

Internship at CMED,Imtiaz Ahmed Chowdhry(161014052)

by Ulab Library

Submission date: 29-Apr-2020 11:02PM (UTC+0530)

Submission ID: 1311269233

File name: Internship_at_CMED,Imtiaz_Ahmed_Chowdhry_161014052.docx (4.04M)

Word count: 4648

Character count: 25338

INTERNSHIP AT CMED HEALTH LTD.

IMTIAZ AHMED CHOWDHURY



INTERNSHIP AT CMED HEALTH LTD.

IMTIAZ AHMED CHOWDHURY

3

An internship report submitted
in partial fulfilment of the requirements
for the degree of

Bachelor of Science in Computer Science and Engineering

UNIVERSITY OF LIBERAL ARTS BANGLADESH
Dhaka, Bangladesh

April 2020

DECLARATION

I declare that this report entitled “*INTERNSHIP AT CMED HEALTH LTD.*”
8 is the result of my own research except as cited in the references. The report has not
been accepted for any degree and is not concurrently submitted in candidature of any
other degree.

Signature : 

Name : Imtiaz Ahmed Chowdhury
ID : 161014052
Date : April 23, 2020

CERTIFICATE OF APPROVAL

The project report entitled “*INTERNSHIP AT CMED HEALTH LTD.*” is
submitted to the Department of Computer Science and Engineering at University of
Liberal Arts Bangladesh (ULAB) in partial fulfillment of the requirements for the
degree of Bachelor of Science.³

Dated: April 2020

Md Abdul Mottalib, PhD

Professor & Head of the Department
Computer Science and Engineering
University of Liberal Arts Bangladesh

Signature & Date

Dr. Farhana Sarker

Assistant Professor and Course Coordinator
³ Computer Science and Engineering
University of Liberal Arts Bangladesh

Signature & Date

DEDICATION

To my lovely parents, who gave me endless love, trust, constant encouragement over the years, and for their prayers.

To my mentors and peers for their patience, support, love, and for enduring the ups and downs during the completion of this thesis.

This report is dedicated to them.

ACKNOWLEDGEMENT

I wish to express my deepest appreciation to all those who helped me, in one way or another, to complete this internship. First and foremost, I thank Almighty who provided me with strength, direction and purpose throughout the internship.

Special thanks to my internship supervisor Dr. Farhana Sarker all her patience, guidance and support during the execution of this report. Through her expert guidance, I was able to overcome all the obstacles that I encountered in these enduring three months of my internship. In fact, she always gave me immense hope every time I consulted with her over problems relating to my report.

I want to thanks the founder of CMED Health Ltd and my industry supervisor Dr. Khondoker Abdullah Al Mamun for his help and consistent supervision which contributed enormously to my self-awareness. Additionally, say thanks to him for his direction which was a striking power that empowered me to effectively finish the internship program.

Special thanks to the Head of the Department Md Abdul Mottalib, PhD for his relentless counsel support to improve my knowledge.

13
ABSTRACT

This internship report emphasizes the work experience I have assembled as an Intern in the IT and Technical department of CMED Health Ltd from January 16, 2020, until April 16, 2020. The substance of all chapters is extensively clarified, and it is developed from the practical & technical knowledge I have gained during my internship period.

In the opening chapter I have explained why I chose internship over project/thesis & explained some of the major objectives of the report to fulfill my requirements of my internship. Then in the second chapter, I described the company background including all the details of the company as far as the reader can without much of a stretch know and access the company.

During my internship I got assigned with several projects. The major project was “HelpAge” an Older People healthcare mobile application as well as a web-based application, another task was to modifying CMED website as a front-end developer add some pages about corona module collaboration with app developer team. All the details of the work are on the chapter 3.

1 TABLE OF CONTENTS

CHAPTER	TITLE	PAGE
	Declaration	ii
	Certificate of Approval	iii
	Dedication	iv
	Acknowledgement	v
	Abstract	vi
	Table of Contents	vii
	List of Tables	x
	List of Figures	xi
	List of Abbreviations	xii
1	Introduction	13
	1.1 Overview	13
	1.2 Objectives of the Report	14
	1.3 Methodology	14
	1.4 Scope of the Report	14
2	Company Overview	16
	2.1 CMED Health Ltd.	16-20
	2.2 CMED Services	20
	2.3 Awards and achievements	21
3	Working Project	23
	3.1 HelpAge	23-29
	3.2 Functionality and responsibilities of system	31
4	Responsibilities	32
	4.1 Software Testing	33-36
	4.2 Software testing of “CMED” user application	36-38
	4.3 Software testing of “HelpAge” application	39-41

	4.4	Working on cmed.com.bd website with CMS	42-43
	4.5	Professional Software	43-46
5		Conclusion	47
	5.1	Future Plan	47
	5.2	Conclusion	47-48
6		Reference	49-50

20
LIST OF TABLES

NO.	TITLE	PAGE
2.1	Company Profile of CMED Health Ltd.	16
4.1	CMED user app login test case.	36
4.2	CMED user app measurements test case	36
4.3	Checklist of HelpAge Doctor Credential	39
4.4	Check list of HelpAge Paramedic credential	39
4.5	Check list of HelpAge Psychosocial credential	40
4.6	Check list of HelpAge Field Facilitator credential	40

LIST OF FIGURES

NO.	TITLE	PAGE
2.1	CMED Organogram	18
2.2	Daily tasks written on Slack	19
2.3	CMED Services	20
2.4	CMED App offers	21
2.5	CMED Awards & Certifications	22
3.1	HelpAge Logo	23
3.2	HelpAge Sing in, Home and Dashboard Design	26
3.3	HelpAge Medial Record Details Design	26
3.4	HelpAge Medical Record Form design.	27
3.5	HelpAge Beneficiary Details UI	28
3.6	HelpAge Web Log-in page UI	29
3.7	HelpAge User and Admin Dashboard UI	30
3.8	HelpAge Web Organization list Page UI	30
4.1	User Acceptance Testing	35
4.1	Issues list of CMED user Application on Redmine	38
4.3	CMED user app issues posted on Redmine	38
4.4	Issues/Bugs list of HelpAge on Redmine	42
4.5	HelpAge issues/bugs posted on Redmine	42
4.6	Covid-19 Update and Screening page of CMED web	43
4.7	Daily availability in office	44
4.8	Issues/Bugs Report on Slack	44

4.9	Issues/Bugs posted on Trello	45
4.10	Issues/Bugs listed on Redmine	45
4.11	API Cross-check with dashboard in Swagger	46

12
LIST OF ABBREVIATIONS

Note: This part should be completed if you have used any abbreviations in your write-up. Please ensure that the list is chronologically organized. Samples are as follows.

3

CSE

Computer Science and Engineering

ULAB

University of Liberal Arts Bangladesh

INTRODUCTION

1.1 Overview

Internship is a program that enhances the capability of the student and the scope to effect practical works within an organization related to the student's major to get the work experience. I feel so grateful to have been given the opportunity to complete my industrial attachment at CMED Health Ltd. As a student at University of Liberal Arts Bangladesh, my university graced me with the flexibility to choose one from internship, project, or thesis to complete my bachelor's degree. I choose internship over other choices because my career goal is to work on an engineering field and for that practical experience is a must. Fortunately, I got an internship in CMED Health Ltd to fulfill my career goal. I believe that my involvement at CMED Health Ltd as an intern was not only enriched my career but also increased my ability to effect progressive change everywhere and make a valuable influence in the field of Software engineering.

In this report, I have presented my internship period in CMED, an overview of the company and its activities, my experiences working for a reputed company, what I have learned, and how it is helped me to develop and grow and retaining customers satisfaction through skills.

1.2 Objectives of the Report

The major goal of the report continues to fulfill the partial requirement of my Bachelor degree in Computer Science and Engineering. This report describes my ³ internship experience at CMED Health Ltd where I achieved practical work experience, learned various technologies used in software companies.

1.3 Methodology

All data utilized in the report is gathered from both internal and external sources. The primary and secondary sources of information for this report are as per the following:

1.3.1 Primary Data Source

- Through personal experience and observations
- Through conversation with other employees

1.3.2 Secondary Data Source

- Company website.
- Related office documents.
- Internet.

