

# **Online Mobile Repair System(MobiCareBD)**

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in  
The Department  
of  
Computer Science and Engineering



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For the Degree of Master of Science in Computer Science and Engineering (MSCSE)

United International University (UIU)

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# Approval Certificate

This project called “**Online Mobile Repair System (MobiCareBD)**” offered by Md. Enamul Haque, Student Id: 012162036, has been taken up as appeasement in completion of the necessity for the degree of Master of Science in Computer Science and Engineering(MSCSE) on September, 2019.

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## **Declaration**

I hereby declare that the project designated “**Online Mobile Repair System (MobiCareBD)**” is the upshot of the research carried out by me under the overseer of Dr. Mohammad Nurul Huda, Professor & Director-MSCE, UIU.

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In my strength as completion overseer of the candidate’s project, I attest that the above descriptions are true to the best of my wisdom.

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## **Abstract**

Key target of this project to reduce repair cost, less time consuming, reliable and hassle free mobile repair system. Digitalization is most priority. A good Digital Mobile Repair system can do all the things. It can easily solve searching mobile repair service provider. We can know the distance between the service provider shop. So no searching manually market to market and shop to shop. It can save your time. Cost will be fixed so no bargaining. There will be no chance to be cheated. Most of the time we are to pay more than real cost cause of good negotiator. So it will cut down expense of repair.

It will be reliable because no service provider wants to lose his fame. There will be rating and comments system. After repair form service provider user can rate the service provider and make comments. No service provider wants poor rating and bad comments. Nobody want to choose those service providers who do bad repairing service. It is smart system so hassle in whole repair process. User can easily submit device problem, choose provider, provider values in system, direction map, distance from user to service provider shop, can see all service tracking record related to repair request.

“Online Mobile Repair System (MobiCareBD)” can solve this problem very efficiently and effectively. It will take away all these hassles. Easy to find out service provider, data security, reliable, lowest cost, trustworthy. User can do it seating at home.

## **Acknowledgment**

To show expressing my profound thankfulness to the all-powerful for imparting me power to put an end the assignment effectively amidst the scheduled time. The project designated “Online Mobile Repair System (MobiCareBD)” is equipped to occupy the necessity of MSCSE. I am extremely having obtained heart-felt counsel, convoy and team-work.

I be keen on to manifest my sound thanks to my overseer, Dr. Mohammad Nurul Huda, Professor & Director-MSCE, UIU, for his incessant steerage, momentum, and endurance, and impart me the room to commit the assignment. His worthy exhortation and precise steerage drawn up it feasible to equip a well-shaped project report.

In fine my profound thanks & piety to my parents of their assistance & borderless love.

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# Chapter 1

## Introduction

### 1.1 Intention

Mobile Phone (Smartphone) are more than just a necessity now a day. We use the phone to do almost all task, that we used to do using computer in past. Internet browsing, sending mail, taking important note, online payment, online booking, printing, document typing etc. In today's world smartphone take the place of digital camera. We are taking photographs on smartphone. We can play heavy processor consumed game in mobile phone to. As we using various things using mobile phone in our life, it became part and presell of your daily life. So when it starting give trouble for technical issue or broken our life become terrible. Even we can't think anything without it. Sometimes we just replace it with a new phone because repair the troubled phone not so easy. We don't like to go through the hassle of mobile phone repair process.

When we think to repair a phone we are to think Where to go? Whom to go? Is it trustworthy? What will be my data security? How much it will be cost? Will it sever ok after repair? How many days to wait? etc. Actually we get confused to go this process. Either we buy a new one or we go this process. But most of the time it doesn't give us good experience.

'Online Mobile Repair System (MobiCareBD)' can solve this problem very efficiently and effectively. It will take away all these hassles. Easy to find out service provider, data security, reliable, lowest cost, trustworthy. User can do it seating at home.

### 1.2 Motivation

This software application is designed to solve the real world problem, that is to make mobile repair system smart. This project can be deployed as service portal. Where common people can take advantage of smart mobile repair system and make life easy.

### **1.3 Layout**

MobiCareBD software has diverse beauty of separate part with specific functionality. Earliest one is System Feature -setup (User info, Rights and so on), Master-setup (Vendor, Device Category, Models & so on) & another is Transaction (Problem, Choose Provider, Comments, Repair Process, update info & so on).

## **Chapter 2**

### **Literature Overview**

#### **2.1 Preface to Mobile Repair System**

**Online Mobile Repair System (MobiCareBD)** is a web and mobile based application system used to make life easy and cut down the cost and time of mobile repair, conducting the mobile repair system in systemic way. Feasible mobile repair system reduce tome of searching mobile service provider, make user able to compare distance, and goodness between multiple service provider. So that user can choose suitable provider among hundreds of service provider. It can reduce cost of repair by fixing cost comparing the cost in real market.

#### **2.2 Subsisting Problem in Mobile Repair System.**

We repair your mobile in traditional system. When we get problem with your favorite mobile phone we get in big trouble. Even we can't think anything without it. Sometimes we just replace it with a new phone because repair the troubled phone not so easy. We don't like to go through the hassle of mobile phone repair process. It happened if we have ability, but most of us don't have so. So we to repair it, search for mobile service provider shop to shop and market to market. Our destination is not fixed and cost is unknown. Finding suitable service provider and repairing that phone in suitable price is a challenge. They often require high cost to repair and sometimes they are not trustworthy. We got in tension that, they can replace other parts of mobile with imitation parts. The Online Mobile Repair System can solve this problem very easily. But it is challenge to make such a flexible system to remove all this problem.

#### **2.3 Submitted Solution**

This software provides facility to maintain all task related to phone repairing. Describe and submit problem smartly in mobile application. Choose service provider comparing price, distance from user location, service provider previous rescored and repair the phone smartly.

### 2.3.1 System Feature

- a. **Monitor User Profile:** User profile less than 100% complete not allow to use any function, de-active user if he/she update it
- b. **Maintain User Rights:** Set up user (Active user, De-active user, Re-activate user after update profile and Make System User or admin) right in accordance with his/her role.

### 2.3.2 Master Setup

- a. **Vendor Setup:** setup Vendor of mobile manufacture company add, edit, delete
- b. **OS Setup:** setup OS of phone add, edit, delete
- c. **Model Setup:** setup Models of phone add, edit, delete
- d. **Cost Setup:** setup cost type, cost of specific repair type add, edit, delete

### 2.3.3 Transaction

- a. **User Info:** All user info, change photo, NID card info, change basic information.
- b. **Define Problem:** Define problem by choosing vendor, os, model, purchase date, what is the problem with the device.
- c. **Choose Provider:** Choose provider from multiple service provider, according to shop place and distance, provider rating, comments, service record, cost etc.
- d. **Repair:** Repair and get the repaired phone back.
- e. **Tracking repair status:** Tracking all the state of repair process.

## **Chapter 3**

### **Definition of Requirement**

#### **3.1 Use Case Prototype**

A Use Case prototype is a replica by that emerges how many sampling of vendees be in contact by means of the scheme & their accessibility of project. It recounts the target of Customers, the fundamental interactions into the vendees, and it recounts intentions which attain indispensable outlook of the system to pleasing operation.

#### **Actor**

Actor recounts a model component. Landmarks take in actor's name and statement which accomplished earmarked role. Here admin, customer, service provider are actors.

#### **Associations**

Associations recount the kinships between actors and the UC that is called communicates-association.

