience to operate the tools.

11. RESPONSIBILITIES

	TM	PM	Dev Team	Test Team	Client
Acceptance test Documentation & Execution	X	X		X	X
System/Integration test Documentation & Exec.	X		X	X	
Unit test documentation & execution	X		X	X	
System Design Reviews	X	X	X	X	X
Detail Design Reviews	X	X	X	X	
Test procedures and rules	X	X	X	X	
Screen & Report prototype reviews			X	X	X
Change Control and regression testing	X	X	X	X	X

12. TESTING SCHEDULE

The project plan lists the following test activities. The project plan schedule lists the exact date and time for each activity. The project schedule and plan also include a list of people needed for each phase. The project manager, in collaboration with the leaders of the development and test teams, organizes the employees of the management team, the customer, the test team and the development team necessary for each task.

	Project Duration	Start time	End time
DHC-2 Documentation	3	2-Mar-23	5-Mar-23
DHC-3 Design	3	6-Mar-23	9-Mar-23
DHC-4 Test plan	3	10-Mar-23	13-Mar-23
DHC-5 Unit testing	3	14-Mar-23	17-Mar-23
DHC-6 Integration Testin	3	18-Mar-23	21-Mar-23
DHC-7 System testing.	3	22-Mar-23	25-Mar-23
DHC-8 Acceplance Testin	3	26-Mar-23	29-Mar-23
DHC-9 Project Completio	3	30-Mar-23	2-Apr-23
DHC-10 Feedback	3	3-Apr-23	6-Apr-23

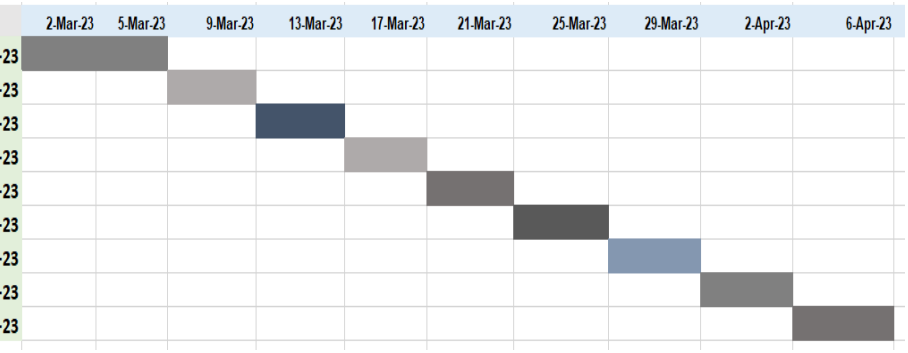

Figure: Testing Schedule (Using Jira)

13. PLANNING RISKS AND CONTINGENCIES

Risks Planning

Technical, programmatic, and process risks are identified and categorized as part of software risk management, which then forms the basis of a plan that connects each to a mitigation approach. Throughout the project, the project manager keeps an eye on risk. If any do, a particular owner takes a mitigating step.

- **Lack of encrypted data:** Keep an eye on security and back up the data with highly encryption.
- **Attempt unauthorized access:** Consecutively three failed login attempts in an hour, the user will be restricted.
- **Error in Functionalities:** Regularly test the application and make a daily backup.
- **Wrong SQL Command for Sensitive Data:** Keep security scans and backups up to data.

Contingency Planning

A contingency plan in project management is a defined, actionable plan that is to be enacted if an identified risk becomes a reality. It is essentially a “Plan B”, to be put in place when things go differently than expected.

- **Power outages:** We can face the load shedding that's why we need to always ready a backup power source.
- **Network Failure:** We will install two fiber optics connection from the different ISP as if one will be work as back up of another.

14. APROVALS

Project Sponsor - Steve Sponsor	
Development Management - Ron Manager	
EDI Project Manager - Peggy Project	
RS Test Manager - Dale Tester	
RS Development Team Manager - Dale Tester	
Reassigned Sales - Cathy Sales	
Order Entry EDI Team Manager - Julie Order	