1.4 Scope of the Report

This report is the outcome of the internship work and experience gathered during the time of my work at CMED Health Ltd. as an intern in the Software

Development department. The report will be focused on my assigned tasks and projects which are:

- i. Software testing of CMED mobile/web application
- ii. Software testing of HelpAge mobile/web application
- iii. Working on the front end of CMED website
- iv. Migration of CMED website in new server

I'll explain each task with as much details as possible in chapter 3. Here, the report is prepared only for academic purposes to fulfill the degree necessity of CSE at University of Liberal Arts Bangladesh program. This report also covers the direct and indirect aspects of the software industry and its difficulties. Moreover, the report is centered on the software testing also working on CMED website as a front-end developer.[7]

CHAPTER 2

COMPANY OVERVIEW

2.1 CMED Health Ltd.

2

CMED is a smart health monitoring system for regular health monitoring. CMED uses smart medical sensors connected to a smartphone for the measurement of vital signs and store data to its secured cloud server. Users will get instant feedback about their health status. CMED also generate health records that will help doctors to minimize diagnostic time and to give better treatment.

2

2.1.1 Impact of CMED

CMED is a cloud-based smart health monitoring system, comprises of a convenient smart monitoring device and a Smartphone Application. In contrast to the current devices, CMED devices track the user's information usually. Certain devices additionally offer recommendations to the user to see the Doctor immediately when their health condition is in danger. At this present stage, CMED devices can screen Blood Pressure, Blood Glucose, Pulse, Blood Oxygen Saturation (SpO2), Body Temperature, Weight, Height, and Body Mass Index (BMI). With the incorporation of this observing framework, CMED is intended to decrease the danger of perilous infections like stroke, heart attack, and so on. With the normal health monitoring system, the user would have the option to decrease indicative time, follow up cost, cost of hospitalization, and emergency clinic days fundamentally. Community Health Workers can also play a vital role in rural areas by using CMED.

2.1.2 Program Overview

CMED Health Limited aims to create a healthy workforce from Hire to Retire by providing preventive healthcare service to workers/employees through Workforce Wellness Program. This program has been designed to create awareness regarding Non-Communicable Diseases and promote healthy lifestyles within the workforce. CMED will provide the technical and medical supports where the employer will assign a representative to oversee the program. [1]

Table 2.1 Company Profile of CMED Health Ltd.

Feature	Information
Name of the company	CMED Health Ltd.
Logo	
Slogan	i. Monitor Your Health, Stay Healthy. ii. Your Health Status on Your Fingertips. iii. Connecting people, Saving lives..
Legal Structure of the Company	Private Limited Company
Corporate Office	Apt# C-4 & C-5, House# 761, Safura Green, Sat masjid Road,
Website	https://cmed.com.bd/
Email Address	info@cmedhealth.bd
Phone no.	+88 01742-925686 +88 01558-241551
Chairman	Dr. Khondakar Abdullah Al Mamun
Managing Director	Dr. Farhana Sarker
Partners	Grameen Phone, Maya Apa, SeedStars World, United International University, AIMS Lab
Year of establishment	2016

2.1.3 Company Hierarchy

CMED Health Ltd has four Major Departments according to their business and technical requirements.

The whole organogram of CMED Health is shown below:

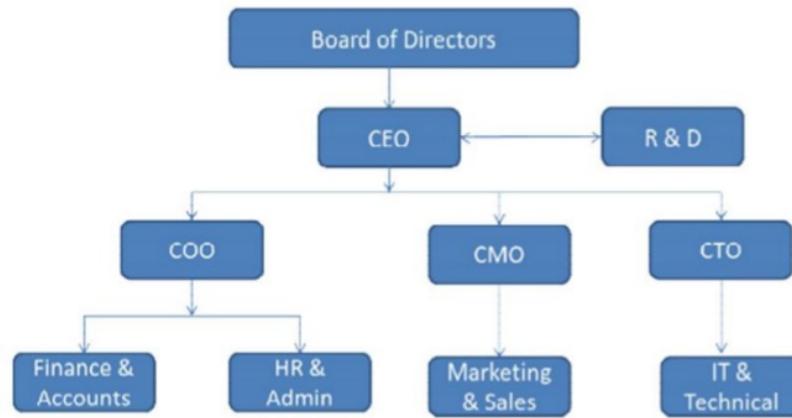


Figure 2.1: CMED Organogram

2.1.4 Project Management of Software Development

CMED uses Agile Scrum method for the project management of software development.

Agile Scrum

- i. Scrum is a framework for overseeing work with importance on software development. It is intended for groups of three to nine engineers who break their work into activities that can be finished inside timeboxed cycles, called sprints.[2]
- ii. In CMED, the sprint is on a daily basis. Developers write their daily & previously completed tasks through Slack message and those tasks are a part of big monthly projects.

- iii. On a weekly basis, there is a sprint meeting held at the office to ensure the work progress and divide the tasks given to the development team. Our scrum master is Senior software engineer Mr. Saroj Roy.

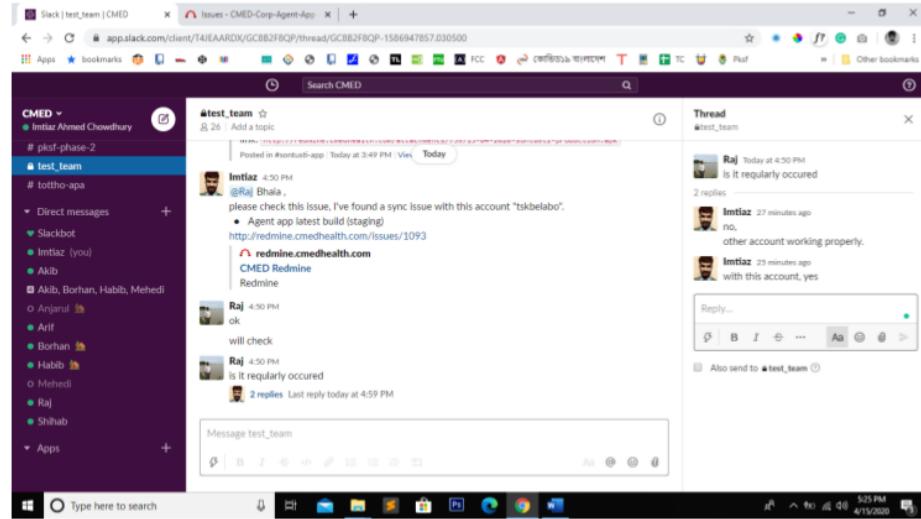


Figure 2.2 : Daily tasks written on Slack

2.1.5 Mission of CMED

- i. To categorize employees' health status as Healthy, Alarming/At-risk, and Emergency, based on measurement of vital signs by creating personal health account.
- ii. To keep health records for every employee by maintaining a health account and to provide the doctor's consultation to those who need immediate attention.
- iii. To provide information about the risk factors of dying rent NCDs through counseling.
- iv. To reduce health risks through preventive healthcare service every month.
- v. To develop a sense of healthy lifestyles and prepare healthy diet plans for the employees.

