Green University of Bangladesh

Department of Computer Science and Engineering (CSE)
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HealthCare Application

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Section:D13

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Lab Project Status	
Marks:	**Signature:**
Comments:	**Date:**

Contents

Chapter 1

Introduction

1.1 Overview

Health care is a basic need of every human being. In Bangladesh the health care system is mainly provided by the government with little or no charge. But this comes with many complications. The huge number of patients makes it difficult for the government hospitals to provide them with a quality health care. As a result, thousands of private hospitals are established with a view to meet the growing need of the masses for a quality health care. But when one wish to take service from a hospital, he first tries to collect some information about that hospital. In this project, we will try to make a mobile application to make health care more convenient for the masses is proposed. The reason for choosing android platform is that in Bangladesh, the cost of android phone is reasonable and even poor people can afford to have one. Besides, android phones are seen widespread and all ages and classes of people are using it without hassle

1.2 Motivation

• Helping people to perform their regular medicine order by their own.

• Removing the Hassle of set appointments with doctors physically.

• Provide a user friendly user interface so that they can easily use it.

• Health articles are available for the users. [**?**].

1.3 Problem Definition

In today's fast-paced world, healthcare services are increasingly being integrated with technology to enhance accessibility, efficiency, and convenience for both patients and healthcare providers. However, there is a growing need for a healthcare app that effectively addresses.

1.3.1 Problem Statement

• No existence of user friendly health care app.

• No app that provide online doctor booking and medicine order also lab test booking at the same app

• High death rates from heart diseases caused by inconsistency of regular health checkup.

• No application for know about the health articles.

• Different times for different medicines.

• Hassle of set appointments with doctors physically.

1.3.2 Complex Engineering Problem

Which Complex Engineering Problem (P's) are addressed?

Name of the P Attributes	Explain how to address
P1: Depth of knowledge required	Required to go through the in depth mobile application development knowledge to complete the task
P2: Range of conflicting requirements	
P3: Depth of analysis required	In depth analysis in mobile activity,intent,database to make usable functionality
P4: Familiarity of issues	Familiarity with android studio,java,xml and SQlite is required
P5: Extent of applicable codes	
P6: Extent of stakeholder involvement and conflicting requirements	
P7: Interdependence	

1.4 Design Goals/Objectives

• To implement an improved health care application with added possibilities offered by E-Health .

• To create a user-friendly interface.

• To enable online medicine order and lab test order in the healthcare application.

• To provide an easy way to Search Specialist doctor, book appointment online.

• To enable a feature where user can see different health articles.

1.5 Application

A healthcare app can serve a wide range of purposes and have various applications in the healthcare industry. Here are some key areas where a healthcare app can be applied:

Telemedicine and Virtual Consultations: Healthcare apps can facilitate remote consultations between patients and healthcare providers. Users can have video or audio consultations with doctors, receive medical advice, and even get prescriptions without physically visiting a clinic or hospital.

Appointment Scheduling and Reminders: Users can schedule appointments with doctors, specialists, or other healthcare professionals through the app. It can send reminders and notifications to ensure patients don't miss their appointments.

Health Monitoring and Wearables Integration: Many healthcare apps integrate with wearable devices such as fitness trackers, smartwatches, or medical sensors to monitor vital signs, track physical activity, measure sleep patterns, and gather other health-related data. This data can be used by healthcare providers to assess patients' health and provide personalized recommendations.

Medication Management: Healthcare apps can help users manage their medications effectively. They can set medication reminders, track dosages, monitor refill requirements, and provide information about drug interactions or potential side effects.

Health Information and Education: Healthcare apps can offer a wealth of information about diseases, symptoms, treatments, and preventive measures. They can provide educational resources, articles, and videos to empower users to make informed decisions about their health.

Personal Health Records (PHR): A healthcare app can serve as a repository for personal health records, allowing users to store and access their medical history, test results, vaccination records, and allergies securely. This information can be easily shared with healthcare providers as needed [**?**]

Chapter 2

Design/Development/Implementation of the Project

2.1 Introduction

Health care is a basic need of every human being.To implement this application we need to confirm a user friendly UI.We need to make sure that every functionality of our project is working perfectly.Every buttons and every options of our project is need to work perfectly. [**?**] [**?**] [**?**].