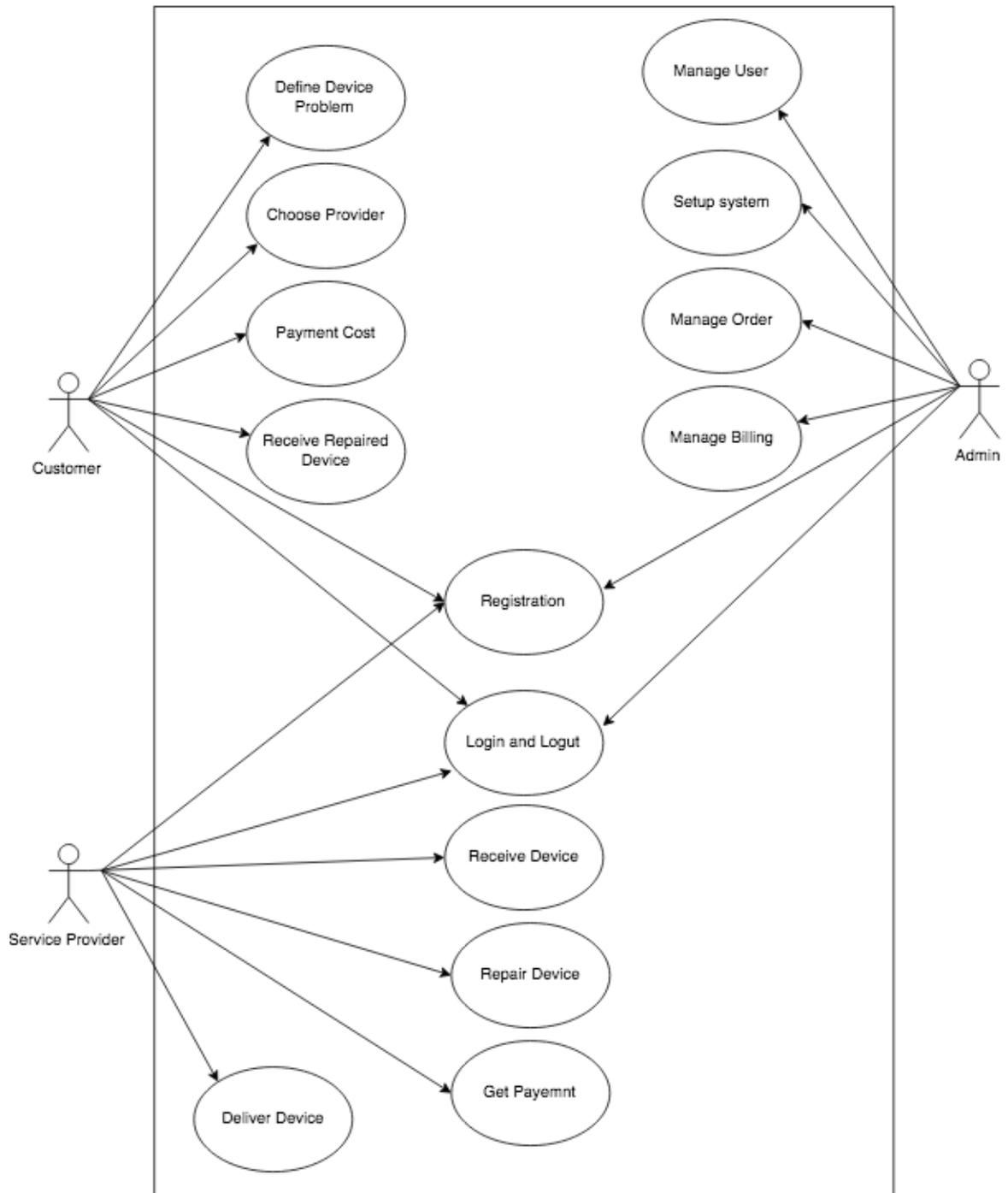
#### **Phenomenon**

A model component recounts the Bourne of the way of part. It also recounts the physical area of the project.

#### **Use Case Recount**

A model material treat to put together the Use Case model to facilitate resolution, putting one's cards on the table. It is used to dive the use case lesser part to anticipate it readable.

### Online Mobile Repair System



**Figure- 3.1-Use Case Diagram**

### 3.2 Narration of Use Case

**Use case title** : **Registration**  
Prerequisite : a unique mobile no, password  
Actors : Customer/Service Provider/Admin  
Post Condition : Login Using email & credential  
Alternate Course : user must enter mobile no that not user this system before, a password and choose user type  
Observation : Created on May, 2019

**Use case title** : **Login and Logout**  
Prerequisite : Login to MobiCareBD  
Actors : Customer/Service Provider/Admin  
Key pathway : Customer and service provider can login in mobile apps and admin can login in web application only.  
: Without system permission, user can not add this.  
Anomalous footing : User must input unique mobile that not used in this system  
Observation : Created on May, 2019

**Use case title** : **Define Device Problem**  
Prerequisite : Login to MobiCareBD and 100% profile done  
Actors : Customer  
Key pathway : Select vendor, os, model, problem type and enter purchase date.  
Anomalous footing : Future date not allow, 100% profile score needed.  
Observation : Created on May, 2019

**Use case title** : **Choose Provider**  
Prerequisite : Login to MobiCareBD and have a problem defined  
Actors : Customer  
Key pathway : User can see distance, comments and rating, direction then choose best provider.  
Anomalous footing :  
Observation : Created on May , 2019

**Use case title** : **Payment Cost**  
Prerequisite : Login to MobiCareBD and must have provider chosen  
Actors : Customer  
Key pathway : First choose provider, carry mobile to service provider then pay in cash.  
Anomalous footing : User must ensure provider accept his payment form system.  
Observation : Created on May , 2019

**Use case title** : **Receive Repaired Device**  
Prerequisite : Login in MobiCareBD and must have payment done  
Actors : Customer  
Key pathway : Service provider receive the mobile for repair and mark the request device delivered.  
Anomalous footing : User must ensure service provider mark device received.  
Observation : Created on April, 2019

**Use case title** : **Receive Device**  
Prerequisite : Login in MobiCareBD and 100% profile completed, payment done  
Actors : Service Provider  
Key pathway : Service provider mark device received form his repair request.  
Anomalous footing :  
Observation : Created on May, 2019

**Use case title** : **Repair Device**  
Prerequisite : Physical task  
Actors : Service Provider  
Key pathway : Physical process  
Anomalous footing :  
Observation : Created on May, 2019

**Use case title** : **Get Payment**  
Prerequisite : Login in MobiCareBD and repair done  
Actors : Service Provider  
Key path : Receive payment from customer.  
Anomalous footing :  
Observation : Created on May, 2019

**Use case title** : **Deliver Repaired Device**  
Prerequisite : Login in MobiCareBD and repair done  
Actors : Service Provider  
Key pathway : Deliver device button click and confirm customer that won the device then deliver.  
Exceptional pathway : Should match customer photo and info.  
Observation : Created on May, 2019

**Use case title** : **Manage User**  
Prerequisite : Login in MobiCareBD  
Actors : Admin  
Key path : Login with user and pass, Must have to be admin. Active button allow to active or de active user.  
Anomalous footing : Active or de activating user related to verify information user provide.  
Observation : Created on May, 2019

**Use case title** : **System Setup**  
Prerequisite : Login in MobiCareBD  
Actors : Admin  
Key path : Login with user and pass, must have to be admin. Vendor, OS, Model, Cost type, cost of specific type can add, update, delete.  
Anomalous footing : Duplicate vendor, os, model not allow.  
Observation : Created on May, 2019

**Use case title** : **Manage Order & Payment**  
Prerequisite : Login in MobiCareBD  
Actors : Admin  
Key path : Login with user and pass, Must have to be admin.  
Anomalous footing :  
Observation : Created on May, 2019

### **3.3 Synopsis**

Use Case model and ingoings' on of model which is emergent for package method life cycle. Exotic examiner can conduct experiments whole characteristics of MobiCareBD.

