1. Write a program to find addition, subtraction, Multiplication, Division of two numbers.

Activity_main.xml

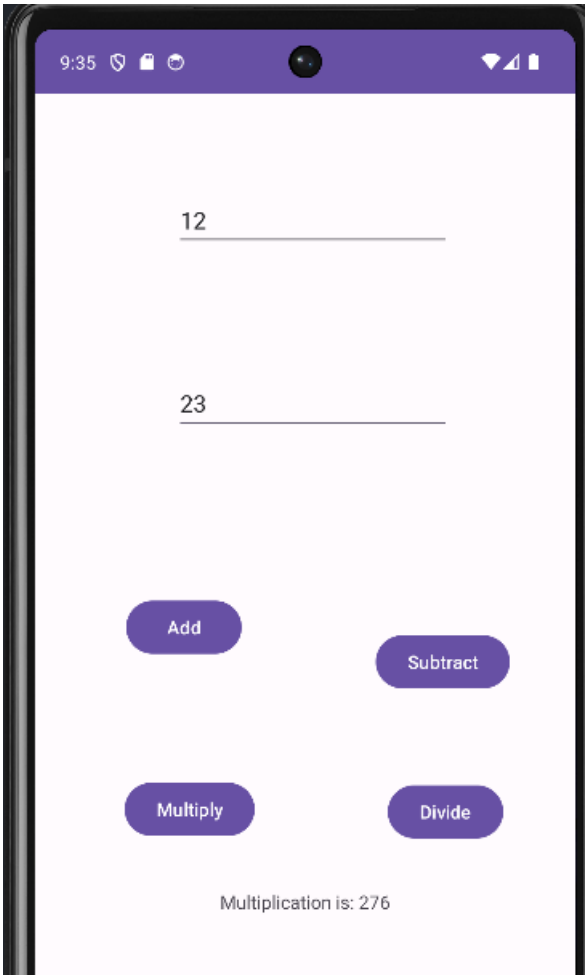
```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/ans"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>

    <Button
        android:id="@+id/btn1"
        android:text="Add"/>

    <Button
        android:id="@+id/btn2"
        android:text="Subtract"/>

    <Button
        android:id="@+id/btn3"
       android:text="Multiply" />

    <Button
        android:id="@+id/btn4"
        android:text="Divide" />


    <EditText
        android:id="@+id/editTextText"
        android:hint="Enter 1st Number"
        android:inputType="text"/>

    <EditText
        android:id="@+id/editTextText2"
        android:hint="Enter 2nd Number"/>

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

MainActivity.java

```
package com.example.question1;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.*;

public class MainActivity extends AppCompatActivity {
    Button add , subtract , divide , multiply;
    EditText edt1 , edt2;
    TextView textView;

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

        add = findViewById(R.id.btn1);
        subtract = findViewById(R.id.btn2);
        multiply = findViewById(R.id.btn3);
        divide = findViewById(R.id.btn4);

        edt1 = findViewById(R.id.editTextText);
        edt2 = findViewById(R.id.editTextText2);

        int n1 = Integer.parseInt(edt1.getText().toString());
        int n2 = Integer.parseInt(edt2.getText().toString());


        textView = findViewById(R.id.ans);

        add.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                textView.setText("Addition is :" + (n1 + n2) );
            }
        });
        subtract.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                textView.setText("Subtraction is :" + (n1 - n2) );
            }
        });
        multiply.setOnClickListener(new View.OnClickListener() {
            @Override

            public void onClick(View view) {
                textView.setText("Multiplication is :" + (n1 * n2) );
```