2.2 Project Details

1. Name of the healthcare app
    - Purpose and objectives of the app
    - Target audience (patients, healthcare providers, specific medical conditions, etc.)
    - Key features and functionalities to be included
2. User Roles and Permissions:
3. Feature List:
    - Telemedicine and virtual consultations
    - Appointment scheduling and reminders
    - Health monitoring and wearables integration
    - Medication management
    - Health information and education
    - Personal health records (PHR)
    - Wellness and fitness programs
    - Mental health support

- Health insurance management
- Additional features specific to your project

4. Technology Stack:
    - Specify the programming languages, frameworks, and databases you plan to use
    - Consider scalability, security, and compatibility with mobile platforms (iOS, Android)
5. User Interface (UI) and User Experience (UX) Design:
    - Design wireframes and prototypes for different app screens
    - Consider usability, accessibility, and intuitive navigation
6. Data Privacy and Security:
    -
    - Address compliance with relevant data protection regulations (HIPAA, GDPR, etc.)
    - Define measures to ensure the confidentiality and integrity of user data

2.2.1 DFD Level 0 and 1:

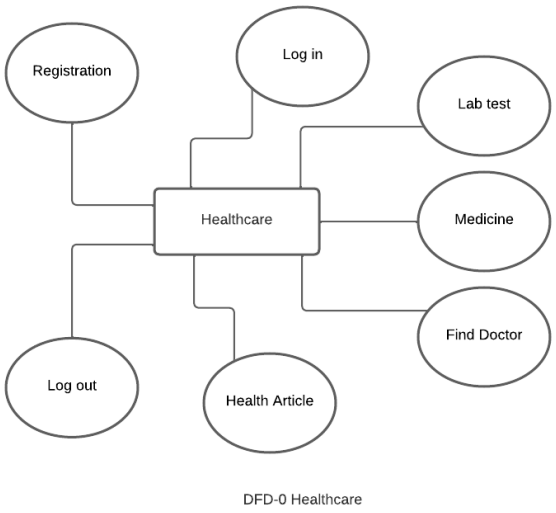

Figure 2.1: DFD Level 0 Healthcare App

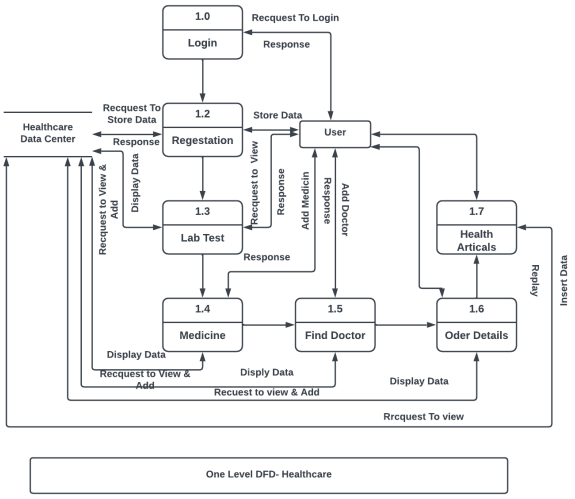

Figure 2.2: DFD Level 1 Healthcare App

2.2.2 Sequence Diagram

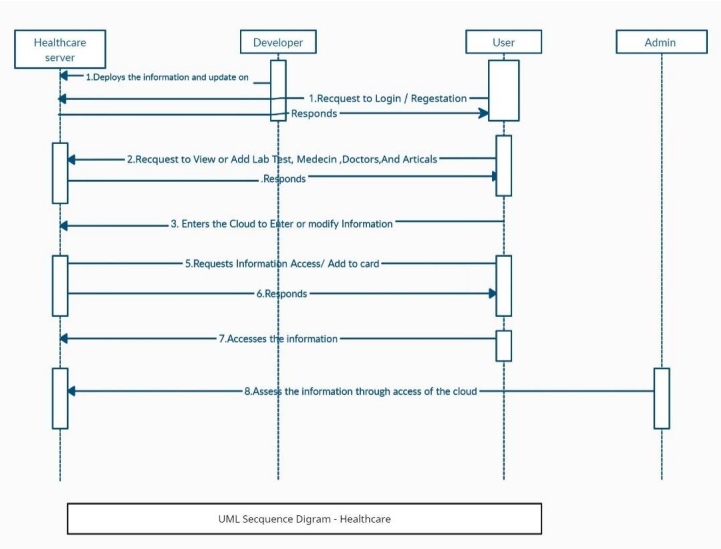

Figure 2.3: Sequence Diagram Healthcare App

2.2.3 USE Case Diagram

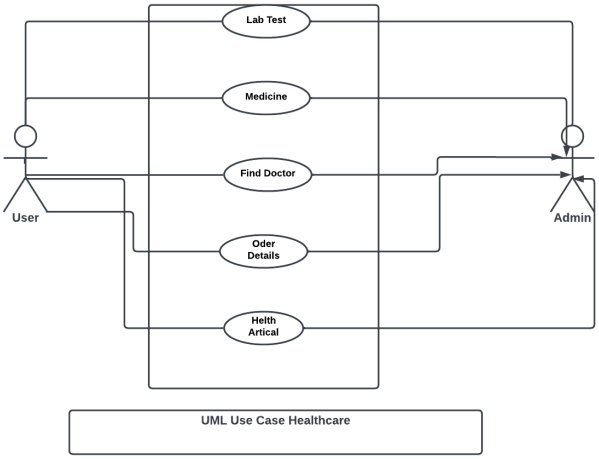

Figure 2.4: USE Case Diagram Healthcare App

2.2.4 Class Diagram