2.1.6 Vision of CMED

The vision of CMED is safeguarding the right to health in workplaces and reduction of health risks within the workforce due to Non-Communicable Diseases (NCDs) all over the country.[1]

2.2 CMED Services

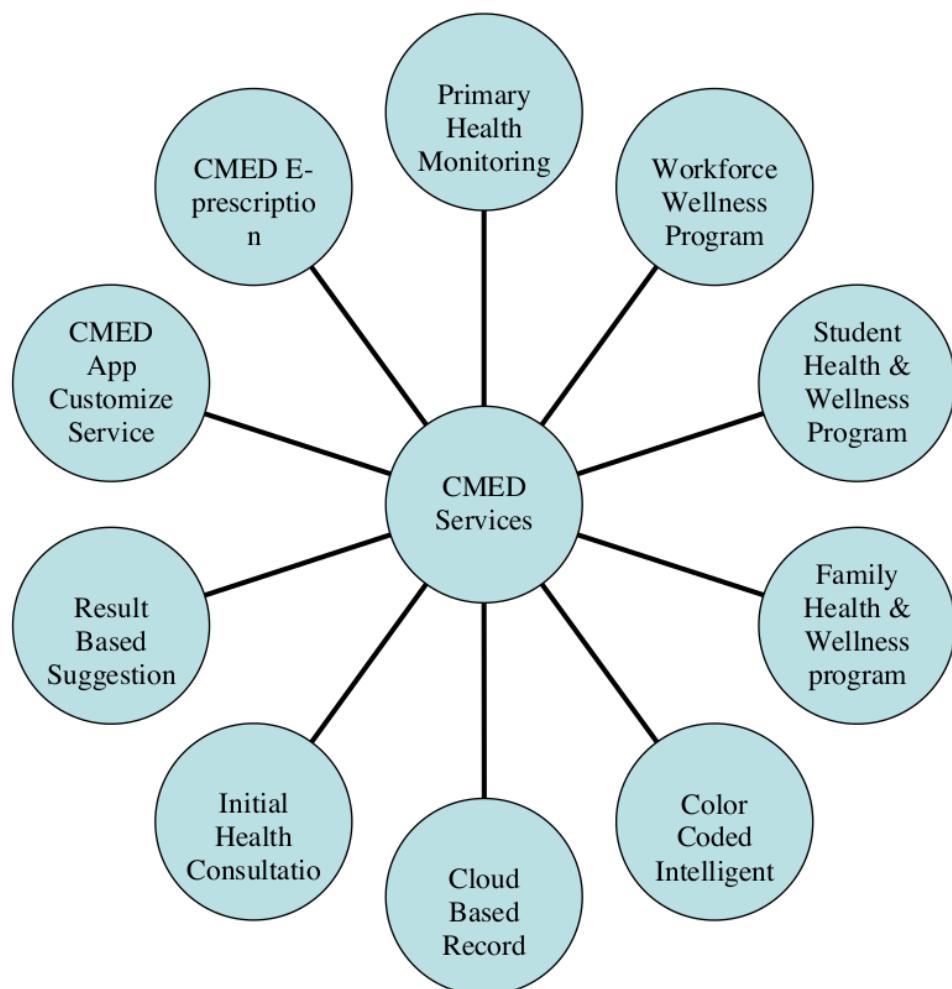


Figure 2.3: CMED Services

CMED Health service includes these offerings to their customers and wellness programs. All of the below tests can be measured through the CMED app with the smart devices.

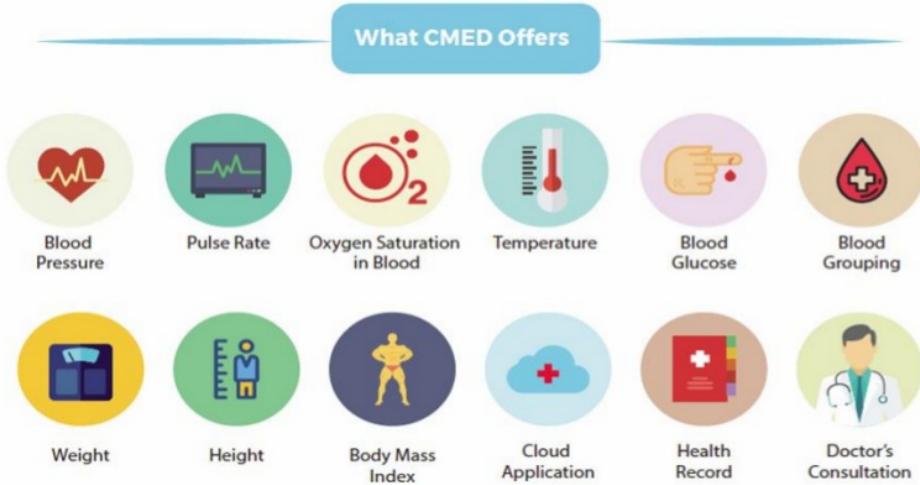


Figure 2.4: CMED App offers

2.3 Awards and achievements

- i. In this short period of time, CMED got quite a big recognition by winning startup awards such as.
- ii. Awarded BDT 10,00,000 innovation fund by ICT ministry of Bangladesh.
- iii. Graduated from GP Accelerator Programme (2nd batch).
- iv. Received USD 10,000 FB start package from Facebook.
- v. Won 1st Place at Seedstars Dhaka 2017
- vi. Won 1st place at Basis national ICT awards 2017
- vii. Participated in different ICT fairs and events in Dhaka.



Figure 2.5: CMED Awards & Certifications

CHAPTER 3

WORKING PROJECT

I got assigned several projects during my internship. The major project was **HelpAge**. In this section, I will explain this project that I was engaged with.

3.1 HelpAge



Figure 3.1: HelpAge Logo

3.1.1 Project Background

In 2010 HelpAge start their serve officially in Bangladesh to better human services' oldest people. HelpAge continually working intimately with local associates, they're campaigning to expand the Old Age remittance and to guarantee everybody qualified for the honor is getting it.[5]

HelpAge wellbeing work in Bangladesh centers around improving consideration for older people. We encourage Physiotherapists, Field Facilitators, Paramedic, Psychosocial, Response Officer, Supervisors, and Doctor in treating conditions that affected older people. likewise, HelpAge assisting with improving nearby wellbeing foundation and referral frameworks that older people can get better care faster.

Around one million refugees who fled abuse in Myanmar to Bangladesh are currently living in rambling camps near Cox's Bazar. In this camp, most of the refugees are senior citizens and children, at this moment most people need physical and mental help to stay healthy. HelpAge helping those people how are in danger condition includes older people, through their five age-friendly spaces in one of the perpetual camps in Cox's Bazar. These give wellbeing screenings and locally established consideration into the camp system, access to age-accommodating toilets, including insurance older people show up at organizations they need.[6]

3.1.2 Feature

- i. The application will help to find perfect health support for older people.
- ii. Application for an appointment.
- iii. Application for complain.
- iv. The application will help the direct provision of protection case management, basic health screening, psychosocial support, and recreational/social activities.
- v. People will get health support by 02 Supervisors, 08 Field Facilitators, 02 Counsellors, 01 Physiotherapist, 01 Pharmacist, and 04 Paramedics with a medical doctor.
- vi. The app will show the listed beneficiary in different locations with different statuses.

3.1.3 Technologies Used

Web application:

- i. Java - Spring boot framework
- ii. HTML, CSS, Java Script, Bootstrap
- iii. Thyme leaf
- iv. MySQL, JPA Query
- v. IDE – IntelliJ Idea ultimate

Mobile application:

- i. Java, Kotlin, XML
- ii. IDE – Android Studio with IntelliJ idea ultimate
- iii. ANR communication
- iv. Some used libraries- glide, Picasso, A chat engine.