```
    }
});
divide.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        textView.setText("Division is :" + (n1 / n2) );
    }
});    }}
```

O/P:



2. Write a program to find greater number from three numbers.

Activity_main.xml

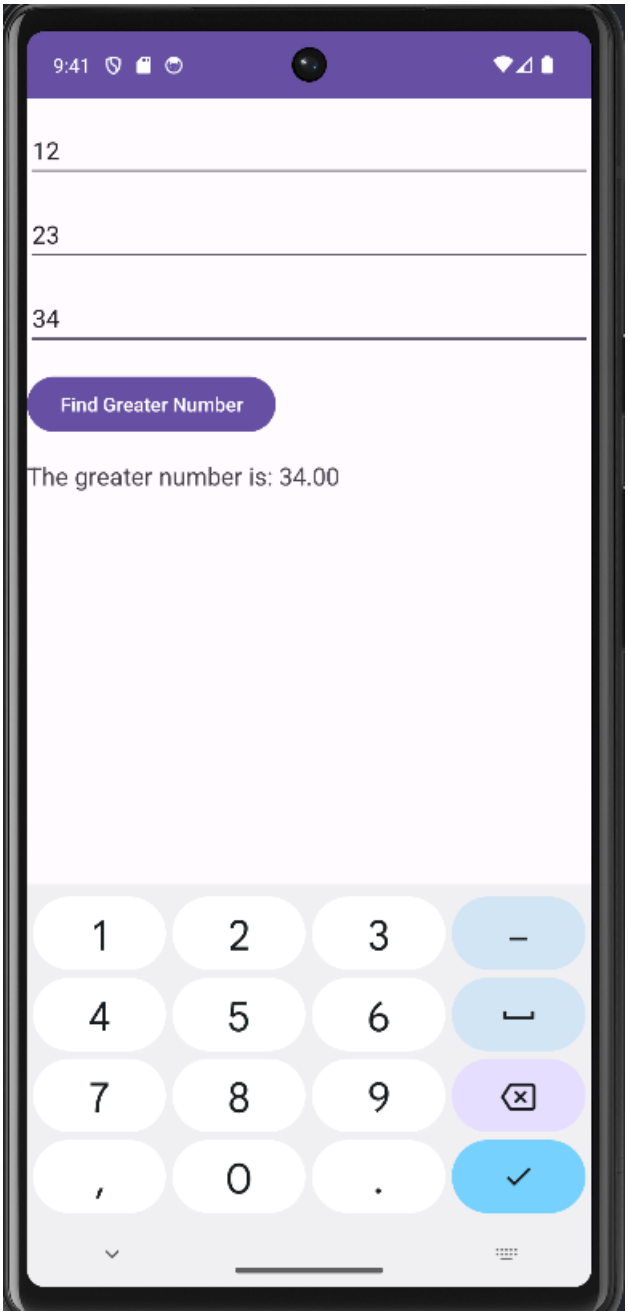
```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <EditText
        android:id="@+id/num1EditText"
        android:hint="Enter the first number"/>

    <EditText
        android:id="@+id/num2EditText"
        android:hint="Enter the second number"
        android:inputType="numberDecimal"/>

    <EditText
        android:id="@+id/num3EditText"
        android:hint="Enter the third number"
        android:inputType="numberDecimal"/>

    <Button
        android:id="@+id/findGreaterButton"
        android:text="Find Greater Number"/>

    <TextView
        android:id="@+id/resultTextView"
        android:text=""/>
</RelativeLayout>
```

MainActivity.java

```
package com.example.question2;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.*;

public class MainActivity extends AppCompatActivity {

    private EditText num1EditText, num2EditText, num3EditText;
    private TextView resultTextView;
```

```
    private Button findGreaterButton;

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

        num1EditText = findViewById(R.id.num1EditText);
        num2EditText = findViewById(R.id.num2EditText);
        num3EditText = findViewById(R.id.num3EditText);
        resultTextView = findViewById(R.id.resultTextView);
        findGreaterButton = findViewById(R.id.findGreaterButton);

        findGreaterButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                findGreaterNumber();
            }
        });
    }

    private void findGreaterNumber() {
            double num1 = Double.parseDouble(num1EditText.getText().toString());
            double num2 = Double.parseDouble(num2EditText.getText().toString());
            double num3 = Double.parseDouble(num3EditText.getText().toString());

            double greaterNumber;

            if (num1 >= num2 && num1 >= num3) {
                greaterNumber = num1;
            } else if (num2 >= num1 && num2 >= num3) {
                greaterNumber = num2;
            } else {
                greaterNumber = num3;
            }

            resultTextView.setText(String.format("The greater number is: %.2f", greaterNumber));