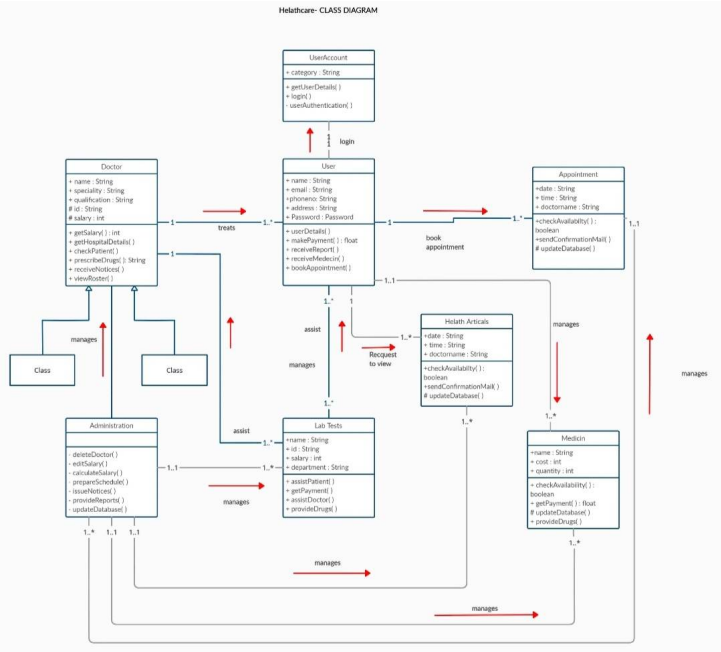

Figure 2.5: Class Diagram Healthcare App

2.2.5 ER Diagram

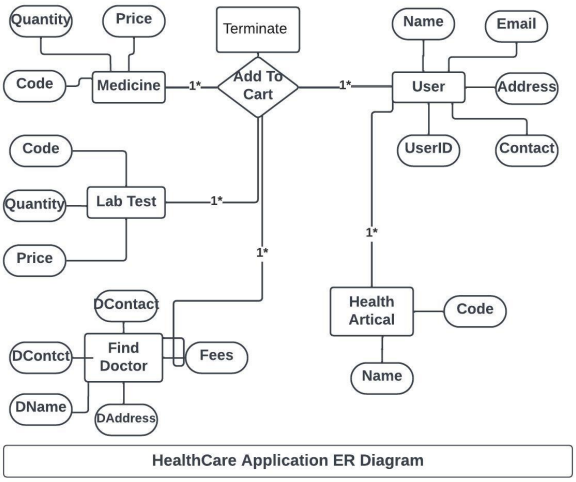

Figure 2.6: ER Diagram Healthcare App

•

- Android Studio
- Xml
- Java
- SQlite

2.3 Implementation

XML Code: Login

```
<LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="vertical"
            android:layout_gravity="center_horizontal"
            android:padding="24dp">


            <TextView
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:text="Login"
                android:id="@+id/loginText"
                android:textSize="36sp"
                android:textAlignment="center"
                android:textStyle="bold"
                android:textColor="@color/purple"/>

            <EditText
                android:layout_width="match_parent"
                android:layout_height="50dp"
                android:id="@+id/email"
                android:background="@drawable/menu3"
                android:drawableLeft="@drawable/baseline_person_24"
                android:drawablePadding="8dp"
                android:hint="email"
                android:padding="8dp"
                android:textColor="@color/black"
                android:layout_marginTop="40dp"/>

            <EditText
                 android:layout_width="match_parent"
                android:layout_height="50dp"
                android:id="@+id/pass"
```

```
android:background="@drawable/menu3"
android:drawableLeft="@drawable/baseline_lock_24"
android:drawablePadding="8dp"
android:hint="Password"
android:padding="8dp"
android:inputType="textPassword"
android:textColor="@color/black"
android:layout_marginTop="20dp"/>
```