3.1.4 Project Design

3.1.4.1 HelpAge Mobile Application UI:

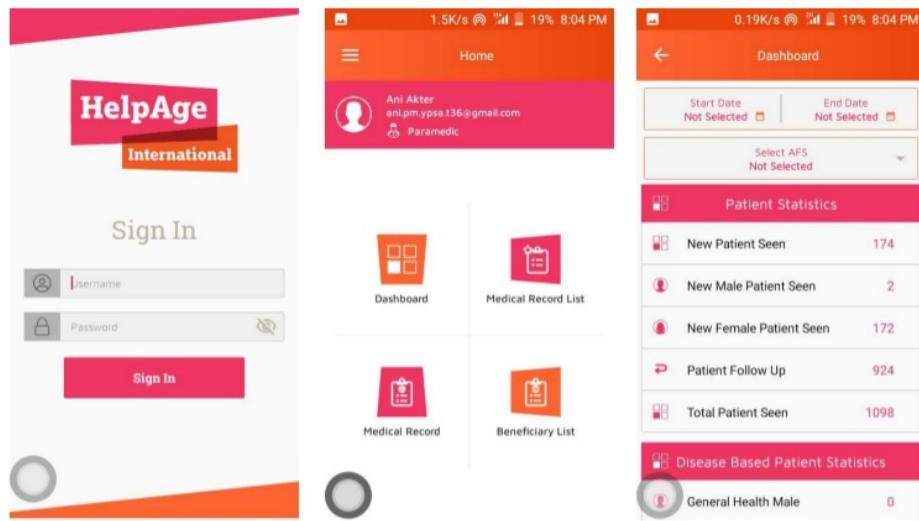


Figure 3.2: HelpAge Sing in, Home and Dashboard Design

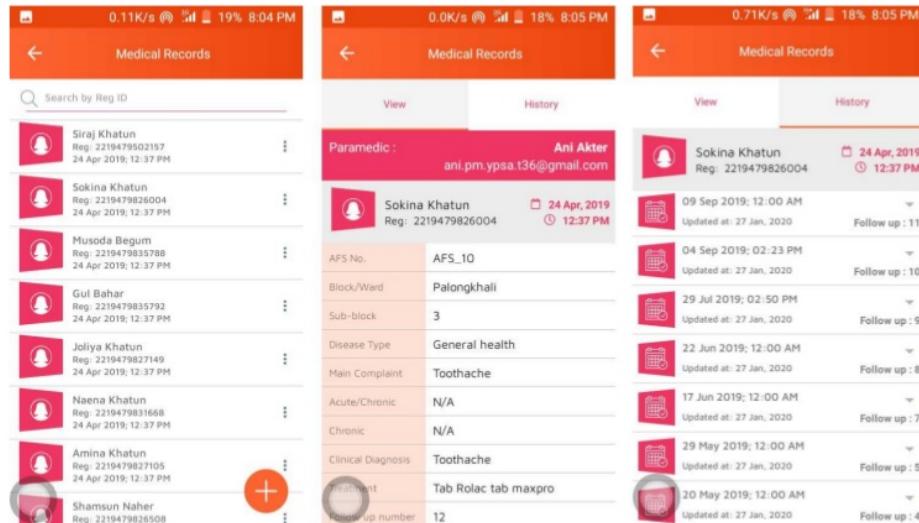


Figure 3.3: HelpAge Medial Record Details Design

Medical Records

Step 1 Step 2 Step 3 Step 4 Step 5

Paramedics Name
Ani Akter

Registration No.*
22194

Survey Date
21 Apr, 2020

New Case?*
 Yes No

Service Place
 Static Outreach
 Home Based N/A

Allergic History
Allergic History

Personal History
 Ginger
 Smoker

Main Complaint

Blood Pressure

Pulse

Jaundice

Anaemia

Oedema

Dehydration

Temperature

Laboratory Findings

Clinical Diagnosis

Treatment

MUAC
 Below 18.5cm
 Between 18.5cm and 23cm
 Between 21cm and 23 cm
 More than 23 cm

Improved
 Side Effects
 Needs
 Interruption in treatment
 N/A

Not Improved
 Lost
 Referral
 Other

Mental Status
I

Returned Date
21 Apr, 2020

Returned From

Save

Figure 3.4: HelpAge Medical Record Form design.

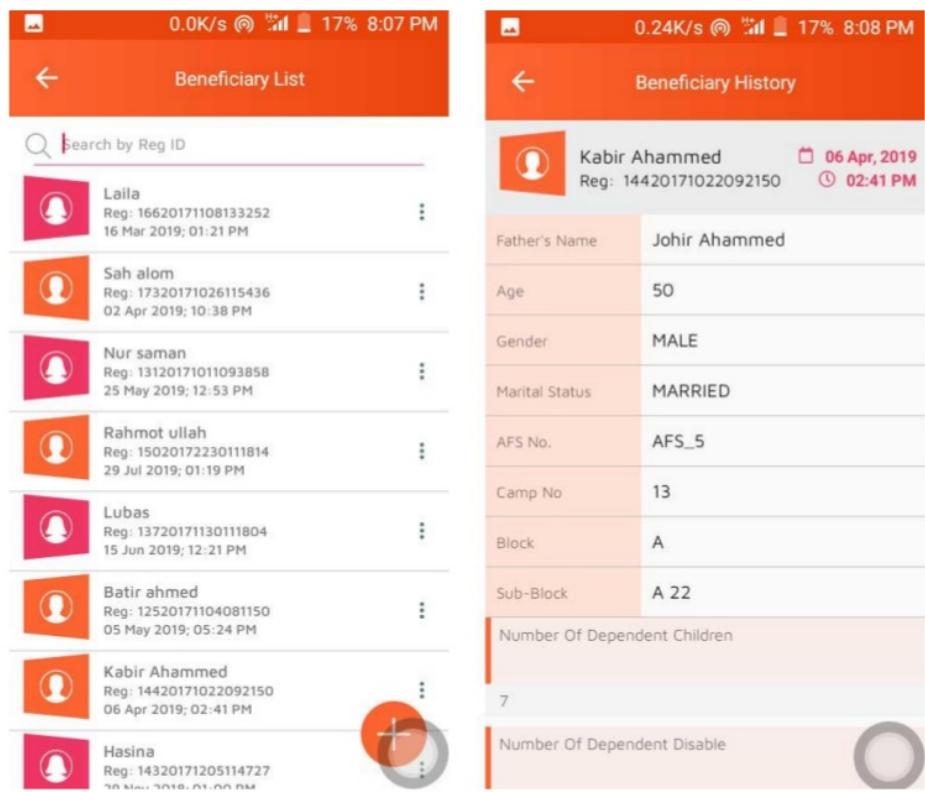


Figure 3.5: HelpAge Beneficiary Details UI

3.1.4.2 HelpAge Web application UI

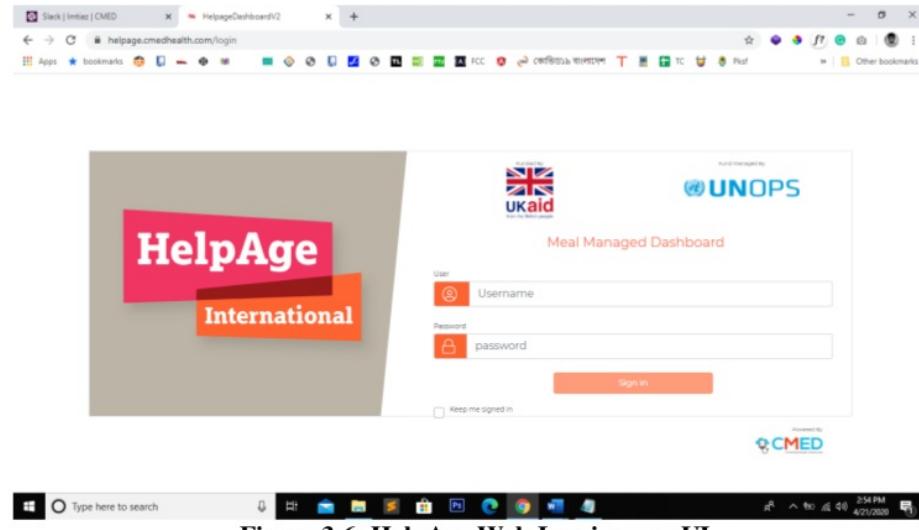
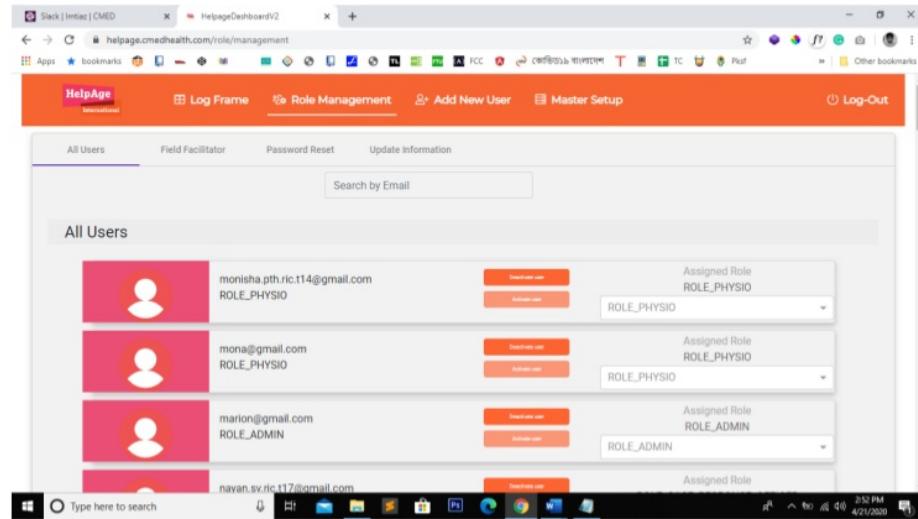


