

Q: Design an android app to Book an appointment for a Doctor. Input the name, phone number and gender using RadioButton. Choose one of the specialist using dropdown.[ General Physician, Neurologist, Ophthalmologist, Dentist, Pulmonologist, Physiotherapist, Ortho]. Assume charges for the doctor approximately between Rs. 700 to Rs. 1000 for different specialization. the user can choose the date and time of appointment using date picker & Time Picker. On Click of "Submit" Button, save all the details in db and also notify to the user as "Appointment booked successfully". Help the doctor to fetch the following details and display it in the new activity named "BookActivity"

1. Find the appointment details which are booked on specific date.
2. Find the patient name, phone number and gender who booked an appointment for the given type of specialist
3. Find the total charges of a particular patient.

activity\_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".MainActivity">
```

```
<EditText
    android:id="@+id/nameBox"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="Enter Patient Name"
    android:inputType="text"
    android:minHeight="48dp"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintBottom_toTopOf="@+id/phnoBox"/>
```

```
<EditText
    android:id="@+id/phnoBox"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="Enter Phone Number"
    android:inputType="number"
    android:minHeight="48dp"
```

```
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintTop_toBottomOf="@+id/nameBox"
app:layout_constraintBottom_toTopOf="@+id/genderGroup"/>
```

```
<RadioGroup
    android:id="@+id/genderGroup"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/phnoBox"
    app:layout_constraintBottom_toTopOf="@+id/doctorBox">
```

```
<RadioButton
    android:id="@+id/maleBtn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Male" />
```

```
<RadioButton
    android:id="@+id/femaleBtn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Female" />
```

```
</RadioGroup>
```

```
<Spinner
    android:id="@+id/doctorBox"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:minHeight="48dp"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/genderGroup"
    app:layout_constraintBottom_toTopOf="@+id/dateBox"/>
```

```
<EditText
    android:id="@+id/dateBox"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="Select Date"
```

```
    android:inputType="date"
    android:minHeight="48dp"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/timeBox"
    app:layout_constraintTop_toBottomOf="@+id/doctorBox"
    app:layout_constraintBottom_toTopOf="@+id/submitBtn"/>
```

```
<EditText
    android:id="@+id/timeBox"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="Select Time"
    android:inputType="time"
    android:minHeight="48dp"
    app:layout_constraintStart_toEndOf="@+id/dateBox"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/doctorBox"
    app:layout_constraintBottom_toTopOf="@+id/submitBtn"/>
```

```
<Button
    android:id="@+id/submitBtn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Submit"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/dateBox"
    app:layout_constraintBottom_toTopOf="@+id/dis2Btn"/>
```

```
<Button
    android:id="@+id/dis1Btn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Display1"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/dis2Btn"
    app:layout_constraintTop_toBottomOf="@+id/submitBtn"
    app:layout_constraintBottom_toBottomOf="parent"/>
```

```
<Button
    android:id="@+id/dis2Btn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
```

```
    android:text="Display2"
    app:layout_constraintStart_toEndOf="@+id/dis1Btn"
    app:layout_constraintEnd_toStartOf="@+id/dis3Btn"
    app:layout_constraintTop_toBottomOf="@+id/submitBtn"
    app:layout_constraintBottom_toBottomOf="parent"/>
```

```
<Button
    android:id="@+id/dis3Btn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Display3"
    app:layout_constraintStart_toEndOf="@+id/dis2Btn"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/submitBtn"
    app:layout_constraintBottom_toBottomOf="parent"/>
```

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

MainActivity.java:

```
package com.example.practiceques18_05;
```

```
import androidx.annotation.RequiresApi;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.NotificationCompat;
```

```
import android.app.DatePickerDialog;
import android.app.NotificationChannel;
import android.app.NotificationManager;
import android.app.TimePickerDialog;
import android.content.Intent;
import android.os.Build;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.DatePicker;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.Spinner;
import android.widget.TimePicker;
```