# Chapter 4

## Design

### 4.1 Data Model

The data model will as a rule compose of entity types, attributes, data model is recruitment of data conjecture that recounts the data, the data contact & data constraint.

The data model will as a rule compose of entity types, components, relationships, fairness rules, and the definitions of those purpose. The data contact & data constraint. It also describes the physical & logical notion.

The intention is to organize, scope and prescribe business notions and rules. This model is typically constructed by Data Architects and Business Analysts. The purpose is to thrived technical map of rules and data structures This data model illustrate how the system will be accomplish using an earmarked DBMS system.

#### 4.1.1 Business Flow Chart

Flow Chart of business model set forth an ocular narrations of the flux of data procedure & emerges us who is the liable for each degree.

#### Interpretation

Flow Chart of business model diagrammatically interpret the deeds else business process one by one.

#### Function

A flowchart is a type of diagram that represents an algorithm, workflow or process which describe the main point of program MODEL. These systems can concentrate on process which is integrated, human. The goal is achieving by creating a balanced, quality output based on a standardized set of methods.

## Prominences

Three prominence of flow charts: sublime-level, manifest and deployment or matrix flowchart. High-level gives the details over view of main process.

## Uses

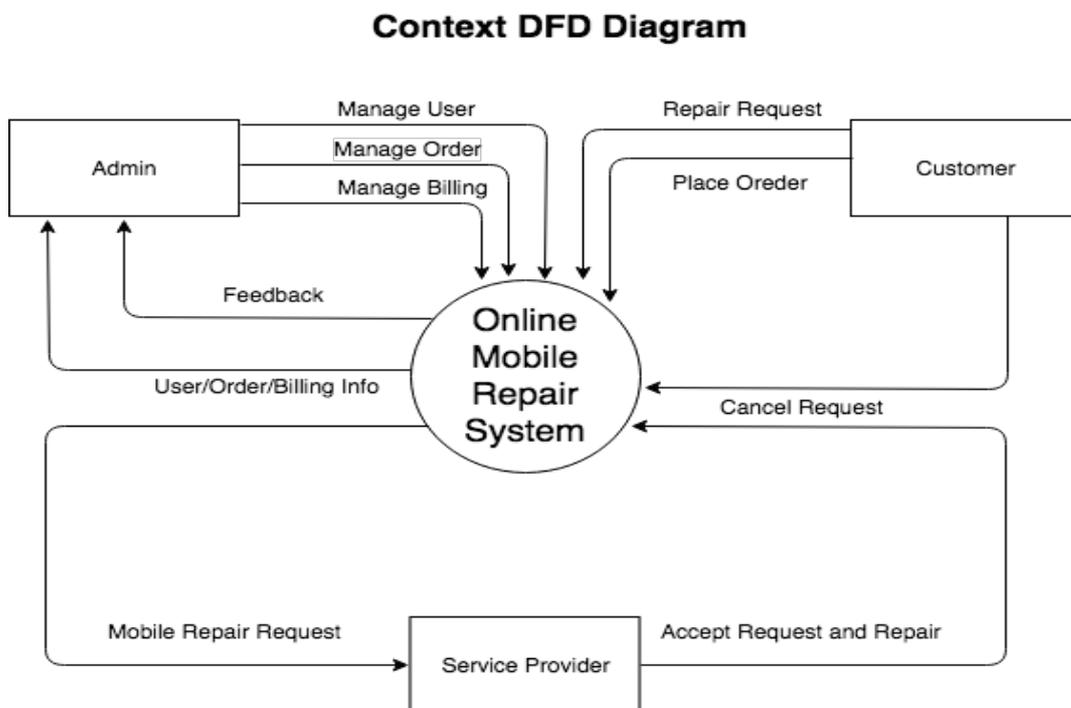
High-level flowchart illustrates the details body imaging process. Watchful reconsideration of flowcharts can express the valuable information affecting a process.

## Shapes

Flowcharts use special features to describe different types of deeds or steps in a process. Lines and arrows represent the sequence of the steps, and relationships among them. These are called flowcharts symbols.

## Business Flow Chart of Online Mobile Repair System(MobiCareBD)

Flow chart of business model are exercised to depicture the business's flow procedure for MobiCareBD.



**Figure-4.1 Business Flowchart**

## **4.2 UI/UX Diagram & Response**

User interface is a diagram which sets forth on the user's experience and interaction with the software.

### **4.2.1 Processes**

There are various types user interface model: -

- Functionality of necessity ingathering – To attain the intention of the project, may employ calculations, technical details, data manipulation & processing. Now and again, a requirements analyst creates use cases after ingathering and affirming a set of functional requirements.
- User analysis – analysis the characteristic, user task & goal so that these findings can help making decision about project.

## **4.3 Requirements**

Requirement ingathering is the system of ascertaining, documenting, and conducting stakeholder urgent & necessity to meet project intention.

## **4.4 Database Entity Design**

Design of Database is an emergent of context that naturalize the masterminding, development, implementation and maintenance of enterprise data.

Database is matured to keeping in reserve the tangible data. The design of a bodily database is following –