Figure 3.6: HelpAge Web Log-in page UI



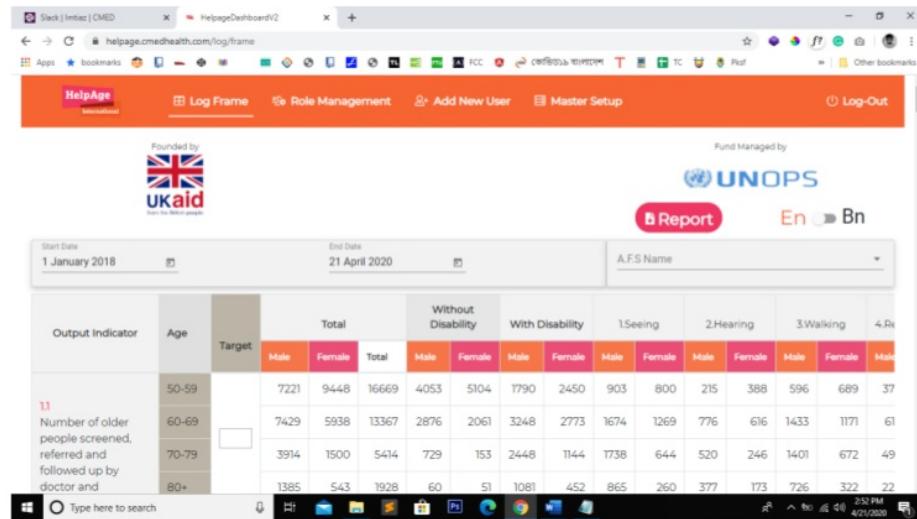


Figure 3.7: HelpAge User and Admin Dashboard UI

Items	organization	Action
1	ব্রেক (BRAC)	
2	আই ও এম (IOM)	
3	ইউনিসেফ (UNICEF)	
4	ওয়ার্ল্ড এফ ফি (WFP)	
5	ওয়ার্ল্ড সি এফ (WCF)	

Figure 3.8: HelpAge Web Organization list Page UI

3.2 Functionality and responsibilities of system components

There are different kinds of users in HelpAge. They are:

- i. Older people (main user)
- ii. Doctor
- iii. Paramedical
- iv. Physiotherapist
- v. Field Facilitator
- vi. Psychosocial
- vii. Case Response Officer
- viii. Meal Asst officer
- ix. Supervisor

At first, I create test cases based on client requirements, in test cases include every small step which is helpful to execute the expected result, and then I start checking each and every step of the HelpAge mobile/web application.

It is a time-consuming process that's why change the testing way to improve my work speed and better result than I create a checklist for each user according to their responsibilities.

Checked each step of the functionality of HelpAge mobile/web application during functional testing and then checked the performance of under different load conditions. Tested proper authentication for security purposes. Check the Usability of mobile/web applications to ensure that the screen should have the required size and be suitable for users. If data won't match between mobile application to web dashboard than check API.

CHAPTER 4

MY RESPONSIBILITIES

During the internship, my supervisor assigned me tasks dependent on my working abilities. From the start, he includes me in software testing of CMED user application and then he assigned me as the whole project which is HelpAge. During the internship, it was a necessity to work with a team and be a part of it eventually. While my supervisor discovered me fit for accomplishing more and my enthusiasm for work, he gradually involves me in doing basic tasks. In general, there are some projects I involved with the team to better performance of the project, which are:

- i. Software testing of CMED mobile/web application
- ii. Software testing of HelpAge mobile/web application
- iii. Software testing of CMED user mobile/web application
- iv. Software testing of PKSF mobile/web application
- v. Software testing of CMED corporate mobile/web application
- vi. Software testing of Tottho Apa mobile/web application
- vii. Software testing of Sontusti mobile/web application
- viii. Working on front end of CMED website
- ix. Testing API structure in swagger

17 As most of my work is focused on software testing, so I would like to clarify what is software testing, how many types of software testing are available, and which techniques my company guided me to follow:

4.1 Software Testing

6 Software testing is the procedure of assessment of a product thing to identify contrasts between given information and expected result. Additionally, to evaluate the feature of a software object. Testing scans the nature of the item. Software testing is a procedure that should be finished during the development process. As it were, software trying is a check and approval process.

23

4.1.1 Types of Software Testing

4.1.1.1 Manual Testing

4 Manual testing is the path toward testing software by hand to check this, to recognize what is and isn't working. This typically incorporates confirming all the highlights determined into necessities archives, however frequently additionally incorporates the tester attempting the software with the point of view of their end-users as a primary concern. Manual test systems shift of completely scripted experiments, experiments, giving tester point by point steps and predictable outcomes, through to raised level aides that steer exploratory testing meetings. Beyond exist loads of complex devices to help with manual testing, yet on the off chance that you need a straightforward and adaptable spot to begin, step through a look at test pad. [3]

4.1.1.2 Automation Testing

Automation testing is the path toward testing the product utilizing a mechanization apparatus to discover the imperfections. In this methodology, testers execute the test substance and produce the test results naturally by utilizing

⁴
mechanization instruments. A portion of the renowned automation testing instruments for useful testing are QTP/UFT and Selenium [3].

4.1.2 Testing Procedures

²²
There are three types of software testing Procedures

⁵ 4.1.2.1 White Box Testing

White box testing is a testing process that considers the inner component of a framework. It is also called formative testing and glass box testing.

⁶ 4.1.2.2 Black Box Testing

⁵
Black box testing is a testing procedure that overlooks the inner instrument of the system and spotlights on the yield produced against any input and execution of the system. we can say it functional testing too.

⁴ 4.1.2.3 Grey Box Testing

Grey box testing is the mix of both White Box and Black Box Testing. The tester who deals with this sort of testing needs to approach configuration reports. This assists with making better experiments in this procedure.

4.1.3 Testing Levels

11

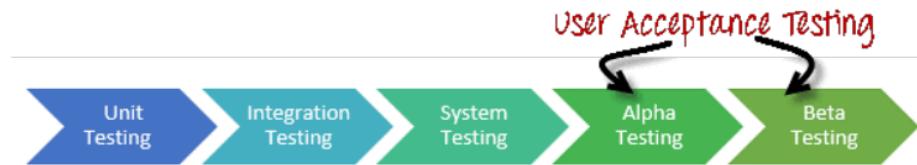
There are many types of testing like

- i. Unit Testing
- ii. Integration Testing
- iii. System Testing
- iv. Acceptance Testing

During my internship those projects are assigned to me, I have been using User acceptance testing mostly.

4.1.4 Acceptance Testing

10
Acceptance testing is frequently done by the client to ensure that the delivered product meets the necessities and functions as the client assumed. Types of Acceptance Testing are Alpha, Beta and Gamma Testing.



16
Figure 4.1: User Acceptance Testing

4.1.4.1 Alpha testing

The alpha test is a type of test that is accepted, designed to identify every issue/bug that can be reached before sending the product to regular customers. The main purpose of this experiment is to grow real users through the processes of Blackbox and Whitebox. The purpose is to complete the tasks that the common customer can perform. Alpha testing is done in the form of a lab and usually, testers are internal employees of the organization. To keep it as accurate as possible under

the circumstances, this type of test is called alpha only because it is performed early, near the completion of software development, and before the Beta test.