        }
    }
}
```

O/P:


9:41
12
23
34
Find Greater Number
The greater number is: 34.00
1
2
3
4
5
6
7
8
9
,
0
.

3. Write a program to accept number and find whether it is even or odd.

Activity_main.xml

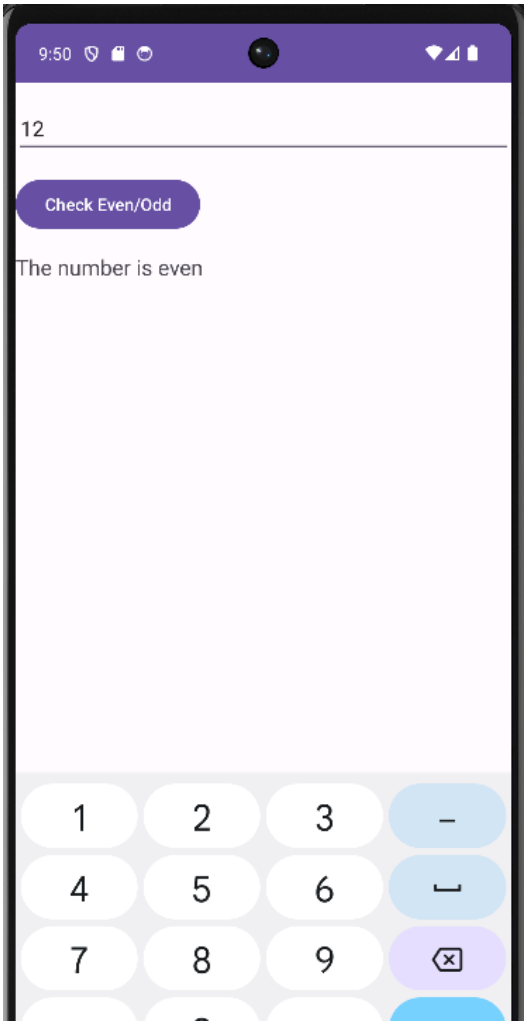
```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <EditText
        android:id="@+id/numberEditText"
        android:hint="Enter a number"
        android:inputType="number"/>

    <Button
        android:id="@+id/checkEvenOddButton"
        android:text="Check Even/Odd"/>

    <TextView
        android:id="@+id/resultTextView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@id/checkEvenOddButton"
        android:layout_marginTop="16dp"
        android:text=""
        android:textSize="18sp"/>
</RelativeLayout>
```

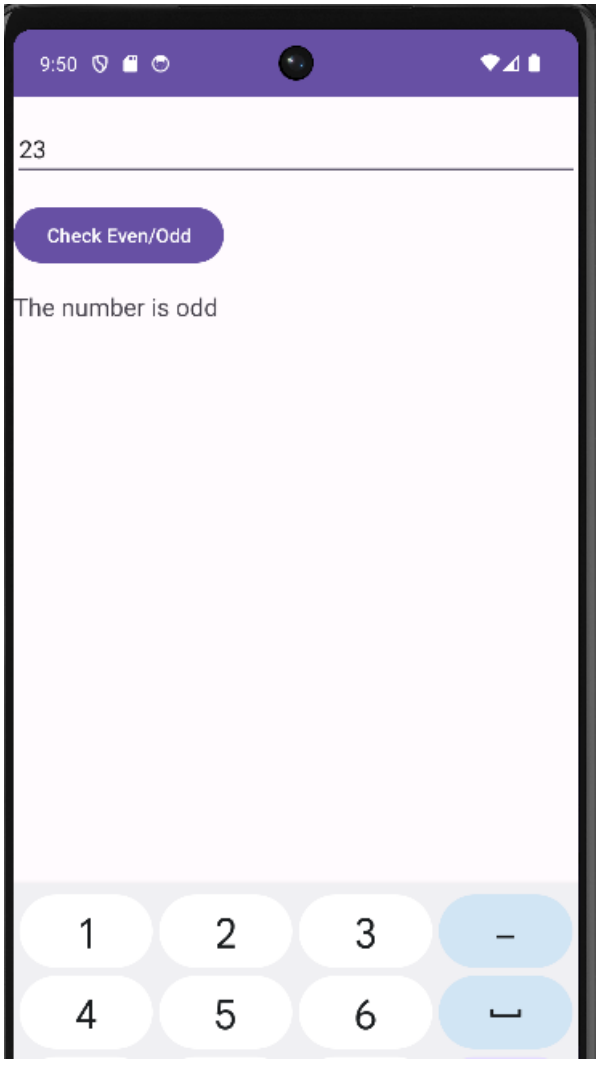
MainActivity.java