```
import java.util.Calendar;
```

```

public class MainActivity extends AppCompatActivity {
    EditText nameVal,phnoVal,dateVal,timeVal;
    RadioGroup rg;
    RadioButton rb;
    Spinner spn;
    Button sub,dis1,dis2,dis3;
    DBH db;
    String[] doc =
{"Physician","Neurologist","Ophthalmologist","Dentist","Pulmonologist","Physiotherapist","Ortho"};
    String sdoc,sdate,stime;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        nameVal = findViewById(R.id.nameBox);
        phnoVal = findViewById(R.id.phnoBox);
        dateVal = findViewById(R.id.dateBox);
        timeVal = findViewById(R.id.timeBox);
        rg = findViewById(R.id.genderGroup);
        spn = findViewById(R.id.doctorBox);
        sub = findViewById(R.id.submitBtn);
        dis1 = findViewById(R.id.dis1Btn);
        dis2 = findViewById(R.id.dis2Btn);
        dis3 = findViewById(R.id.dis3Btn);
        db = new DBH(this,"AppointmentsDB",null,1);
        ArrayAdapter aa = new ArrayAdapter(this, android.R.layout.simple_spinner_dropdown_item,doc);
        spn.setAdapter(aa);
        spn.setOnItemSelectedListener(new AdapterView.OnItemSelectedListener() {
            @Override
            public void onItemSelected(AdapterView<?> adapterView, View view, int i, long l) {
                sdoc = adapterView.getItemAtPosition(i).toString();
            }

            @Override
            public void onNothingSelected(AdapterView<?> adapterView) {

            }
        });
        rg.setOnCheckedChangeListener(new RadioGroup.OnCheckedChangeListener() {
            @Override
            public void onCheckedChanged(RadioGroup radioGroup, int i) {
                rb = findViewById(i);
            }
        }
    }
}

```

```

});
dateVal.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        Calendar cal = Calendar.getInstance();
        int cY = cal.get(Calendar.YEAR);
        int cM = cal.get(Calendar.MONTH);
        int cD = cal.get(Calendar.DATE);
        DatePickerDialog dialog = new DatePickerDialog(MainActivity.this,
android.R.style.Theme_DeviceDefault_DialogWhenLarge, new DatePickerDialog.OnDateSetListener() {
            @Override
            public void onDateSet(DatePicker datePicker, int i, int i1, int i2) {
                sdate = i2+"/"+(i1+1)+"/"+i;
                dateVal.setText(sdate);
            }
        },cY,cM,cD);
        dialog.show();
    }
});
timeVal.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        Calendar cal = Calendar.getInstance();
        int cH = cal.get(Calendar.HOUR);
        int cMi = cal.get(Calendar.MINUTE);
        TimePickerDialog dialog = new TimePickerDialog(MainActivity.this,
android.R.style.Theme_DeviceDefault_DialogWhenLarge, new TimePickerDialog.OnTimeSetListener() {
            @Override
            public void onTimeSet(TimePicker timePicker, int i, int i1) {
                stime = i+": "+i1;
                timeVal.setText(stime);
            }
        },cH,cMi,false);
        dialog.show();
    }
});
sub.setOnClickListener(new View.OnClickListener() {
    @RequiresApi(api = Build.VERSION_CODES.O)
    @Override
    public void onClick(View view) {
        String n = nameVal.getText().toString();
        String ph = phnoVal.getText().toString();
        String g = rb.getText().toString();
        int ch=0;

```