4.1.4.2 Beta Testing

Beta Testing is a test that is completed by end-users, a party with no turn of events, or to freely release a full version of something known as beta external. The point of the beta test is to cover surprising errors. It falls under the category of black box testing.

4.2 Software testing of “CMED” user application

The main task I was given on this project was to test the software on android application. I was instructed to do manual testing. The main cause of choosing the manual user testing is the tester can test as a user perspective and can find out user experience errors & bugs.

In the beginning, I was using the google spreadsheet bug report format, but it was time-consuming and the workflow was slow. That's why we switched to Trello and then Redmine issue list which is easy to use and the communication and workflow with the development team are much faster.

The following parameters have been used for testing CMED user app

- i. Issue No.
- ii. Category
- iii. Sub-category
- iv. Test Case Scenario
- v. Test Steps
- vi. Expected Results
- vii. Actual Results
- viii. Issue
- ix. Suggestions

Table 4.1 : CMED user app login test case.

Check if Employee number is displaying correctly						
A	B	C	D	E	F	G
1. Project Name:		CMED User app	Designed by: Imtiaz			
2. Platform:		Android	Designed date:			
3. Release Version:		1.0.0.0	Executed by: Imtiaz			
			Execution date: 17/01/2020			
Category	Sub Category	Test Case Scenario	Test Steps	Expected Results	Actual Results	Status Issue
7. Login Check	Valid Credential	Check: Login with correct user id and password	# Enter Correct user id and password # Click login	User should be able to login successfully.	Login was successful	Pass
	Invalid Credential	Check: Login with invalid user id and password	# Enter invalid user id and password # Click login	Login should fail, Error message should come up. As Expected		Pass
	Empty Credential	Check: Login attempt with empty fields.	# Keep the fields empty # Click login	Login should fail, Error message should come up. As Expected		Pass
10. Dashboard Check	Agent Credential	Check: If agent Name and id are displaying correctly.	# Click on the burger menu # Go to dashboard # Check agent name and id	Agent credentials must be correct	As Expected	Pass
	Company Credential	Check: If Company Name displaying correctly.	# Click on the burger menu # Go to dashboard # Check company name	Company credentials must be correct	As Expected	Pass

Table 4.2: CMED user app measurements test case

Check if measurement name is showing						
A	B	C	D	E	F	G
7. Measurement list	Name	Check if measurement name is showing correctly	TC0031	# User must be logged in	# Go to home page # Select a household # Click on a member	N/A
	Status	Check if member health status is showing correct information	TC0032	# User must be logged in # Measurement has been taken or manually inputted	# Go to home page # Select a household # Click on a member # Click on a measurement	Date: Time: Measurement Value: Member health status must correspond to the corresponding measurement
	Measurements result	Check if member measurements result is displaying correct information	TC0033	# User must be logged in	# Go to home page # Select a household # Click on a member	Date: Time: Measurement Value: Measurement list should display correct information
	Edit measurement	Check if measurement is updated when edited	TC0034	# User must be logged in	# Go to home page # Select a household # Click on a member # Select the measurement to be edited # Click edit and change value # Click Done	Date: Time: Measurements
	Measurement Date	Check if the measurement date, time, range, status, color code etc. match with the	TC0035	# User must be logged in	# Go to home page # Measurements has been selected	Measurements Measurement date, time, color code etc. match with the

Figure 4.2: Issues list of CMED user Application on Redmine

Figure 4.3: CMED user app issues posted on Redmine

4.3 Software testing of “HelpAge” application

4.3.1 Validation Testing

Tests were performed to discover congruity with the prerequisites. Plans and techniques were designed to ensure that every useful prerequisite is fulfilled. The product was alpha-tested. There are two objectives in getting ready to test plans. Firstly, an appropriately detailed test plan presents that the program particulars are seen totally. Secondly, the test plan is utilized during program testing to demonstrate the rightness of the program.

4.3.2 Checklist

During this project, I prefer checklists over test cases, and the checklist is better to organize test reports to verify issues of my important tasks. Checklist has been intended to decrease mistakes and assure consistency and fulfillment in completing an obligation.

The following parameters have been used for testing HelpAge

- i. SL No (Serial number).
- ii. Test Case
- iii. Test Case Sub-category
- iv. Pass
- v. fail
- vi. Implementations Status
- vii. Comments

Table 4.3: Checklist of HelpAge Doctor Credential

	A	B	C	D	E	F	G	H
18	5	Patient Statistics	New Patient seen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done		
19			New Male Patient seen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done		
20			New Female Patient seen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done		
21			Patient follow up	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Not Done		
22			Patient Referred (Secondary)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Not Done		
23			Patient Referred (Tertiary)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done		
			Total patient seen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Not Done		

Table 4.4: Check list of HelpAge Paramedic credential

	A	B	C	D	E	F	G	
6	2	Login	with internet	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done		
7			without internet	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Not Done		
8			with wrong credentials	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done		
9	3	Forgot Password		<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done		
10								
11	4	Dashboard	Start date	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done		
12			End date	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done		
13			Select AFS	<input type="checkbox"/>	<input type="checkbox"/>	Done		

Table 4.5: Check list of HelpAge Psychosocial credential

SL No.	Test Case	Test Case Sub Category	Pass	Fail	Implementation Status	Comments
32	9	PSS record list	Search by Reg ID	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done
			Add	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done
			View	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done
33	10	Beneficiary list	Search by Reg ID	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done
			Name list	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done
			View details information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done

Table 4.6: Check list of HelpAge Field Facilitator credential

SL No.	Test Case	Test Case Sub Category	Pass	Fail	Implementation Status	Comments
30	7	Service based statistics	Wash	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done
		Health	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done	
		Shelter	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Not Done	
		NFI	<input type="checkbox"/>	<input type="checkbox"/>	Not Applicable	
		Food items	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done	
		Others	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done	
31	8	Organization based statistics		<input checked="" type="checkbox"/>	<input type="checkbox"/>	Done