**Sign up Activity:

```
<EditText
    android:id="@+id/baddress"
    android:layout_width="275dp"
    android:layout_height="50dp"
    android:background="@drawable/input_bg"
    android:color="@color/black"
    android:drawableLeft="@drawable/phone"
    android:drawablePadding="10sp"
    android:ems="10"
    android:hint="PHONE NUMBER"
    android:textColor="@color/black"
    android:inputType="phone"
    android:paddingLeft="20sp"
    android:paddingTop="10sp"
    android:paddingRight="10sp"
    android:textColorHint="#0C0C0C"

    app:layout_constraintBottom_toTopOf="@+id/med_price"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/med_name" />

<EditText
    android:id="@+id/med_name"
    android:layout_width="275dp"
    android:layout_height="50dp"
    android:background="@drawable/input_bg"
    android:color="@color/black"
    android:drawableLeft="@drawable/username_icon"
    android:drawablePadding="10sp"
    android:ems="10"
    android:hint="USER NAME"
    android:textColor="@color/black"
    android:inputType="textEmailAddress"
    android:paddingLeft="20sp"
```

```
        android:paddingTop="10sp"
        android:paddingRight="10sp"
        android:textColorHint="#131313"

        app:layout_constraintBottom_toTopOf="@+id/baddress"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/r_email" />

    <EditText
        android:id="@+id/r_Cpassword"
        android:layout_width="275dp"
        android:layout_height="50dp"
        android:background="@drawable/input_bg"
        android:color="@color/black"
        android:drawableLeft="@drawable/password_icon"
        android:drawablePadding="10sp"
        android:ems="10"
        android:hint="CONFIRM PASSWORD"
        android:inputType="textPassword"
        android:paddingLeft="20sp"
        android:textColor="@color/black"
        android:paddingTop="10sp"
        android:paddingRight="10sp"
        android:textColorHint="#070707"

        app:layout_constraintBottom_toTopOf="@+id/add_cart_med"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/med_price" />

    <EditText
        android:id="@+id/med_price"
        android:layout_width="275dp"
        android:layout_height="50dp"
        android:background="@drawable/input_bg"
        android:color="@color/black"
        android:drawableLeft="@drawable/password_icon"
        android:drawablePadding="10sp"
        android:ems="10"
        android:hint="PASSWORD"
        android:inputType="textPassword"
        android:paddingLeft="20sp"
        android:paddingTop="10sp"
        android:paddingRight="10sp"
        android:textColorHint="#090909"
```

```
        android:textColor="@color/black"
        app:layout_constraintBottom_toTopOf="@+id/r_Cpassword"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/baddress" />

    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Register"
        android:textColor="#DC101010"
        android:textSize="25sp"
        android:textStyle="bold"
        app:fontFamily="@font/aclonica"
        app:layout_constraintBottom_toTopOf="@+id/r_email"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView4" />



</androidx.constraintlayout.widget.ConstraintLayout>
```

**Home Activity

```
    <LinearLayout
        android:id="@+id/home"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_gravity="center"
        android:gravity="center">

        <ImageView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:src="@drawable/hicon" />

        <TextView

            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginStart="12dp"
```

```
            android:layout_marginTop="12dp"
            android:layout_marginEnd="12dp"
            android:layout_marginBottom="12dp"
            android:text="HOME"
            android:textColor="@color/black"
            android:textSize="35sp"
            android:textStyle="bold"
            app:fontFamily="@font/architects_daughter" />
    </LinearLayout>

    <GridLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_below="@+id/home"
        android:layout_alignParentStart="true"
        android:layout_marginTop="40dp"

        android:columnCount="2"
        android:rowCount="3">

        <androidx.cardview.widget.CardView

            android:id="@+id/c_labtest"
            android:layout_width="wrap_content"
            android:layout_height="80dp"
            android:layout_row="0"
            android:layout_rowWeight="0"
            android:layout_column="0"
            android:layout_columnWeight="1"
            android:layout_gravity="fill"
            app:cardBackgroundColor="@color/cgrey"
            app:cardCornerRadius="8dp"
            app:cardElevation="0dp"
            app:cardUseCompatPadding="true">
            <LinearLayout
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:layout_gravity="center_vertical |
                center_horizontal"
                android:gravity="center"
                android:orientation="vertical">

                <ImageView
                    android:layout_width="wrap_content"
                    android:layout_height="wrap_content"
                    android:src="@drawable/test" />

                <TextView
```

```
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="LAB TEST"
            android:textColor="@color/black"
            android:textStyle="bold" />

    </LinearLayout>
</androidx.cardview.widget.CardView>

<androidx.cardview.widget.CardView

    android:id="@+id/c_buymedicine"
    android:layout_width="wrap_content"
    android:layout_height="80dp"
    android:layout_row="0"
    android:layout_rowWeight="1"
    android:layout_column="1"
    android:layout_columnWeight="1"
    android:layout_gravity="fill"
    app:cardBackgroundColor="@color/cgrey"
    app:cardCornerRadius="8dp"
    app:cardElevation="0dp"
    app:cardUseCompatPadding="true">

    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center_vertical |
        center_horizontal"
        android:gravity="center"
        android:orientation="vertical">

        <ImageView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:src="@drawable/medicine" />

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="BUY MEDICINE"
            android:textColor="@color/black"
            android:textStyle="bold" />

    </LinearLayout>
</androidx.cardview.widget.CardView>

<androidx.cardview.widget.CardView
```

```
        android:id="@+id/c_finddoc"
        android:layout_width="wrap_content"
        android:layout_height="80dp"
        android:layout_row="1"
        android:layout_rowWeight="1"
        android:layout_column="0"
        android:layout_columnWeight="1"
        android:layout_gravity="fill"
        app:cardBackgroundColor="@color/cgrey"
        app:cardCornerRadius="8dp"
        app:cardElevation="0dp"
        app:cardUseCompatPadding="true">
        <LinearLayout
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center_vertical |
            center_horizontal"
            android:gravity="center"
            android:orientation="vertical">

            <ImageView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:src="@drawable/docs" />

            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="FIND MY DOCTOR"
                android:textColor="@color/black"
                android:textStyle="bold" />

        </LinearLayout>
    </androidx.cardview.widget.CardView>

    <androidx.cardview.widget.CardView

        android:id="@+id/c_articles"
        android:layout_width="wrap_content"
        android:layout_height="80dp"
        android:layout_row="1"
        android:layout_rowWeight="1"
        android:layout_column="1"
        android:layout_columnWeight="1"
        android:layout_gravity="fill"
        app:cardBackgroundColor="@color/cgrey"
        app:cardCornerRadius="8dp"
```

```
        app:cardElevation="0dp"
        app:cardUseCompatPadding="true">

        <LinearLayout
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center_vertical |
            center_horizontal"
            android:gravity="center"
            android:orientation="vertical">

            <ImageView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:src="@drawable/articles" />

            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="HEALTH ARTICLES"
                android:textColor="@color/black"
                android:textStyle="bold" />

        </LinearLayout>
    </androidx.cardview.widget.CardView>

    <androidx.cardview.widget.CardView

        android:id="@+id/c_orderdetails"
        android:layout_width="wrap_content"
        android:layout_height="80dp"
        android:layout_row="2"
        android:layout_rowWeight="1"
        android:layout_column="0"
        android:layout_columnWeight="1"
        android:layout_gravity="fill"
        app:cardBackgroundColor="@color/cgrey"
        app:cardCornerRadius="8dp"
        app:cardElevation="0dp"
        app:cardUseCompatPadding="true">

        <LinearLayout
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center_vertical |
            center_horizontal"
            android:gravity="center"
            android:orientation="vertical">
```

```
            <ImageView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:src="@drawable/order" />

            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="MY ORDERS"
                android:textColor="@color/black"
                android:textStyle="bold" />

        </LinearLayout>
    </androidx.cardview.widget.CardView>

    <androidx.cardview.widget.CardView

        android:id="@+id/logout"
        android:layout_width="wrap_content"
        android:layout_height="80dp"
        android:layout_row="2"
        android:layout_rowWeight="1"
        android:layout_column="1"
        android:layout_columnWeight="1"
        android:layout_gravity="fill"
        app:cardBackgroundColor="@color/cgrey"
        app:cardCornerRadius="8dp"
        app:cardElevation="0dp"

        app:cardUseCompatPadding="true">

        <LinearLayout
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center_vertical |
            center_horizontal"
            android:gravity="center"
            android:orientation="vertical">

            <ImageView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:src="@drawable/logout" />

            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
```

```
                android:text="LOGOUT"
                android:textSize="15dp"
                android:textColor="@color/black"
                android:textStyle="bold" />

        </LinearLayout>
    </androidx.cardview.widget.CardView>
</GridLayout>
</RelativeLayout>
```