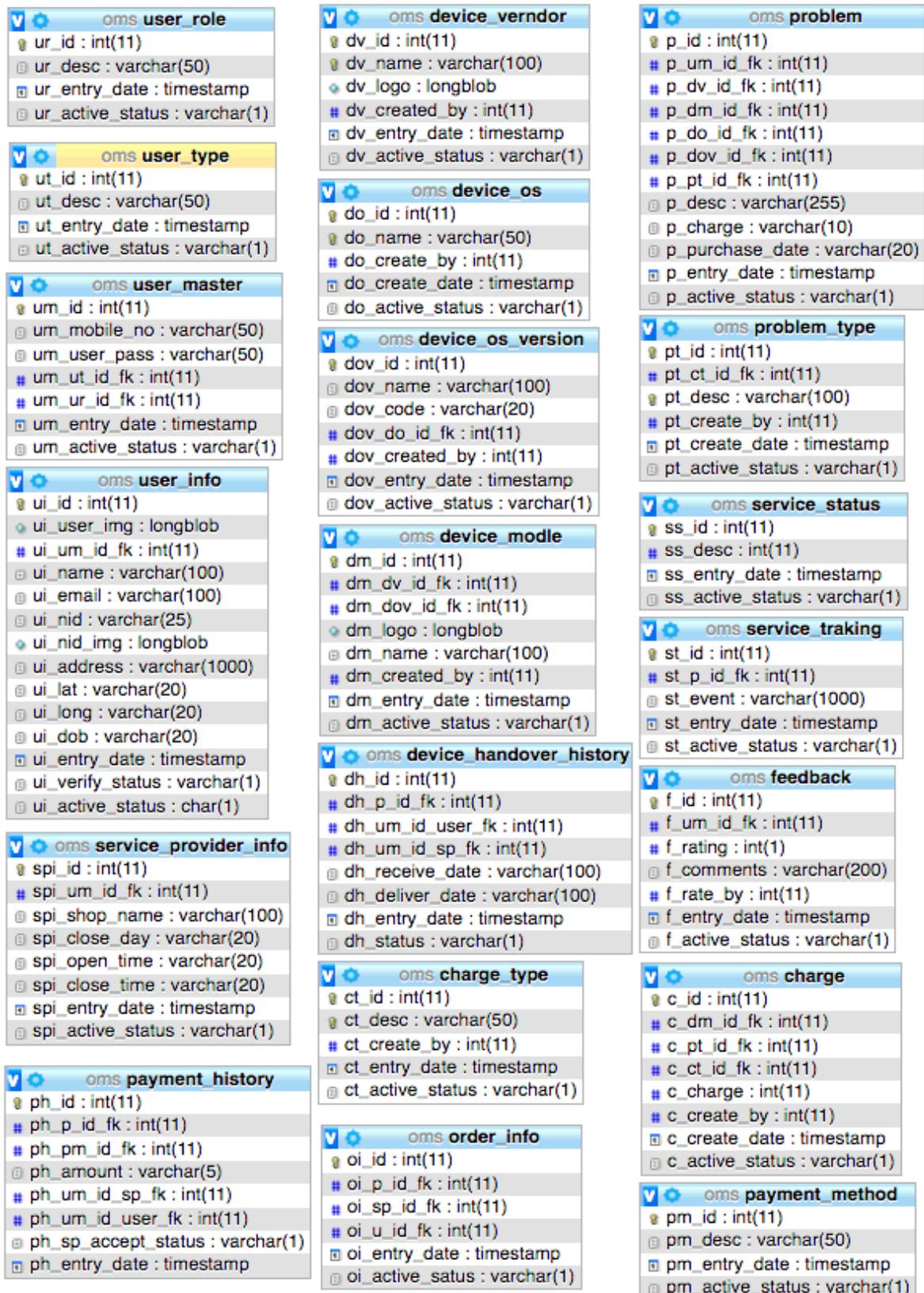


Figure-4.2-Entity Relationship Diagram

#### **4.4.1 Details for Online Mobile Repair System**

Key Functionalities recounted are following:

**4.4.1.1-User Role, User Type:** User role specify the role in the system. Admin or general user. User type specify whether user is customer or service provider.

**4.4.1.2 User Master:** username, id, password etc. are stored here. Password are encrypted string with Minimum 8 character with number & special character. Mobile no should be valid & unique. Duplicate mobile no is not allowed here. Mobile number is used as username. User role and type is defined here.

**4.4.1.3- User Info:** Details about user are store here. User full name, nid no, email, address, date of birth etc. Location are also store here. All specific has a score point. Sum of all score point is 100. That means 100%. If any user dose not fill all information he will not be able to play any action in this system.

**4.4.1.4 Service Provider Info:** Service provider information store here like store name, off day, start time, close time etc. This table only for service provider this table share profile point with 100% profile info. Without filling this info service provider will not be able to do any task in this system.

**4.4.1.5 Device Vendor:** All mobile manufacture company name will store here. Vendor company name with logo of the company will store.

**4.4.1.6 Device OS and OS Version:** All OS of mobile device will entry here. Name of OS with OS logo will store. Related OS version will store in OS version table.

**4.4.1.7 Device Model:** Different type of mobile model with logo will store here. Model name, related vendor id, related OS id and version will store hear.

**4.4.1.8 Problem:** Problem with device will entry here. Customer will entry his device problem in this. Vendor, OS, OS version, model, purchase date, problem type, problem description, chare to repair will store here.

**4.4.1.9 Problem Type:** Problem type like screen problem, battery problem, camera problem etc will store here. Problem description entry here and problem id will generate automatically in database.

**4.4.1.10 Charge and Charge Type:** Cost of repair of specific problem type will store here. Problem type id, cost will store. Charge type will store whiter charge or cost is fixed or negotiable.

**4.4.1.11 Order:** When user choose a service provider order will generate. Here auto-generated order id, problem id, customer id, service provider id etc will store.

**4.4.1.12 Service Tracking:** Customer will be able to track his mobile repair history. Here all tracking recorded with related problem id and event description.

**4.4.1.13 Device Handover History:** All record related mobile device handover will entry here. Device handover to service provider for repair by customer, Device receive by service provider, get back the repaired device form service provider etc. It will maintain by status flag. So problem id, service provider id, customer id, handover status etc will store.

**4.4.1.14 Payment History:** Payment entry related to mobile repair will store here. Problem id, customer id, service provider id, cost, payment date, payment status etc will store here.

## **4.5 Synopsis**

Chapter-4 recounts circumstantial graph of the MobiCareBD tables. Flow Chart of Business of diverse mode, UI/UX plan of MobiCareBD and plan of database are recounted.

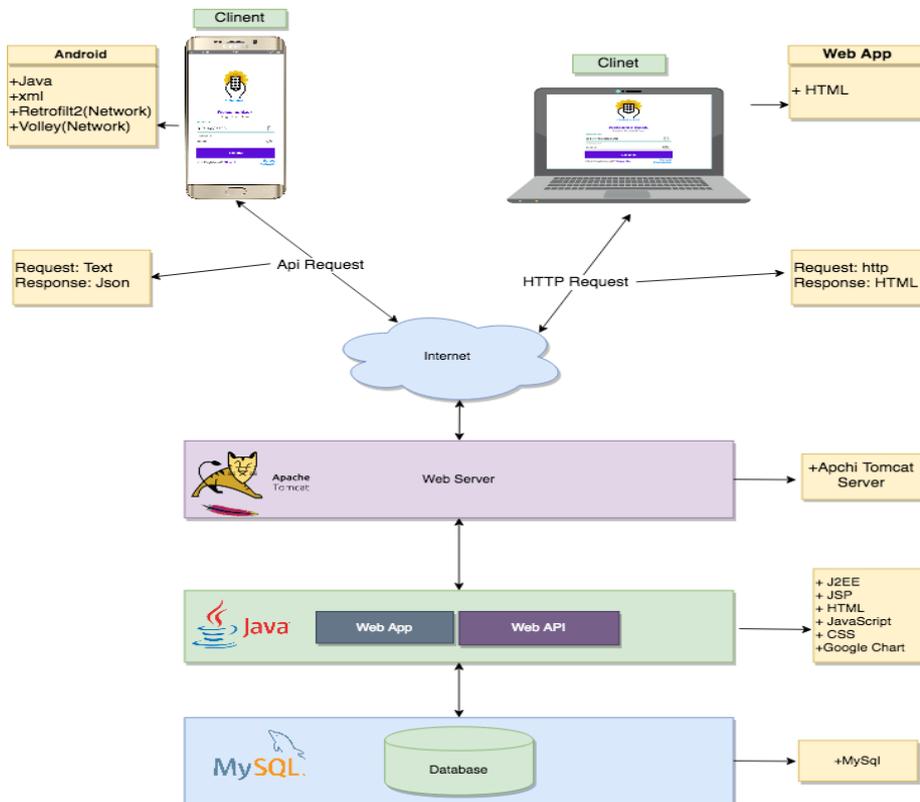
# Chapter 5

## Implementation & Evaluating

### 5.1 Implementation Overview: Implementation of MobiCareBD

#### 5.1.1 Architecture:

The database uses to reserve and store information, the web application and api operates logic and the presentation (Web and Mobile App) tier is a picturesque user interface that enquire about with the other two tiers. The three tiers are rational, not tangible, and may or may not run on the same tangible server in Online Mobile Repair System.