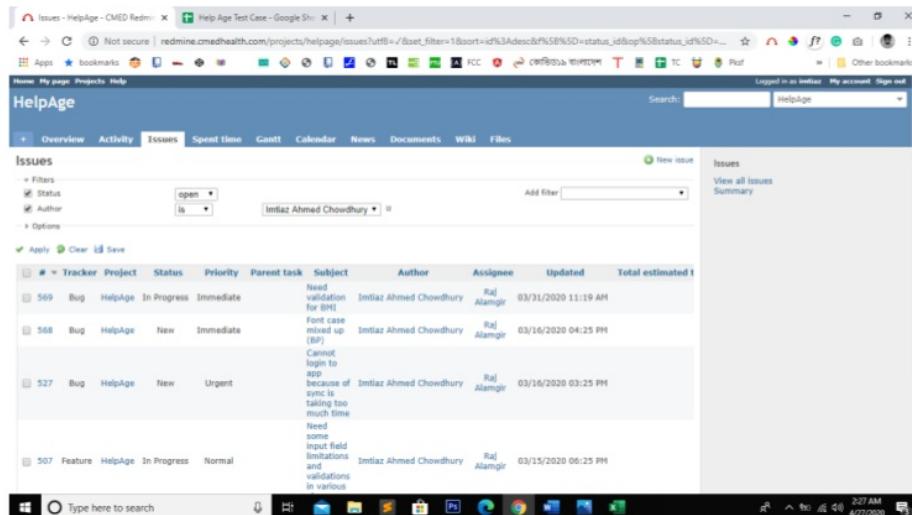


Figure 4.4: Issues/Bugs list of HelpAge on Redmine

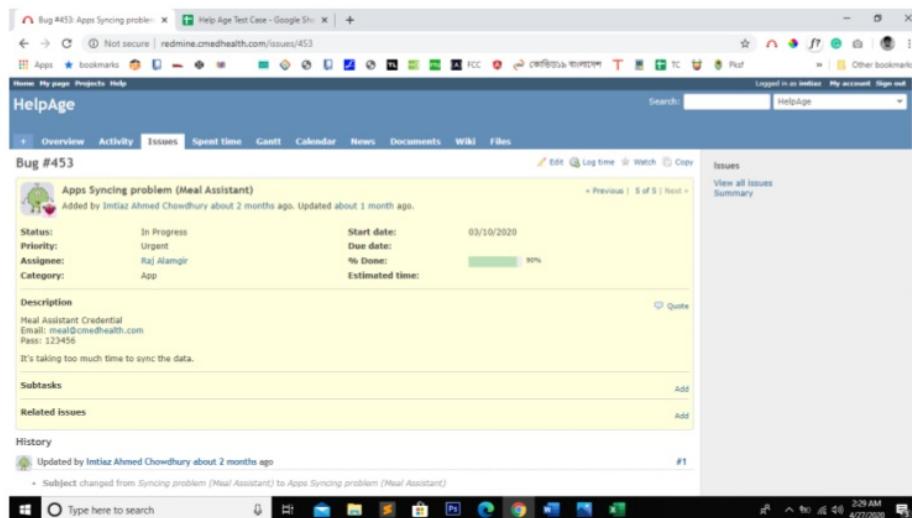


Figure 4.5: HelpAge issues/bugs posted on Redmine

4.4 Working on cmmed.com.bd website with CMS

During my internship, my major development work beside software testing, modifying CMED website (cmmed.com.bd). When Bangladesh started affecting COVID-19, CMED wants to help people to provide services and guidelines about CORONA that's why CMED adds the corona module on their website along with the

mobile application. In below I will discuss my task in the modification of the CMED website

4.4.1 Modification

I was assigned to create some modifications on the website of the CMED website. I add some pages and content using CMS(WordPress). To adding content on the website, I used Elementor Page Builder and some plugins.

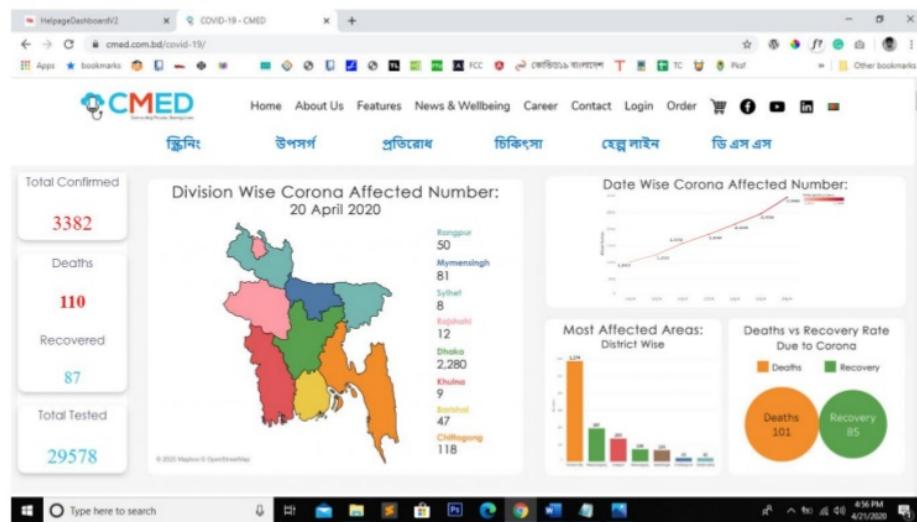


Figure 4.6 Covid-19 Update and Screening page of CMED web

4.5 Professional Software

During my internship, I was getting used to some professional software for different purposes. I was using Slack for daily confirmation and reporting issues/bugs.

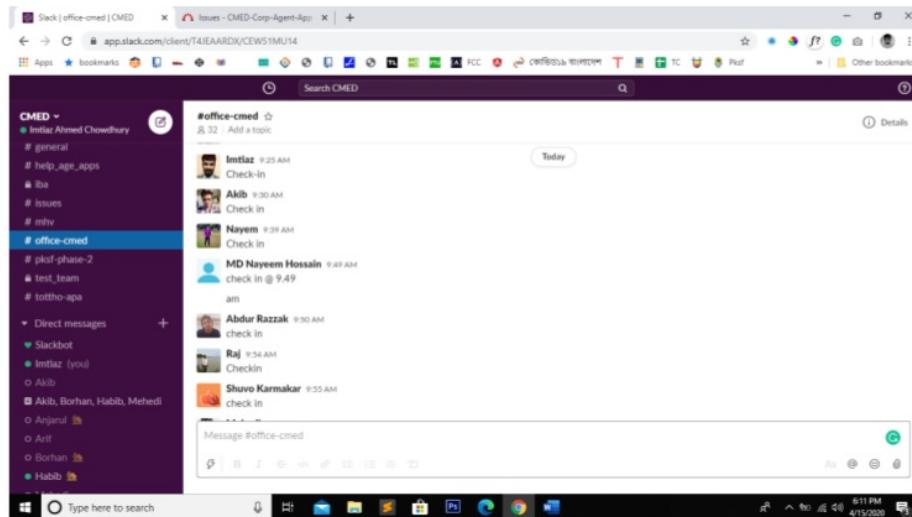


Figure 4.7: Daily availability in office

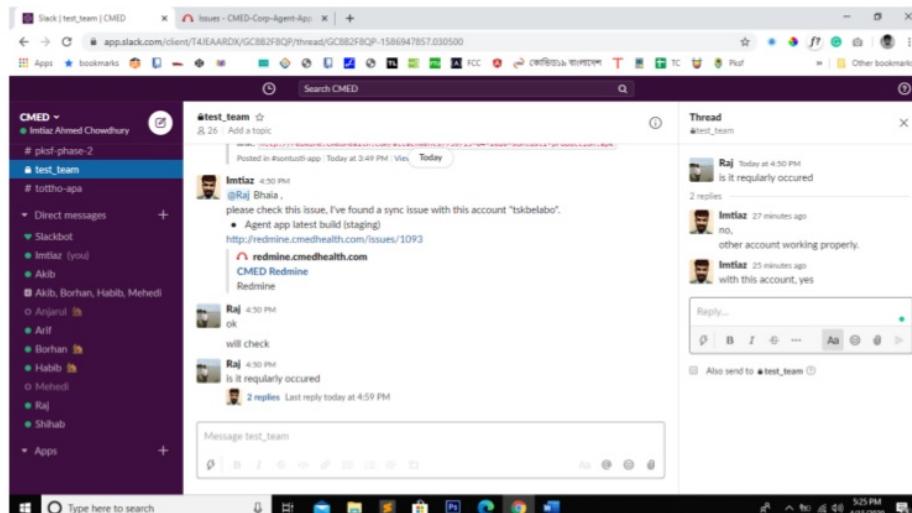


Figure 4.8 Issues/Bugs Report on Slack

To listed issues/bugs I was using Trello and Redmine those are online corkboards. I use it to compose "cards" into records those cards can be commissions, notes, screenshot, shared documents, or whatever else that helps Dev collaboration together [8].

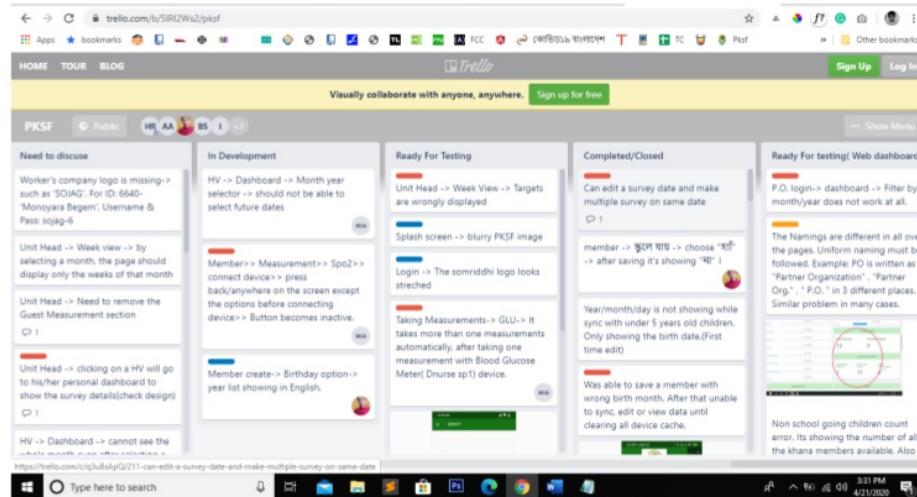


Figure 4.9: Issues/Bugs posted on Trello

#	Project	Tracker	Status	Subject
1005	CORONA	Bug	New	Filter issue (web)
158	Tottho Apa	Feature	Ready for Testing	Tottho Apa Dashboard design
761	Tottho Apa	Bug	New	Data mapped with web only this three-sections(green square shape)
461	HelpAge	Bug	Ready for Testing	Create/field in these DTO as per BizId val requested
163	Tottho Apa	Bug	Ready for Testing	Design Web Dashboard
456	HelpAge	Support	Ready for Testing	Update Device Library
971	CMED-User-App	Bug	New	Findings of user app from operation Team