```
package com.example.question3;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.*;

public class MainActivity extends AppCompatActivity {

    private EditText numberEditText;
    private Button checkEvenOddButton;
    private TextView resultTextView;

    @Override
```

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

        numberEditText = findViewById(R.id.numberEditText);
        checkEvenOddButton = findViewById(R.id.checkEvenOddButton);
        resultTextView = findViewById(R.id.resultTextView);

        checkEvenOddButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                checkEvenOdd();
            }
        });
    }

    private void checkEvenOdd() {
            int number = Integer.parseInt(numberEditText.getText().toString());
            if (number % 2 == 0) {
                resultTextView.setText("The number is even");
            } else {
                resultTextView.setText("The number is odd");
            }
    }
}
```

O/P:


9:50
12
Check Even/Odd
The number is even
1
2
3
4
5
6
7
8
9


9:50
23
Check Even/Odd
The number is odd
1
2
3
4
5
6

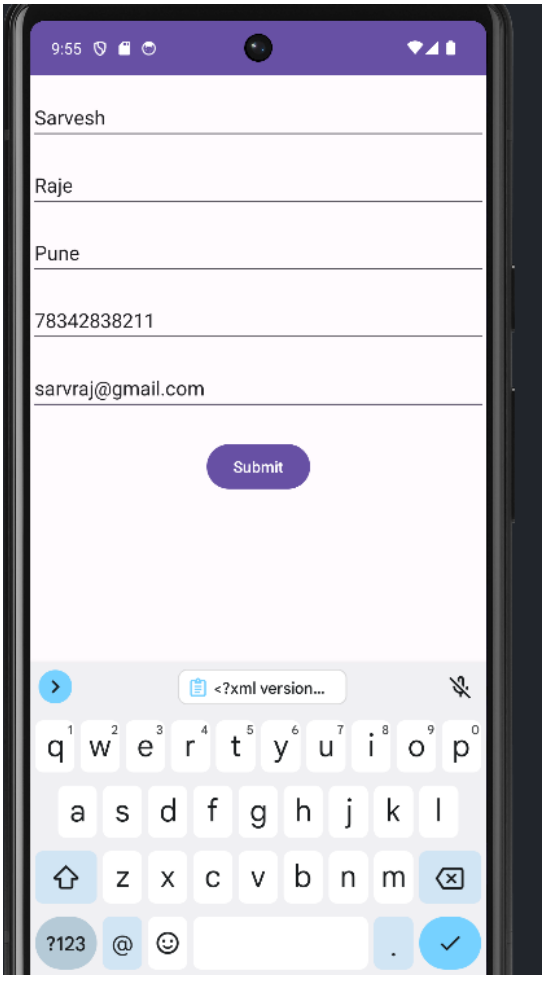
4. Write a graphical layout for registration from having fields name First name, last name, address, mobile no, email id and submit button

Activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
   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"
   tools:context=".MainActivity">

   <EditText
      android:id="@+id/firstNameEditText"
      android:hint="First Name"
      app:layout_constraintStart_toStartOf="parent"
      app:layout_constraintEnd_toEndOf="parent"
      app:layout_constraintTop_toTopOf="parent"/>


   <EditText
      android:id="@+id/lastNameEditText"
      android:hint="Last Name"
      app:layout_constraintStart_toStartOf="parent"
      app:layout_constraintEnd_toEndOf="parent"
      app:layout_constraintTop_toBottomOf="@id/firstNameEditText"
      android:layout_marginTop="16dp"/>


   <EditText
      android:id="@+id/addressEditText"
      android:hint="Address"
      app:layout_constraintStart_toStartOf="parent"
      app:layout_constraintEnd_toEndOf="parent"
      app:layout_constraintTop_toBottomOf="@id/lastNameEditText"/>


   <EditText
      android:id="@+id/mobileNumberEditText"
      android:hint="Mobile Number"
      app:layout_constraintStart_toStartOf="parent"
      app:layout_constraintEnd_toEndOf="parent"
      app:layout_constraintTop_toBottomOf="@id/addressEditText"/>

   <EditText
      android:id="@+id/emailEditText"
      android:hint="Email ID"
      app:layout_constraintStart_toStartOf="parent"
```

```
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toBottomOf="@id/mobileNumberEditText"/>