**Lab Test

```
<TextView
    android:id="@+id/med_name"
    android:layout_width="275dp"
    android:layout_height="55dp"


    android:layout_marginBottom="72dp"
    android:background="@drawable/input_bg"
    android:color="@color/black"

    android:drawableLeft="@drawable/labtest_icon"
    android:drawablePadding="10sp"
    android:paddingLeft="20sp"
    android:paddingTop="10sp"
    android:paddingRight="10sp"
    android:textColor="@color/black"
    android:textColorHint="#3B0B0B0B"
    app:layout_constraintBottom_toTopOf="@+id/med_price"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent" />

<TextView
    android:id="@+id/med_price"
    android:layout_width="275dp"
    android:layout_height="55dp"
    android:background="@drawable/input_bg"
    android:color="@color/black"
    android:drawableLeft="@drawable/bcash"
    android:drawablePadding="10sp"
    android:ems="10"
    android:paddingLeft="20sp"
    android:paddingTop="10sp"
    android:paddingRight="10sp"
    android:textColor="@color/black"
    android:textColorHint="#3B171616"
```

```
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/add_cart_med"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="36dp"
        android:background="@drawable/input_bg"
        android:text="ADD TO MY CART"
        app:backgroundTint="#272727"
        app:layout_constraintBottom_toTopOf="@+id/back_button_med"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent" />

    <
        app:layout_constraintStart_toStartOf="@+id/add_cart_med" />


</androidx.constraintlayout.widget.ConstraintLayout>
```

**Find Doctor

```
    <LinearLayout
        android:id="@+id/myorders"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_gravity="center"
        android:gravity="center">

        <ImageView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:src="@drawable/doc" />

        <TextView

            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginStart="12dp"
            android:layout_marginTop="12dp"
            android:layout_marginEnd="12dp"
            android:layout_marginBottom="12dp"
```

```
        android:text="FIND MY DOC"
        android:textColor="@color/gwhite"
        android:textSize="35sp"
        android:textStyle="bold"
        app:fontFamily="@font/architects_daughter" />
</LinearLayout>


        <LinearLayout
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center_vertical |
            center_horizontal"
            android:gravity="center"
            android:orientation="vertical">

            <ImageView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:src="@drawable/dentist" />

            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="DENTIST"
                android:textColor="@color/black"
                android:textStyle="bold" />


        </LinearLayout>
    </androidx.cardview.widget.CardView>
    <androidx.cardview.widget.CardView

        <LinearLayout
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center_vertical |

            center_horizontal"
            android:gravity="center"
            android:orientation="vertical">

            <ImageView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:src="@drawable/dietition" />

            <TextView
```

```
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="DIETITIAN"
                android:textColor="@color/black"
                android:textStyle="bold" />


        >


            </LinearLayout>
        </androidx.cardview.widget.CardView>
        <androidx.cardview.widget.CardView




            </LinearLayout>
        </androidx.cardview.widget.CardView>

    </GridLayout>


</RelativeLayout>
```