#	Project	Tracker	Status	Subject
286	PKSF-App	Bug	In Progress	The user-input text field should be limited
1093	CMED-Corp-Agent-App	Bug	New	Sync issue with this account "bibelabao"
1073	DGHS-CSS	Bug	New	No confirmation message came to my phone after serve but app showing message has been sent.
1071	DGHS-CSS	Bug	New	Screen shaking issue
1041	CMED-User-App	Bug	In Progress	Responsive issue(signup page)
974	CMED-User-App	Bug	In Progress	Graph responsive issue 1
793	CMED-User-App	Bug	Ready for Testing	Graph issues
946	CMED-User-App	Bug	In Progress	App crash
904	CMED-User-App	Bug	In Progress	Glucose showing different result in a different stage
783	CMED-User-App	Bug	New	Text style should be either capitalize or uppercase

Figure 4.10: Issues/Bugs listed on Redmine

When data are a mismatch between the mobile application and web dashboard at that moment need to check APIs. If I got an issue then post that issue on Redmine and discuss it with the developer team. For this testing, I used Swagger during my internship.

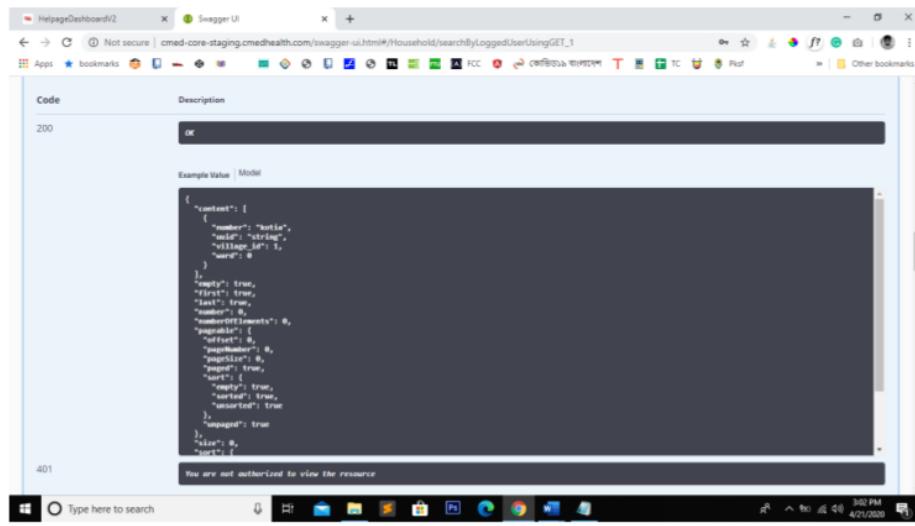


Figure 4.11: API Cross-check with dashboard in Swagger

CHAPTER 5

CONCLUSION

5.1 Future Plan

Most future patterns will revolve around artificial intelligence, fast operation, interactivity of web applications. I take the most notable web applications for building my career from experience during the internship I gather and academic knowledge.

5.2 Conclusion

I believe that my involvement at CMED Health Ltd as an intern was not only enriched my career but also increased my ability to effect progressive change everywhere and make a valuable influence in the field of Software engineering. I have never worked in a professional environment before, so it was a completely new experience for me & I enjoyed every bit of it. My colleagues and my industry supervisor whom I think as my mentor helped me enormously and I enjoyed many technical and professional things practically through them.

I started my internship journey with a goal to gather real-life software development knowledge and the power of teamwork. I achieved that goal through

hard work and learning. currently, I'm working on a project which is a live stream website, I use all my software development knowledge that I gather from my internship period.

REFERENCE

- [1] CMED. (n.d.). Home - CMED. [online] Available at: <https://cmed.com.bd/> [Accessed 20 January, 2020].
- [2] cPrime. (n.d.). *What is Agile? What is Scrum.* [online] Available at: <https://www.cprime.com/resources/what-is-agile-what-is-scrum/> [Accessed 17 February, 2020].
- [3] Rajkumar, *Manual Testing: What Is Software Testing-Definition, Types, Methods, Approaches*, November-2019. [online] Available at: <https://www.softwaretestingmaterial.com/software-testing/> [Accessed 25 January, 2020].
- [4] Hasan, M. Roles of Digital Marketing Communications Over Conventional Marketing: A Perspective on Ogilvy & Mather Communications (Pvt.) Ltd, May-2016. [online] Available at: http://dspace.bracu.ac.bd/xmlui/bitstream/handle/10361/6175/12104035_BBA.pdf?sequence=1&isAllowed=y [Accessed 13 April, 2020].
- [5] HelpAge. (n.d.). Bangladesh. [online] Available at: <https://www.helpage.org/tags/bangladesh/> [Accessed 03 march, 2020].
- [6] HelpAge. (n.d.). Why we work in Bangladesh: Humanitarian relief to Myanmar's refugees. [online] Available at: <https://www.helpage.org/where-we-work/south-asia/bangladesh/> [Accessed 03 march, 2020].
- [7] Babla, A. Internship Report at Software Firm: ACADEMIA December-2013. [online] Available at: https://www.academia.edu/6017721/Internship_Report_at_Software_Firm?email_work_card=interaction_paper [Accessed 15 March, 2020].

[8] Albright, D. *Using Trello for Project Management: An Easy, Step-by-Step Guide*. May-2019. [online] Available at: <https://blog.hubstaff.com/trello-project-management/> [Accessed 16 April, 2020].

Internship at CMED,Imtiaz Ahmed Chowdhry(161014052)

ORIGINALITY REPORT



PRIMARY SOURCES

- | | | |
|---|---|----|
| 1 | Submitted to Universiti Teknologi Malaysia
Student Paper | 4% |
| 2 | cmed.com.bd
Internet Source | 3% |
| 3 | Submitted to Central Queensland University
Student Paper | 3% |
| 4 | www.softwaretestingmaterial.com
Internet Source | 2% |
| 5 | Submitted to University of Westminster
Student Paper | 1% |
| 6 | Submitted to Colorado Technical University
Online
Student Paper | 1% |
| 7 | Submitted to Gulf College Oman
Student Paper | 1% |
| 8 | www.scribd.com
Internet Source | 1% |
| 9 | Submitted to Harrisburg University of Science | |

10

Submitted to Institute of Technology
Blanchardstown

1 %

Student Paper

11

Submitted to University of Northumbria at
Newcastle

<1 %

Student Paper

12

mojtabaalizadeh.com

<1 %

Internet Source

13

dspace.bracu.ac.bd

<1 %

Internet Source

14

Submitted to Sheffield Hallam University

<1 %

Student Paper

15

Submitted to Softwarica College of IT & E-
Commerce

<1 %

Student Paper

16

Submitted to City University of Hong Kong

<1 %

Student Paper

17

Submitted to University of Lincoln

<1 %

Student Paper

18

sdasia.co

<1 %

Internet Source

19

eprints.utm.my

<1 %

Internet Source

20	Submitted to Universiti Malaysia Kelantan Student Paper	<1 %
21	www.slideshare.net Internet Source	<1 %
22	Submitted to South Bank University Student Paper	<1 %
23	Submitted to International School of Management and Technology Student Paper	<1 %

Exclude quotes

On

Exclude matches

Off

Exclude bibliography

On