Q1. Calculator

```
package com.example.myapplication;
import android.os.Bundle;
import android.view.View;
import android.widget.*;
import androidx.appcompat.app.AppCompatActivity;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        EditText number1=findViewById(R.id.number1);
        EditText number2=findViewById(R.id.number2);
        Button addButton=findViewById(R.id.addButton);
        Button subtractButton=findViewById(R.id.subtractButton);
        Button divideButton=findViewById(R.id.divideButton);
        Button multiplyButton=findViewById(R.id.multiplyButton);
        Button equalButton=findViewById(R.id.Submit);
        Button clearButton=findViewById(R.id.clearButton);
        TextView result=findViewById(R.id.result);
        final double[] answer = {1};
        addButton.setOnClickListener(v->{
            String input1= number1.getText().toString();
            double n1=Double.parseDouble(input1);
            String input2=number2.getText().toString();
            double n2=Double.parseDouble(input2);
            answer[0] =n1+n2;
```

```
});
subtractButton.setOnClickListener(v->{
    String input1= number1.getText().toString();
    double n1=Double.parseDouble(input1);
    String input2=number2.getText().toString();
    double n2=Double.parseDouble(input2);
    answer[0] = n1 - n2;
});
divideButton.setOnClickListener(v->{
    String input1= number1.getText().toString();
    double n1=Double.parseDouble(input1);
    String input2=number2.getText().toString();
    double n2=Double.parseDouble(input2);
    answer[0] = n1 /n2;
});
multiplyButton.setOnClickListener(v->{
    String input1= number1.getText().toString();
    double n1=Double.parseDouble(input1);
    String input2=number2.getText().toString();
    double n2=Double.parseDouble(input2);
    answer[0] = n1 * n2;
});
equalButton.setOnClickListener(v->{
    result.setText("Result : "+ answer[0]);
});
clearButton.setOnClickListener(v->{
    number1.setText("");
    number2.setText("");
```

```
        });
    }
}
/*
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp">
    <!-- EditText -->
    <EditText
        android:id ="@+id/number1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:hint="Enter number 1"
        android:inputType="numberDecimal"   />
    <EditText
        android:id ="@+id/number2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:hint="Enter number 2"
        android:inputType="numberDecimal"/>
    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content">
    <Button
```

```
    android:id="@+id/addButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="+"
    />
<Button
    android:id="@+id/subtractButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="-"
    />
<Button
    android:id="@+id/divideButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="/"
    />
<Button
    android:id="@+id/multiplyButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="*"
    />
</LinearLayout>
<LinearLayout
    android:layout_width="wrap_content"
    android:layout_height="wrap_content">
<Button
```

```
        android:id="@+id/Submit"
        android:layout_marginLeft="80sp"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="="
        />
        <Button
            android:id="@+id/clearButton"
            android:layout_marginLeft="20sp"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Clear"
            />
    </LinearLayout>
    <TextView
        android:id="@+id/result"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>
</LinearLayout>
*/
```

Q2. Quiz

```
package com.example.myapplication;
import android.os.Bundle;
import android.widget.*;
import androidx.appcompat.app.AppCompatActivity;
import java.text.SimpleDateFormat;
import java.util.ArrayList;
import java.util.Calendar;
import java.util.Date;
import java.util.List;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        TextView result = findViewById(R.id.result);
        Button submitButton=findViewById(R.id.submitButton);
        RadioGroup question1Options = findViewById(R.id.Q1Options);
        RadioGroup question2Options = findViewById(R.id.Q2Options);
        submitButton.setOnClickListener(v->{
            int c = 0;
            int id = question1Options.getCheckedRadioButtonId();
            RadioButton answerQuestion1 = findViewById(id);
            String answer = answerQuestion1.getText().toString();
            if (answer.equals("2024")) c++;
            int id2 = question2Options.getCheckedRadioButtonId();
            RadioButton answerQuestion2 = findViewById(id2);
            String answer2 = answerQuestion2.getText().toString();
```

```
            if (answer2.equals("New Delhi")) c++;
            float percentage=c/2*100;
            result.setText("Quiz Result : "+percentage+"%");
        });
    }
}
/*
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp">
    <TextView
        android:id="@+id/Q1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Which Year is this ?"/>

    <RadioGroup
        android:id="@+id/Q1Options"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content">

        <RadioButton
            android:id="@+id/Q1O1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
```

```
        android:text="2024" />

    <RadioButton
        android:id="@+id/Q1O2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="2025" />
</RadioGroup>

<TextView
    android:id="@+id/Q2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Capital of India ?"/>

<RadioGroup
    android:id="@+id/Q2Options"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content">

    <RadioButton
        android:id="@+id/Q2O1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Delhi" />

    <RadioButton
        android:id="@+id/Q2O2"
```

```
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="New Delhi" />
    </RadioGroup>

    <Button
        android:id="@+id/submitButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Submit Quiz"/>

    <TextView
        android:id="@+id/result"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        />
</LinearLayout>
*/
```