** Order Detail

```
<ListView
    android:id="@+id/cartdetails"
    android:layout_width="302dp"
    android:layout_height="386dp"
    app:layout_constraintBottom_toTopOf="@+id/totalcost"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/myorders" />



<Button
    android:id="@+id/checkout"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="55dp"
    android:layout_marginBottom="41dp"
    android:text="CHECK OUT"
```

```
        app:backgroundTint="#272727"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toStartOf="parent" />



</androidx.constraintlayout.widget.ConstraintLayout>
```

JAVA Codes

```
    ** Login JAVA
    package com.example.my_health;



            }
        });
        articles.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                startActivity(new Intent(Home.this,articles.class));

            }
        });
    }
}

** Database
   package com.example.my_health;

import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;

import androidx.annotation.Nullable;

import java.util.ArrayList;

public class Database extends SQLiteOpenHelper {
    public Database(@Nullable Context context,
    @Nullable String name, @Nullable
    SQLiteDatabase.CursorFactory factory, int version) {
        super(context, name, factory, version);
    }

    @Override
```

```
public void onCreate(SQLiteDatabase db) {

    String query1 = "create table users(username text ,email
    text,password text,phone text ) ";
    db.execSQL(query1);

    String query2 = "create table cart(username text ,product
    text,price float,type text ) ";
    db.execSQL(query2);
}

@Override
public void onUpgrade(SQLiteDatabase db,
int oldVersion, int newVersion) {

}
public void register(String username,

String email,String phone,String password){

    ContentValues cv = new ContentValues();
    cv.put("username",username);
    cv.put("email",email);
    cv.put("phone",phone);
    cv.put("password",password);
    SQLiteDatabase db =getWritableDatabase();
    db.insert("users",null,cv);
    db.close();
}
public int login(String username, String password){

    int match = 0;
    String [] str= new String[2];
    str[0]=username;

    str[1]=password;
    SQLiteDatabase db = getReadableDatabase();
    Cursor cr = db.rawQuery("select * from users where username =
    and password = ?",str);
    if (cr.moveToFirst()){match=1;}
    return match;


}

public void addingtocart(String username,String product,float
price,String type){
    ContentValues cv = new ContentValues();
```

```
        cv.put("username",username);
        cv.put("product",product);
        cv.put("price",price);
        cv.put("type",type);
        SQLiteDatabase db =getWritableDatabase();
        db.insert("cart",null,cv);
        db.close();
    }

    public int checkcart(String username,String product){

        int result=0;
        String[] str = new String[2];
        str[0] = username;
        str[1] = product;
        SQLiteDatabase db = getReadableDatabase();

        Cursor cr = db.rawQuery("select *

        from cart where username = ? and product =
        ?",str);

        if (cr.moveToFirst()){result=1;}
        db.close();
        return  result;

    }

    public int removecart(String username){
        int result=0;
        String[] str = new String[1];
        str[0] = username;

        SQLiteDatabase db = getWritableDatabase();
        db.delete("cart","username = ?",str);
        db.close();
        return  result;

    }

    public ArrayList getcartdata(String username){
        ArrayList<String> arr = new ArrayList<>();
        SQLiteDatabase db = getReadableDatabase();
        String[] str = new String[1];

        str[0] = username;

        Cursor cr = db.rawQuery
```

```
        ("select * from cart where username = ?
        ",str);
        if (cr.moveToFirst()){
            do {
                String product = cr.getString(1);
                String price = cr.getString(2);
                arr.add(product+"$"+price);
            }while(cr.moveToNext());

        }
        db.close();
        return arr;
    }

}
```

```
    ** Find Doctor
    package com.example.my_health;

import androidx.appcompat.app.AppCompatActivity;
import androidx.cardview.widget.CardView;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;

public class findmydoc extends AppCompatActivity {
    CardView physician , dentist ,

    cardiologist , dietitian , surgeon , back;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_findmydoc);
        physician = findViewById(R.id.Physician);
        dentist = findViewById(R.id.dentist);
        cardiologist = findViewById(R.id.cardiologist);
        dietitian = findViewById(R.id.dietition);
        surgeon= findViewById(R.id.surgeon);
        back= findViewById(R.id.back);

        physician.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {

                Intent intent = new
                Intent(findmydoc.this,doctors_details.class);
```

```
            intent.putExtra("title","PHYSICIAN");
            startActivity(intent);
        }
    });

    dentist.setOnClickListener(new View.OnClickListener() {

        @Override
        public void onClick(View v) {
            Intent intent = new
            Intent(findmydoc.this,doctors_details.class);

            intent.putExtra("title","DENTIST");
            startActivity(intent);
        }
    });

    surgeon.setOnClickListener
    (new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            Intent intent = new

            Intent(findmydoc.this,doctors_details.class);

            intent.putExtra("title","SURGEON");

            startActivity(intent);
        }
    });


    System.out.println(totalamount);

    cost.setText("TOTAL COST IS " +totalamount);

    checkout.setOnClickListener
    (new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            db.removecart(username);

            Toast.makeText(myorders.this,

            "SUCCESSFULLY ORDERED",

            Toast.LENGTH_SHORT).show();
            startActivity
```

```
                (new Intent(myorders.this,Home.class));
            }
        });
        back.setOnClickListener(new View.OnClickListener() {

            @Override
            public void onClick(View v)
            {

                startActivity(new Intent(myorders.this,Home.class));
            }
        });
    }
}
```