    <Button
        android:id="@+id/submitButton"
        android:text="Submit"
        app:layout_constraintTop_toBottomOf="@id/emailEditText"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"/>

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

O/P:



5. Write a program to change the text on the click of a button.

Activity_main.xml

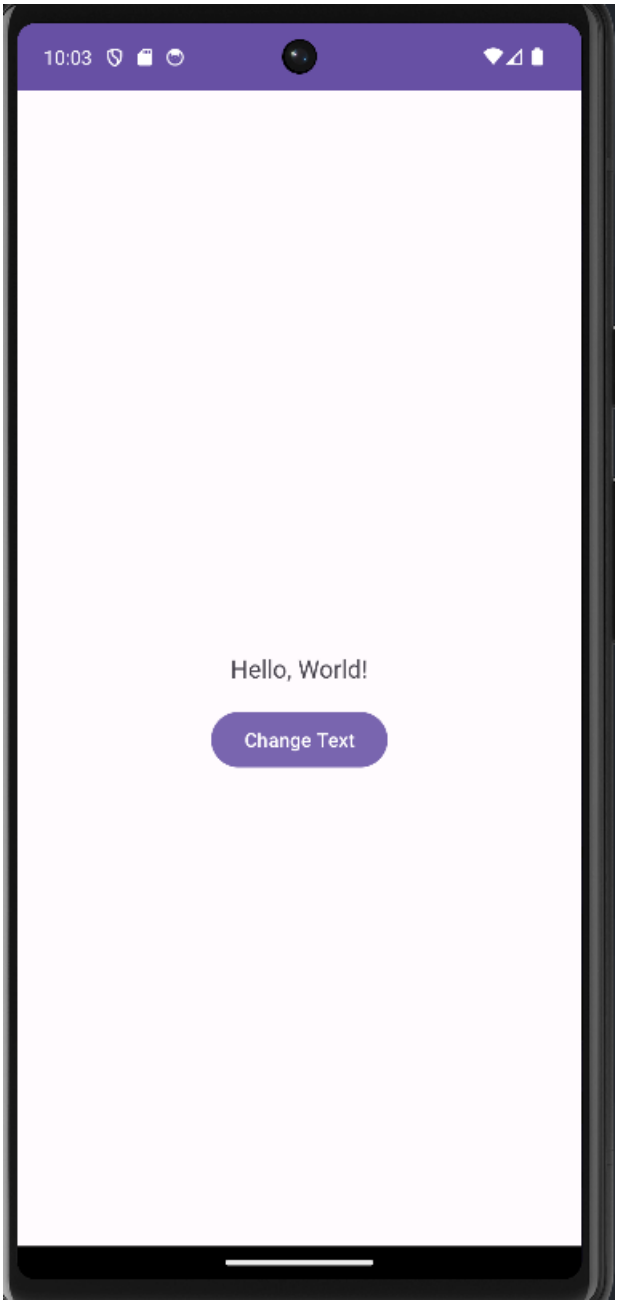
```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
   xmlns:tools="http://schemas.android.com/tools"
   android:layout_width="match_parent"
   android:layout_height="match_parent"
   tools:context=".MainActivity">

   <TextView
      android:id="@+id/displayTextView"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Hello, World!"
      android:textSize="18sp"
      android:layout_centerInParent="true"/>

   <Button
      android:id="@+id/changeTextButton"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Change Text"
      android:layout_below="@id/displayTextView"
      android:layout_centerHorizontal="true"
      android:layout_marginTop="16dp"/>

</RelativeLayout>
```