Q3.Calender

```
package com.example.myapplication;
import android.os.Bundle;
import android.widget.*;
import androidx.appcompat.app.AppCompatActivity;
import java.text.SimpleDateFormat;
import java.util.Calendar;
import java.util.Date;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        CalendarView calendarView=findViewById(R.id.calendarView);
        TextView result=findViewById(R.id.resultTextView);
        calendarView.setOnDateChangeListener((view,year,month,date)->{
            String dob=date+"/"+month+"/"+year;
            result.setText("Your Date of Birth: " +dob);
        });
    }
}
/*<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp">
    <CalendarView
```

```
        android:id="@+id/calendarView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" />
    <TextView
        android:id="@+id/resultTextView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="16dp"
        android:text="Your Date of Birth: "
        android:textSize="16sp" />
</LinearLayout>
*/
```

Q4: TODO

```
package com.example.myapplication;
import android.os.Bundle;
import android.widget.*;
import androidx.appcompat.app.AppCompatActivity;
import java.text.SimpleDateFormat;
import java.util.ArrayList;
import java.util.Calendar;
import java.util.Date;
import java.util.List;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        EditText taskToAdd=findViewById(R.id.taskToAdd);
        Button addTaskButton= findViewById(R.id.addTaskButton);
        ListView listView=findViewById(R.id.listView);
        List <String> list=new ArrayList<>();
        ArrayAdapter<String> adapter=new ArrayAdapter<>(this,
android.R.layout.simple_list_item_1,list);
        listView.setAdapter(adapter);
        addTaskButton.setOnClickListener(v->{
            String task=taskToAdd.getText().toString();
            list.add(task);
            adapter.notifyDataSetChanged();
            taskToAdd.setText("");
        });
```

```
        listView.setOnItemClickListener((parent, view, position, id) -> {
            list.remove(position);
            adapter.notifyDataSetChanged();
        });
    }
}
/*
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp">
    <EditText
        android:id="@+id/taskToAdd"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:hint="Enter the task to add"/>
    <Button
        android:id="@+id/addTaskButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Add Task"/>
    <ListView
        android:id="@+id/listView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>
</LinearLayout>  */
```

Q5.Form Controls

```
package com.example.myapplication;
import android.os.Bundle;
import android.widget.*;
import androidx.appcompat.app.AppCompatActivity;
import java.text.SimpleDateFormat;
import java.util.ArrayList;
import java.util.Calendar;
import java.util.Date;
import java.util.List;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        EditText taskToAdd=findViewById(R.id.taskToAdd);
        Button addTaskButton= findViewById(R.id.addTaskButton);
        ListView listView=findViewById(R.id.listView);
        List <String> list=new ArrayList<>();
        ArrayAdapter<String> adapter=new ArrayAdapter<>(this,
android.R.layout.simple_list_item_1,list);
        listView.setAdapter(adapter);
        addTaskButton.setOnClickListener(v->{
            String task=taskToAdd.getText().toString();
            list.add(task);
            adapter.notifyDataSetChanged();
            taskToAdd.setText("");
        });
```

```
        listView.setOnItemClickListener((parent, view, position, id) -> {
            list.remove(position);
            adapter.notifyDataSetChanged();
        });
    }
}
/*
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp">
    <EditText
        android:id="@+id/taskToAdd"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:hint="Enter the task to add"/>
    <Button
        android:id="@+id/addTaskButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Add Task"/>
    <ListView
        android:id="@+id/listView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>
</LinearLayout>
```