**Online Mobile Repair System (MobiCareBD) Architecture**

**Figure-5.1-Architecture**

Three tier architecture:

**a. Presentation Tier:**

**a.1 Web:** JSP, HTML5 with bootstrap 4, cascading style sheets (CSS) JavaScript, jquery.

**a.2 Mobile App:** Java, xml, Retrofit 2 (Network), Volley (Network), MapBox for Map.

**b. Application Tier:** Java EE, Run on apache tomcat 8 server

**c. Database:** MySQL Database, MySQL stored procedure

### 5.1.1 Methodology

**RDBMS:** To make sure the utmost cohesion of database, MySQL-RDMBS is conducted in MobiCareBD.

### 5.1.2 Toolkits

Draw.io (Online): To quarterback UML Diagram User Case & Flow chart.

**NetBeans and Android Studio:** I have used NetBeans and Android Studio IDE for developing & design.

**PhpMyAdmin:** 4.8.4, MySQL query browser: use for accessing & create database with process.

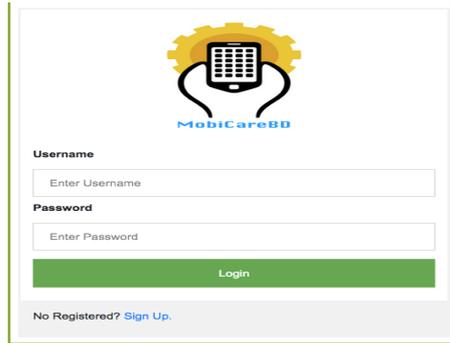
## 5.2 Opening Pages:

Page Example of ‘Online Mobile Repair System(MobicareBD)’

### 5.2.1 Web Application (For Admin):

Web application only design for admin user. Where admin user can login the system, see dashboard (overview of full system), setups system tables, manage user and service provider.

**5.2.1.1 Login to MobiCareBD:** A convincing user-mobile-no and credential are needed to MobiCareBD login. Unauthorized Mobile No & credential will show error top of the page as error message.

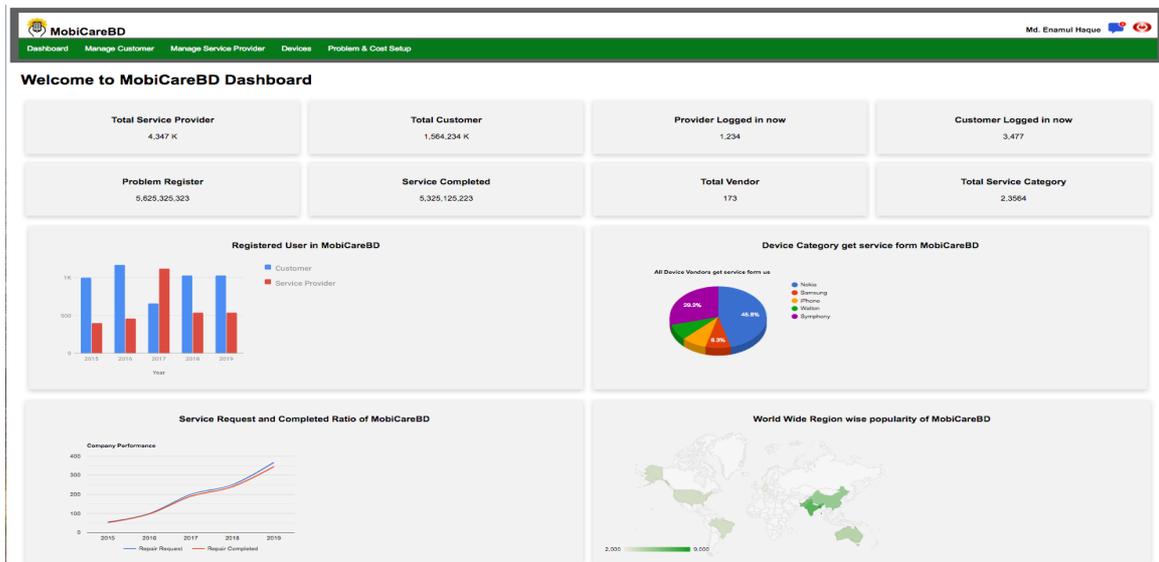


**Figure-5.2 Login Page**

**5.2.1.2 Menu Master & Dashboard:** Menus display according to user rights.

Dashboard shows how many total service provider, total customer registered in the system. How many providers logged in just now, customer logged in just now. How many problems registered, how many completed, total vendor, total service category that system service.

Graph represent how many customer and service provider registered yearly. Pie chart represent different type vendor total service by the system. Total region wise popularity in geo graph and so on.



**Figure-5.3-Menu Screen & Dashboard**

**5.2.1.3 Manage Customer:** Admin can manage customer. See all information. Match nid info with nid card. Active or inactive customer.

ID	Profile Image	Name	Mobile No	Email	DOB	Shop Address	NID	NID Card	Verify	Shop Latitude	Shop Longitude	Create Date
4		Tonu	01719885509	email@yahoo.com	07/09/2001	Uttora, Dhaka	0155555588		Verified <a href="#">Click to Make Unverified</a>	23.880090999861054	90.400852502242	2019-08-09 22:22:55.0
4		Tonu	01719885509	email@yahoo.com	07/09/2001	Uttora, Dhaka	0155555588		Verified <a href="#">Click to Make Unverified</a>	23.880090999861054	90.400852502242	2019-08-09 22:22:55.0
5		Ali Imam	01719885510	asraf@gmail.com	07/09/2012	Dhanmondi, Dhaka	2555555555		Verified <a href="#">Click to Make Unverified</a>	23.741956693154346	90.36179800781582	2019-09-07 17:36:15.0
5		Ali Imam	01719885510	asraf@gmail.com	07/09/2012	Dhanmondi, Dhaka	2555555555		Verified <a href="#">Click to Make Unverified</a>	23.741956693154346	90.36179800781582	2019-09-07 17:36:15.0
8		Monir Hossain	01719885513	manir@gmail.com	07/09/2000	Dhanmondi, Dhaka	2555555567		Verified <a href="#">Click to Make Unverified</a>	23.741956693154344	90.36179800781583	2019-08-02 10:04:20.0
8		Monir Hossain	01719885513	manir@gmail.com	07/09/2000	Dhanmondi, Dhaka	2555555567		Verified <a href="#">Click to Make Unverified</a>	23.741956693154344	90.36179800781583	2019-08-02 10:04:20.0

**Figure-5.4-Manage Customer**

**5.2.1.4 Manage Service Provider:** From this screen, admin can manage service provider. See all information. Match nid info with nid card. Active or inactive service provider.

ID	Profile Image	Name	Mobile No	Email	DOB	Address	NID	NID Card	Verify	Latitude	Longitude	Create Date
3		ENAMUL HAQUE	01719885508	namul@gmail.vij	07/09/2019	Dhaka, Bangladesh	1968567788999		Verified <a href="#">Click to Make Unverified</a>	23.72048562945276	90.42126136183248	2019-08-02 10:04:20.0
3		ENAMUL HAQUE	01719885508	namul@gmail.vij	07/09/2019	Dhaka, Bangladesh	1968567788999		Verified <a href="#">Click to Make Unverified</a>	23.72048562945276	90.42126136183248	2019-08-02 10:04:20.0
6		Md. Nurun Nabi	01719885511	enamul@erainfotechbd.com	30/01/1987	abc	9723938749724		Not Verified <a href="#">Click to Make Verified</a>	90.98237486	23.987323	2019-08-02 10:04:20.0
6		Md. Nurun Nabi	01719885511	enamul@erainfotechbd.com	30/01/1987	abc	9723938749724		Not Verified <a href="#">Click to Make Verified</a>	90.98237486	23.987323	2019-08-02 10:04:20.0
7		Md. Asadujaman	01719885512	asad@erainfotechbd.com	30/01/1988	abc	9723938749725		Not Verified <a href="#">Click to Make Verified</a>	90.98237487	23.987327	2019-08-02 10:04:20.0
7		Md. Asadujaman	01719885512	asad@erainfotechbd.com	30/01/1988	abc	9723938749725		Not Verified <a href="#">Click to Make Verified</a>	90.98237487	23.987327	2019-08-02 10:04:20.0

**Figure-5.5 Manage Service Provider**

**5.2.1.5 Vendor Setup:** Mobile phone manufacture company (Vendor) setup can perform form this page by admin user. Admin can update, delete, insert a new vendor. Can see all setup vendor form this page with logo.