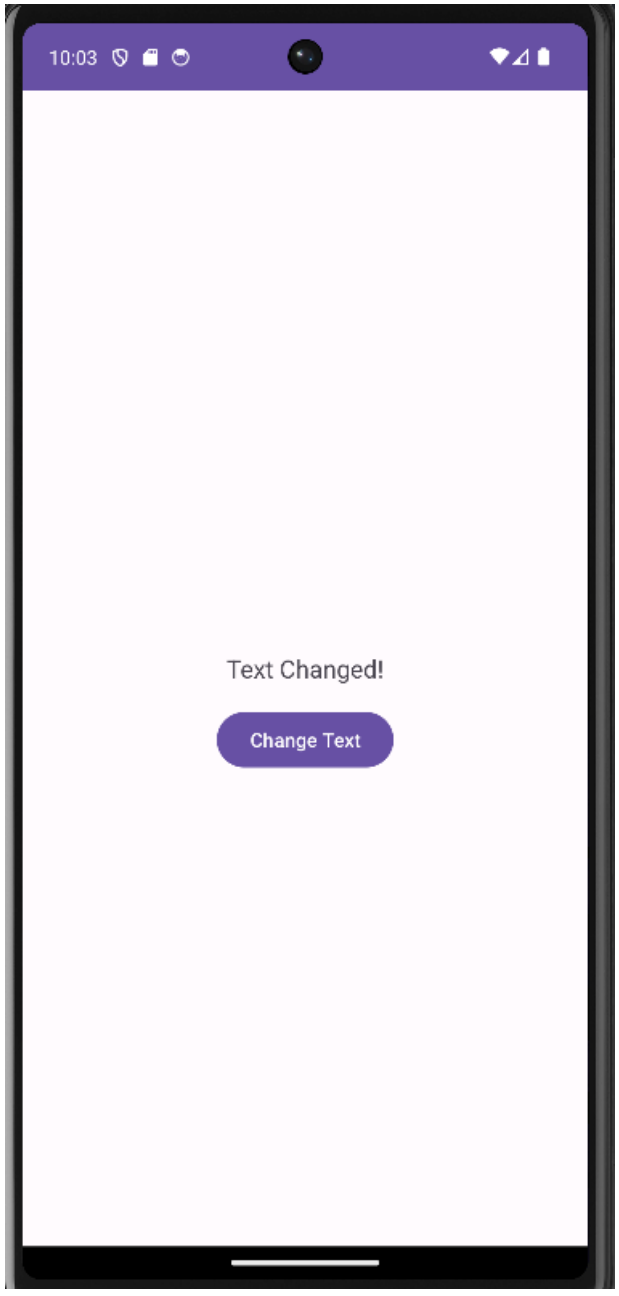
MainActivity.java

```
package com.example.question5;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.*;
public class MainActivity extends AppCompatActivity {

   private TextView displayTextView;
   private Button changeTextButton;

   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_main);
        displayTextView = findViewById(R.id.displayTextView);
        changeTextButton = findViewById(R.id.changeTextButton);

        changeTextButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                changeText();
            }
        });}
    private void changeText() {
        displayTextView.setText("Text Changed!");
    }
}
```

O/P:





6. Write an android code to turn Bluetooth on/off.

Activity_main.xml

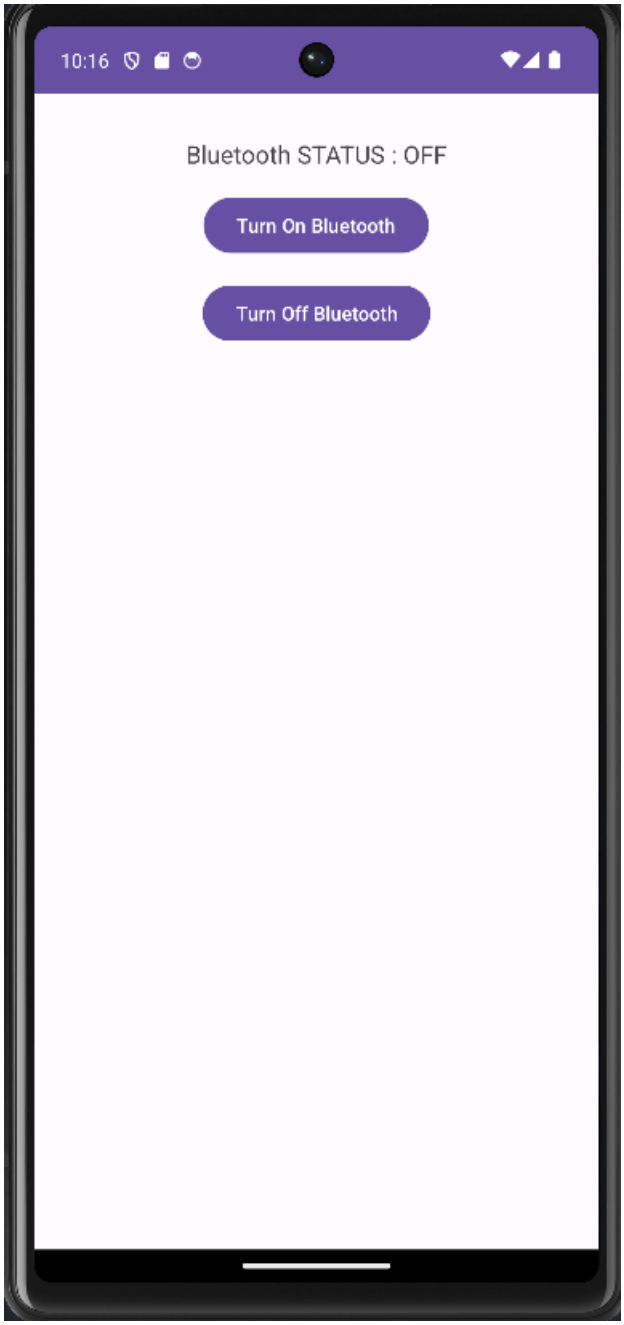
```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/bluetoothStatusTextView"
        android:text="Bluetooth Status"/>

    <Button
        android:id="@+id/turnOnButton"
        android:text="Turn On Bluetooth"/>

    <Button
        android:id="@+id/turnOffButton"
        android:text="Turn Off Bluetooth"/>

</RelativeLayout>
```