Q6. Temperature Converter

```
package com.example.myapplication;
import android.os.Bundle;
import android.view.View;
import android.widget.*;
import androidx.appcompat.app.AppCompatActivity;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        RadioGroup radioGroup=findViewById(R.id.tempType);
        EditText tempInput=findViewById(R.id.tempInput);
        TextView result=findViewById(R.id.result);
        Button submitButton=findViewById(R.id.submitButton);
        submitButton.setOnClickListener(v->{
            String t=tempInput.getText().toString();
            double temperature=Double.parseDouble(t);
            int id=radioGroup.getCheckedRadioButtonId();
                RadioButton radioButton=findViewById(id);
                String type=radioButton.getText().toString();
                if (type=="celsius") {
                    double fah= temperature*(9/5)+32;
                    result.setText("Fahrenheit : "+ fah);
                }
                else {
                    double cel = (temperature - 32) * 5 / 9;
                    result.setText("Fahrenheit : " + cel);
```

```
            }
        });
    }
}
/*<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp">
    <!-- EditText -->
    <EditText
        android:id ="@+id/tempInput"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:hint="Enter Temperature"
        android:inputType="numberDecimal"   />
    <RadioGroup
        android:id="@+id/tempType"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical">

        <RadioButton
            android:id="@+id/celsius"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
```

```
        android:text="Celsius" />

    <RadioButton
        android:id="@+id/fahrenheit"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Fahrenheit" />

  </RadioGroup>
  <Button
    android:id="@+id/submitButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Convert"
    />
  <TextView
    android:id="@+id/result"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"/>
</LinearLayout>
*/
```

Q7. DB Interaction

- **DBACTIVITY.JAVA**

```
import android.database.Cursor;
import android.os.Bundle;
import android.widget.*;
import androidx.appcompat.app.AppCompatActivity;

public class DatabaseActivity extends AppCompatActivity {
    DatabaseHelper dbHelper;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_database);

        EditText nameInput = findViewById(R.id.nameInput);
        Button insertButton = findViewById(R.id.insertButton);
        Button viewButton = findViewById(R.id.viewButton);
        TextView displayData = findViewById(R.id.displayData);

        dbHelper = new DatabaseHelper(this);

        insertButton.setOnClickListener(v -> {
            String name = nameInput.getText().toString();
            if (dbHelper.insertData(name)) {
                Toast.makeText(this, "Data Inserted", Toast.LENGTH_SHORT).show();
                nameInput.setText("");
            }
```

```
        });

        viewButton.setOnClickListener(v -> {
            Cursor cursor = dbHelper.getData();
            StringBuilder data = new StringBuilder();
            while (cursor.moveToNext()) {
                data.append("ID: ").append(cursor.getInt(0)).append(", Name:
").append(cursor.getString(1)).append("\n");
            }
            displayData.setText(data.toString());
        });
    }
}
```

- **DBHELPER.JAVA**

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

public class DatabaseHelper extends SQLiteOpenHelper {
    private static final String DATABASE_NAME = "example.db";
    private static final String TABLE_NAME = "data_table";
    private static final String COL_ID = "ID";
    private static final String COL_NAME = "NAME";

    public DatabaseHelper(Context context) {
        super(context, DATABASE_NAME, null, 1);
```

```
    }

    @Override
    public void onCreate(SQLiteDatabase db) {
        db.execSQL("CREATE TABLE " + TABLE_NAME + " (" + COL_ID + " INTEGER
PRIMARY KEY AUTOINCREMENT, " + COL_NAME + " TEXT)");
    }

    @Override
    public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {
        db.execSQL("DROP TABLE IF EXISTS " + TABLE_NAME);
        onCreate(db);
    }

    public boolean insertData(String name) {
        SQLiteDatabase db = this.getWritableDatabase();
        ContentValues contentValues = new ContentValues();
        contentValues.put(COL_NAME, name);
        long result = db.insert(TABLE_NAME, null, contentValues);
        return result != -1;
    }

    public Cursor getData() {
        SQLiteDatabase db = this.getReadableDatabase();
        return db.rawQuery("SELECT * FROM " + TABLE_NAME, null);
    }
}
```

- **DB.XML**

```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp">

    <EditText
        android:id="@+id/nameInput"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter Name" />
    <Button
        android:id="@+id/insertButton"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Insert Data" />
    <Button
        android:id="@+id/viewButton"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="View Data" />

    <TextView
        android:id="@+id/displayData"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" />
</LinearLayout>
```

Q8. Animation

```
package com.example.simpleanimation;
import android.animation.ObjectAnimator;
import android.os.Bundle;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        // Step 1: Initialize the View
        TextView animatedView = findViewById(R.id.animatedView);

        // Step 2: Create ObjectAnimator for horizontal movement
        ObjectAnimator animation = ObjectAnimator.ofFloat(animatedView, "translationX", 0f,
500f); // Move from X=0 to X=500
        animation.setDuration(1000); // Set duration to 1 second

        // Step 3: Start the animation
        animation.start();
    }
}
```

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:gravity="center">

    <!-- TextView to animate -->
    <TextView
        android:id="@+id/animatedView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="I am Moving!"
        android:textSize="24sp"
        android:textColor="#000000" />
</LinearLayout>
```