Vendor ID	Vendor Logo	Vendor Name	Creator Name	Create Date	Edit	Delete
2		Symphony	3	2019-08-04 13:17:46.0		
3		Samsung	3	2019-08-04 13:23:45.0		
4		Apple	3	2019-08-04 13:25:22.0		
6		Nokia	3	2019-08-09 12:19:50.0		

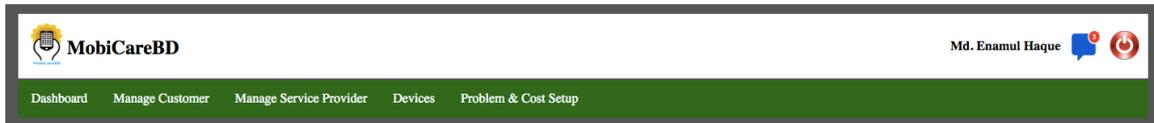
**Figure-5.6-Vendor Setup**

**5.2.1.6 Model Setup:** Mobile phone model setup can perform form this page by admin user. Admin can update, delete, insert a new model. Can see all setup model form this page with logo. Model is related to vendor, so vendor logo with name can see also.

Model ID	Vendor Logo	Vendor Name	Version Name	Model Logo	Model Name	Create By	Create Date	Edit	Delete
2		Samsung	Jelli Bean ( 16 )		Dous 2	3	2019-08-05 12:01:15.0		
3		Symphony	Kit Kat ( 19 )		W70	3	2019-08-05 12:08:35.0		
4		Symphony	Nugut ( 28 )		W30	3	2019-08-05 12:19:32.0		
7		Apple	7s ( Plus )		7s 2	3	2019-08-09 21:52:41.0		

**Figure-5.7 Mobile Model**

**5.2.1.7 Charge Setup:** Cost of repair (Charge) can setup form this page. Admin can see previous record, add new one, update or delete previous record. This setup related to device model.



**+ All Charge(Cost) of All Fixed Repair Type**

Charge ID	Model Name	Problem Type	Charge Type	Cost of Repair	Create By	Create Date	Edit	Delete
1	Dous 2	Bettary	Fixed	2003	3	2019-08-28 10:34:40.0		
3	Dous 2	Screen	Fixed	800	3	2019-08-28 11:27:49.0		
4	2.2	Bettary	Fixed	500	1	2019-09-10 20:28:10.0		

**Figure-5.8 Repair Charge Setup**

**5.2.2 Mobile Application (For Customer & Service Provider)**

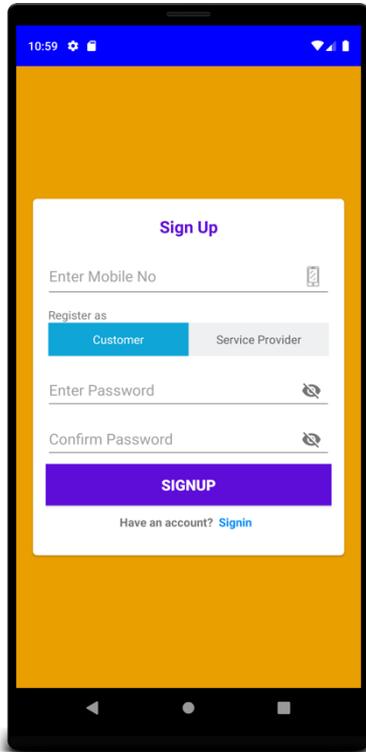
Mobile application only design for customer and service provider user user. Where customer and service provider user can login.

Customer can login, registration, update profile, raise problem, choose provider, comment & rate service provider, pay cost, see tracking info related to problem. See previous service history.

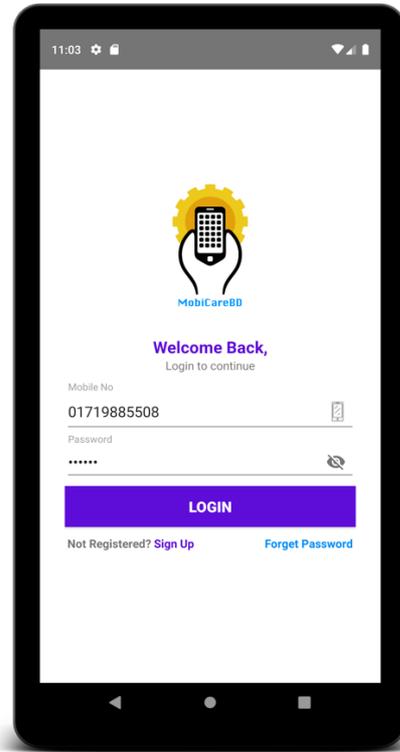
Service provider can login, registration, update profile, see ordered problem, receive device, repair phone, deliver device, payment history, previous service record.

**5.2.2.1 Registraion:** Service provider and customer registration can perform from this page. User need to provider his own mobile no that not used in this system before. This mobile no will be the user no. Choose user type customer or service provider. Enter password then signup.

**5.2.2.2 Login:** Service provider and customer ‘Login’ can perform from this page. User need to provider mobile no that they use for registration. This mobile no will be the user name. Enter password then press Login.



**Figure-5.9 Registration**

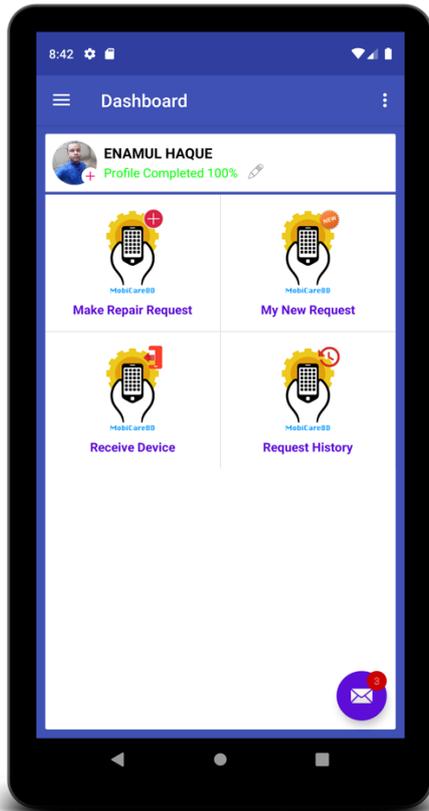


**Figure-5.10 Login**

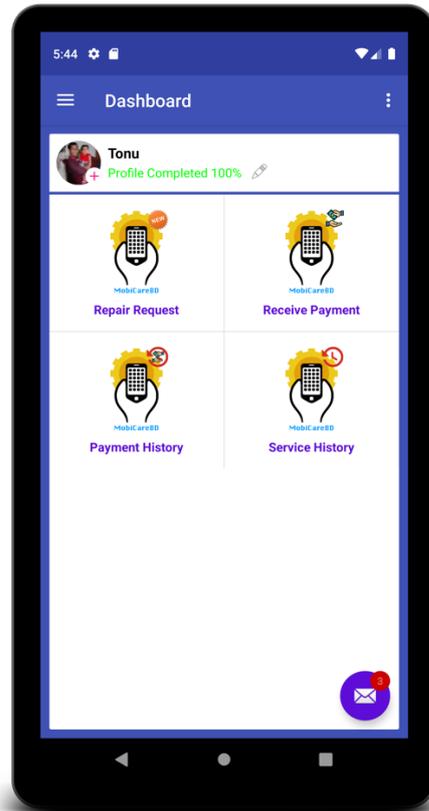
**5.2.2.3 Dashboard:** After successful login user will see the dashboard. Dashboard content will be different as user type. Common option is edit profile.