2.3.1 The workflow

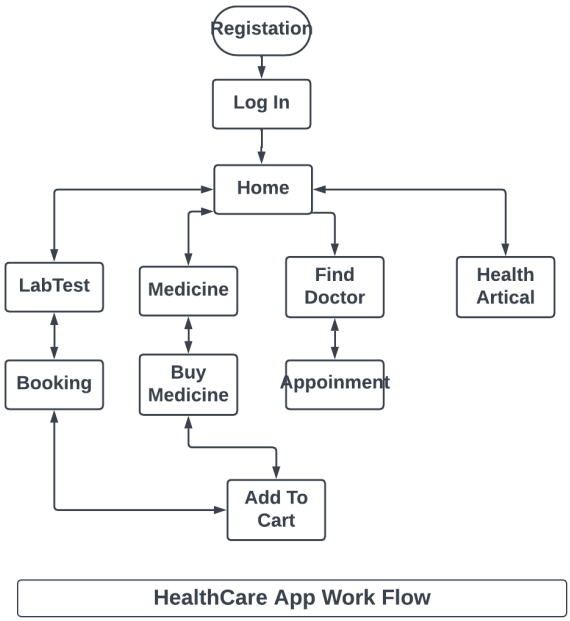

Figure 2.7: ER Diagram Healthcare App

Tools and libraries

- Android Studio
- Xml
- Java
- SQlite

Chapter 3

Performance Evaluation

3.1 Simulation Environment/ Simulation Procedure

The Android Emulator lets you test your app on many different devices virtually. The emulator comes with Android Studio, so you don't need to install it separately. To use the emulator, follow these basic steps, which are described in more detail in the sections that follow:

- Verify that you have the system requirements.
- Create an Android Virtual Device (AVD).
- Run your app on the emulator.
- Navigate the emulator..

Verify that you have the system requirements. Create an Android Virtual Device (AVD). Run your app on the emulator. Navigate the emulator..

For the best experience, you should use the emulator in Android Studio on a computer with at least the following specs:

- 16 GB RAM
- 64-bit Windows, macOS, Linux, or ChromeOS operating system
- 16 GB disk space