```

if(sdoc.equals("Physician") || sdoc.equals("Dentist") || sdoc.equals("Physiotherapist") || sdoc.equals("Ortho"))
    ch = 700;
else
    ch = 1000;
db.insertRecord(n,ph,g,sdoc,ch,sdate,stime);
String CHANNEL_ID = "my_ch";
String CHANNEL_NAME = "My_channel";
int importance = NotificationManager.IMPORTANCE_HIGH;
NotificationChannel channel = new
NotificationChannel(CHANNEL_ID,CHANNEL_NAME,importance);
NotificationManager mngr = (NotificationManager) getSystemService(NOTIFICATION_SERVICE);
mngr.createNotificationChannel(channel);
NotificationCompat.Builder builder = new
NotificationCompat.Builder(MainActivity.this,CHANNEL_ID);
    builder.setSmallIcon(R.drawable.ic_launcher_background);
    builder.setTitle("Booking details");
    builder.setText("Appointment Booked Successfully");
    mngr.notify(100,builder.build());
}
});
dis1.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        String rec = db.Query1(sdate);
        Intent it = new Intent(MainActivity.this,BookedActivity.class);
        it.putExtra("Records",rec);
        startActivity(it);
    }
});
dis2.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        String rec = db.Query2(sdoc);
        Intent it = new Intent(MainActivity.this,BookedActivity.class);
        it.putExtra("Records",rec);
        startActivity(it);
    }
});
dis3.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        String n = nameVal.getText().toString();

```

```

        int tot = db.Query3(n);
        Intent it = new Intent(MainActivity.this,BookedActivity.class);
        it.putExtra("Records","Total charges:"+tot);
        startActivity(it);
    }
    });
}
}

```

activity\_booked.xml:

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".BookedActivity">

<TextView
    android:id="@+id/Result"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

BookedActivity.java:

```

package com.example.practiceques18_05;

import androidx.appcompat.app.AppCompatActivity;

import android.app.NotificationManager;
import android.content.Intent;
import android.os.Bundle;
import android.widget.TextView;

public class BookedActivity extends AppCompatActivity {
    TextView res;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
    }
}

```



```

        setContentView(R.layout.activity_booked);
        res = findViewById(R.id.Result);
        Intent it1 = getIntent();
        String m = it1.getStringExtra("Records");
        res.setText(m);
        NotificationManager manager = (NotificationManager) getSystemService(NOTIFICATION_SERVICE);
        manager.cancel(100);
    }
}

```

DBH.java:

```
package com.example.practiceques18_05;
```

```

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

```

```
import androidx.annotation.Nullable;
```

```

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

```

```

@Override
public void onCreate(SQLiteDatabase sqLiteDatabase) {
    sqLiteDatabase.execSQL("create table app(name varchar(15),phno varchar(15),gender
varchar(10),spec varchar(20),fare integer,date1 varchar(20),time1 varchar(20))");
}

```

```

@Override
public void onUpgrade(SQLiteDatabase sqLiteDatabase, int i, int i1) {

}

public void insertRecord(String n,String ph,String g,String doc,int c,String d,String t){
    SQLiteDatabase db = this.getWritableDatabase();
    db.execSQL("insert into app values('"+n+"','"+ph+"','"+g+"','"+doc+"','"+c+"','"+d+"','"+t+"')");
    db.close();
}

public String Query1(String d){
    String td = "";
    SQLiteDatabase db = this.getReadableDatabase();
}

```

```

Cursor cr = db.rawQuery("select * from app where date1 = ?",new String[]{d});
while (cr.moveToNext()){
    String n = cr.getString(0);
    String p = cr.getString(1);
    String g = cr.getString(2);
    String doc = cr.getString(3);
    int c = cr.getInt(4);
    String da = cr.getString(5);
    String t = cr.getString(6);
    td+=n+" "+p+" "+g+" "+doc+" "+c+" "+da+" "+t+"\n";
}
db.close();
return td;
}

public String Query2(String doc){
    String td = "";
    SQLiteDatabase db = this.getReadableDatabase();
    Cursor cr = db.rawQuery("select name,phno,gender from app where spec = ?",new String[]{doc});
    while (cr.moveToNext()){
        String n = cr.getString(0);
        String p = cr.getString(1);
        String g = cr.getString(2);
        td+=n+" "+p+" "+g+"\n";
    }
    db.close();
    return td;
}

public int Query3(String n){
    int sum =0;
    SQLiteDatabase db = this.getReadableDatabase();
    Cursor cr = db.rawQuery("select fare from app where name = ?",new String[]{n});
    while (cr.moveToNext())
        sum+=cr.getInt(0);
    db.close();
    return sum;
}
}

```