**5.2.2.3.1 Customer Dashboard:** Customer will get, Make Repair Request, My New Request, Receive Device, Request History.

**5.2.2.3.2 Service Provider Dashboard:** Service provider will get, Repair Request, Receive Device Payment, Payment History, Service History.



**Figure-5.11 Customer Dashboard**



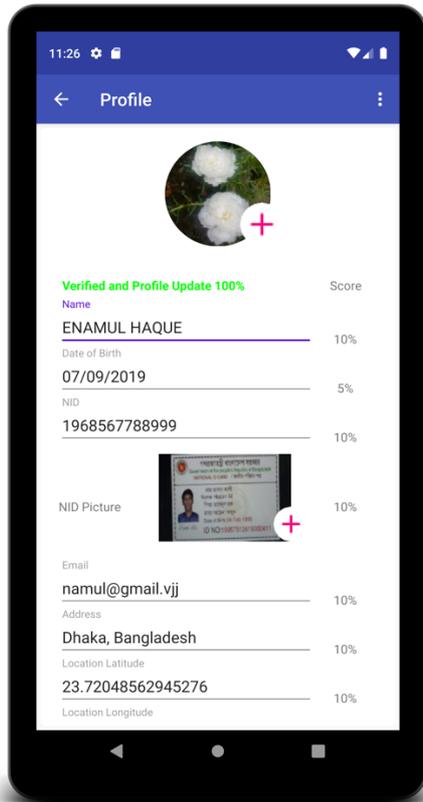
**Figure-5.12 Provider Dashboard**

**5.2.2.4 Update Profile:** Both user can update his profile. Each update make user deactivate until admin activate them. But update profile page is different for customer and service provider. Profile complete ratio 100% must need otherwise user can't do any action.

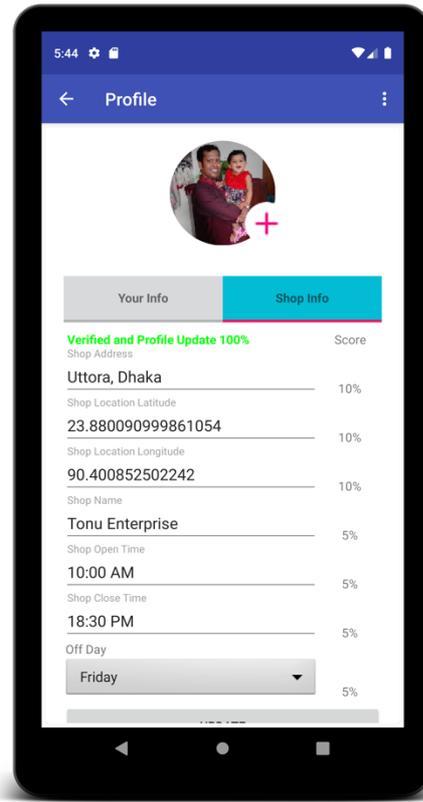
**5.2.2.4.1 Customer Update:** Customer can update full name, address, email, nid, date of birth, latitude, longitude, nid image, profile image.

**5.2.2.4.2 Service Provider Update:** Service provider can update full name, shop address address, email, nid, date of birth, shop latitude, shop longitude, nid image, profile image.

Additional info for service provider is shop off day, show open time, shop close time.



**Figure-5.13 Customer Update**



**Figure-5.14 Provider Update**

**5.2.2.5 Repair Request:** Customer can submit his repair request by defining problem. Just tap on Repair Request Menu from dashboard. Enter device info and problem then submit. If successful, then it will show message. User can directly choose provider by clicking yes from dialog message.

**5.2.2.6 Request History:** Here customer can see all request info he made. User can also choose provider to repair, pay to provider, track service status by clicking specific menu.

**5.2.2.7 Choose Provider:** By clicking choose provider menu from request history user will go to choose provider page. Here user can see all service provider list and info with distance to shop, his rating etc. User can also see map direction to shop. Can see comment from previous client.

**5.2.2.8 Direction Map:** User can see direction map to service provider shop location by clicking map on choose provider page.