3.1.1 Output Result

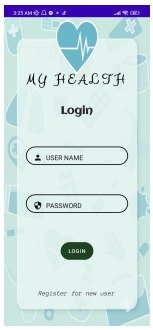

Figure 3.1: Log in Page Healthcare App

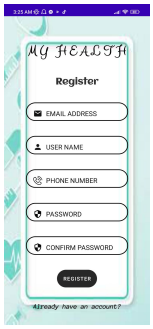

Figure 3.2: Registration Healthcare App

Figure 3.3: Home Page Healthcare App

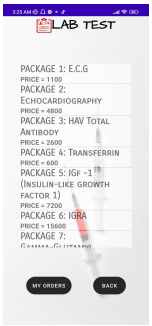

Figure 3.4: Lab test Derails Healthcare App

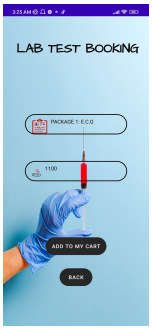

Figure 3.5: Lab test Booking Confirmation Healthcare App

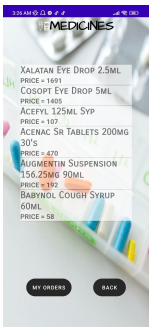

Figure 3.6: Medicine Order List Healthcare App

Figure 3.7: Medicine Order Confirmation Healthcare App

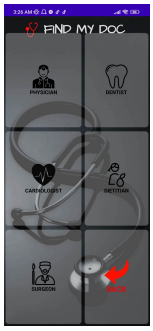

Figure 3.8: Find Doctor Healthcare App

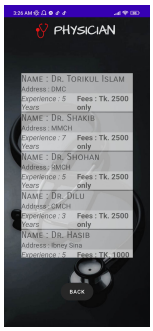

Figure 3.9: Doctor Details Healthcare App

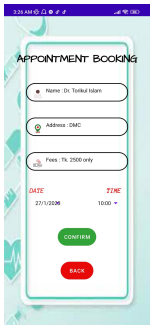

Figure 3.10: Doctor Apportionment Healthcare App

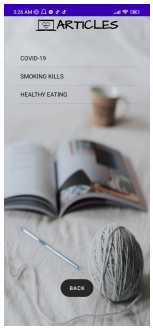

Figure 3.11: Health Article Healthcare App

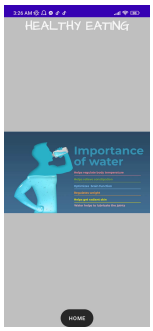

Figure 3.12: Articel Healthcare App

Figure 3.13: Order Details Healthcare App

3.2 Results Analysis/Testing

In this example, we are using Selenium WebDriver to automate the web browser actions. The setUp method is called before each test case, and it sets up the browser driver and opens the registration page. The tearDown method is called after each test case to close the browser.

The test signup method performs the actual signup process. It locates the relevant form fields by their IDs and enters the registration details. Then, it submits the form by clicking on the submit button. After submission, it verifies the success message displayed on the page.

```
    import unittest
from selenium import webdriver
from selenium.webdriver.common.keys import Keys

class SignupRegistrationTest(unittest.TestCase):

    def setUp(self):

        # Set up the browser driver (assuming Chrome

        WebDriver is installed)
        self.driver = webdriver.Chrome()

        self.driver.implicitly_wait(10)
        # Implicit wait for 10 seconds

        # Open the registration page

        self.driver.get("https://example.com/register")
```

```
    def tearDown(self):

        # Close the browser after each test case

        self.driver.quit()

    def test_signup(self):

        # Enter registration details

        username = "testuser"
        password = "testpassword"
        email = "testuser@example.com"

        username_field = self.driver.find_element_by_id("username")

        password_field = self.driver.find_element_by_id("password")

        email_field = self.driver.find_element_by_id("email")


        username_field.send_keys(username)
        password_field.send_keys(password)
        email_field.send_keys(email)

        # Submit the registration form
        submit_button = self.driver.find_element_by_id("submit")

        submit_button.click()

        # Verify successful signup message
        success_message = self.driver.find_element_by_id
        ("success-message").text
        self.assertEqual(success_message,
        "Registration successful.")



if __name__ == '__main__':
    unittest.main()
```

3.2.1 Result_portion_1

- Verify that as soon as the login page opens, by default the cursor should remain on the username textbox.
- Verify that the user is able to navigate or access the different controls by pressing

the ‘Tab’ key on the keyboard.

- Check if the password is in masked form when typed in the password field.
- Check if the password can be copy-pasted or not.
- Verify that the user is able to login by entering valid credentials and clicking on the ‘Login’ button.

3.2.2 Result_portion_2

- Check that the user is not able to login with an invalid username and password.
- Verify that the validation message gets displayed in case the user leaves the username or password field blank.
- Check that the validation message is displayed in case the user exceeds the character limit of the user name and password fields.
- Verify that the reset button functionality is on the login page. Clicking on it should clear the textbox’s content.
- Verify if there is a checkbox with the label “remember password” on the login page.
- Verify that closing the browser should not log out an authenticated user. Launching the application should lead the user to the login state only.

3.3 Results Overall Discussion

Test cases for login or sign-up page write the test cases for all the fields. There should be a combination of both positive and negative test cases. Try to cover the performance, security, and functional scenarios. The login page is the page with fewer controls, so even though it is looking simple for testing, it should not be considered as an easy task.

Chapter 4

Conclusion

4.1 Discussion

In conclusion, the healthcare application project has proven to be a significant advancement in improving healthcare delivery and patient outcomes. By leveraging technology and innovation, the application has successfully addressed various challenges in the healthcare industry, such as accessibility, efficiency, and communication. Through its user-friendly interface and robust features, the application has empowered patients to take control of their health by providing them with easy access to medical information, appointment scheduling, medication reminders, and virtual consultations. This has resulted in enhanced patient engagement and adherence to treatment plans, ultimately leading to better health outcomes.Additionally, healthcare professionals have greatly benefited from the application, as it has streamlined administrative tasks, reduced paperwork, and facilitated seamless communication between different healthcare providers. This has resulted in improved coordination of care, faster access to critical information, and more efficient decision-making, ultimately enhancing the overall quality of care provided.

4.2 Limitations

Discuss the limitations of the project. Limitations must be discussed, with the help of some critical analysis.

4.2.1 Scope of Future Work

The future scope of the healthcare application project is filled with exciting possibilities and potential advancements that can further enhance the user experience and revolutionize the way people consume healthcare online services.In conclusion, the future scope of the this application project holds immense potential for innovation and improvement.In future we can conduct with doctors and create a doctor portal to complete the book appoinment task.

References

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