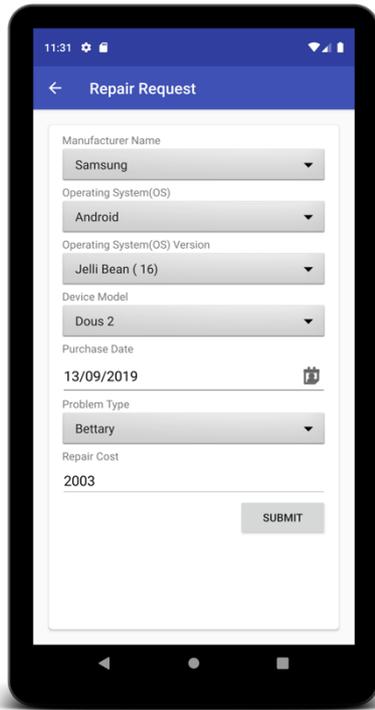


Figure-5.15 Repair Request

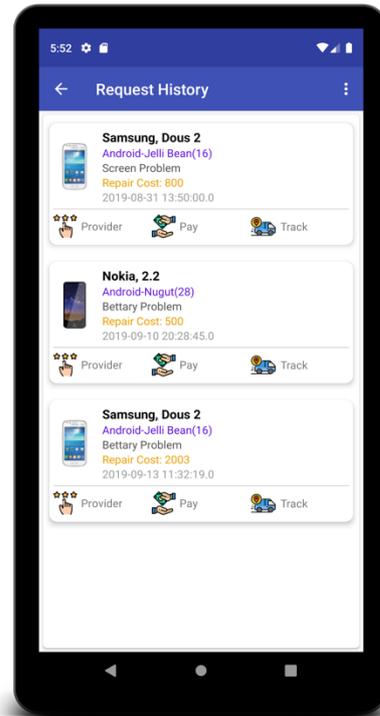


Figure-5.16 Request History

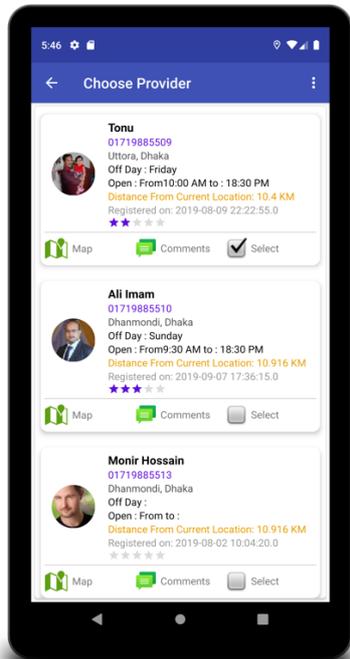


Figure-5.17 Choose Provider

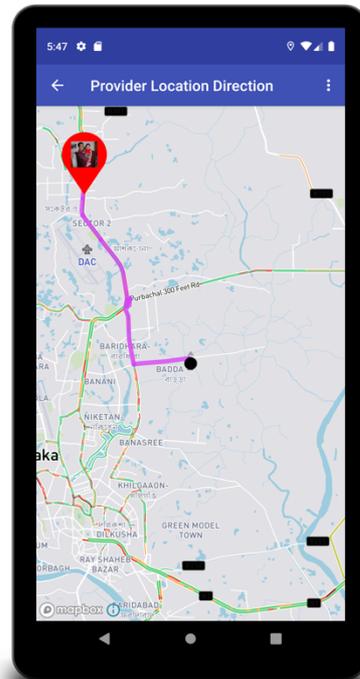
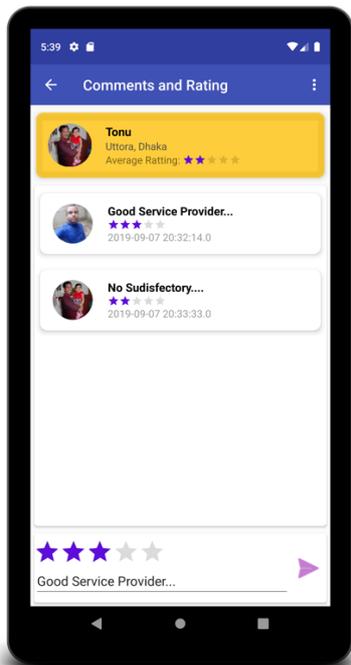


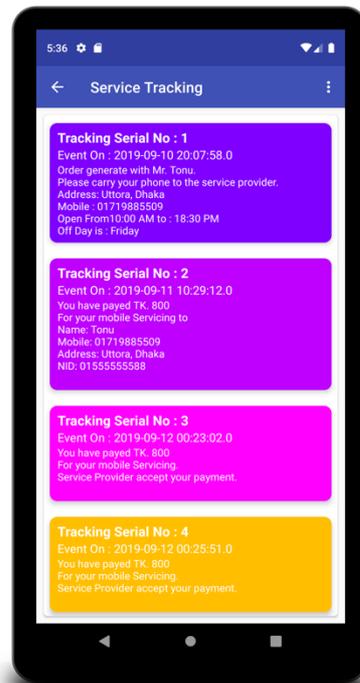
Figure-5.18 Direction Map

**5.2.2.9 Comments and Rating:** User can see previous client comments and rating in this page. User also can rate the provider and make comments.

**5.2.2.10 Service Tracking:** All event after creating require request will show in this page. This page related to repair request. User came to the page clicking Track menu from request history.



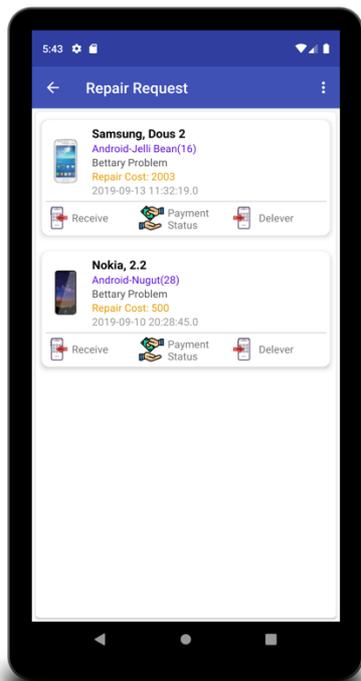
**Figure-5.19 Comment and Rating**



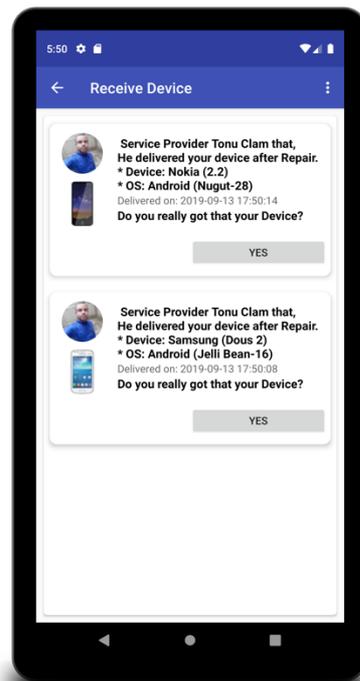
**Figure-5.20 Service Tracking**

**5.2.2.11 Repair Request(Service Provider):** Service provider can see all repair request to him from different customer. Service provider can receive device, check payment status, deliver device after repair complete.

**5.2.2.12 Receive Device:** If payment done and repair complete service provider will click deliver device. Customer will get data in Receive Device page. If customer get device back and device work fine, then customer will click ok and confirm that he gets back the repaired device and device working fine. By this event all repair process related to repair request will finish. Service of Request will close.



**Figure-5.21 Repair Request**



**Figure-5.22 Receive Repaired Device**

### 5.3 Software Testing

Software testing is defined as an activity to check whether the actual results match the expected results and to ensure that the software system is Defect free. so that software's operation functionalities completely according the requirement.

#### 5.3.1 Testing Methods

Static Testing is ascertaining as a software testing deftness by which we can examine the drawbacks in software without actually executing the code.

Dynamic Testing is a sort of software testing method using which the progressive dealing of the code is analyzed.

#### 5.3.2 The Box Approach

- **White-Box Testing:** White-box testing is the testing process which is based on the code based testing or structural testing. Code should be visible to the tester when tester is going test a software

- **Black-Box Testing:** Tester test can be no-functional and functional where test does not know coding, design and so on which is called behavioral testing system.

#### **5.4 Synopsis**

We have examined whole screens as ocular experiment to examine the module. We detect entire screens conduct barring any oversight data and whole operations are operating clearly.

## **Chapter 6**

### **Conclusion & Future Works**

#### **6.1 Conclusion**

MobiCareBD is significant for keeping lowest cost mobile repair, while user need repair their mobile device. It confirms that service providers are trustworthy. User can choose nearest service provider so it is less time consuming. Fixed price comparing local market so no bargaining and get lowest cost.

Lastly I would like to say using “Online Mobile Repair System (MobiCareBD)” software it is very useful to user for low cost, less time and trustworthy hassle free mobile repair.

#### **6.2 Limitations**

MobiCareBD need payment and delivery system. So that every device transport and payment can done setting at home.

#### **6.3 Future Work**

Following may be added to **Online Mobile Repair System (MobiCareBD)** in future:

- AI base problem assigning to service provider
- Used AR Technology for locating service provider location along with map.
- Build IOS app (Native Flavor).

## References

[1] Sheza Gary, “The Importance of Excellent Online Customer Service,” Internet Marketing, July. 2015.

[2] Martin Fowler, Cris Kobryn, and Kendall Scott, “UML Distilled: A Brief Guide to the Standard Object Modeling Language,” 3<sup>rd</sup> Edition, pp. 9–118, 2003.

[3] Herbert Schildt, “Java™: The Complete Reference,” Seventh Edition, pp. 848–928, 2007.

[4] Chryssa Aliferi, “Android Programming Cookbook,” Kick Start your android project, pp. 67–79, 2016.

[5] Ian F. Darwin, “Android Cookbook,” Problems and Solutions for Android Developers, Location and Map Applications, pp. 599–619, 2017.