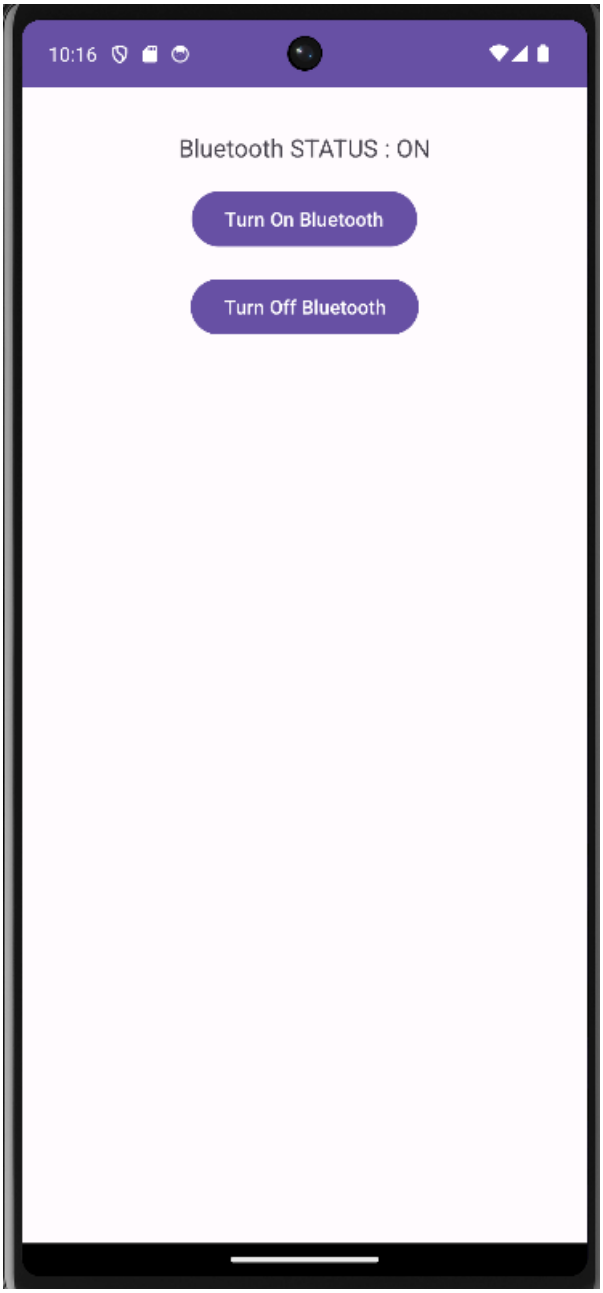
MainActivity.java

```
package com.example.question6;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.*;

public class MainActivity extends AppCompatActivity {

    private TextView bluetoothStatusTextView;
    private Button turnOnButton, turnOffButton;

    private String status = "OFF";

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

```
    bluetoothStatusTextView = findViewById(R.id.bluetoothStatusTextView);
    turnOnButton = findViewById(R.id.turnOnButton);
    turnOffButton = findViewById(R.id.turnOffButton);

    turnOnButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            turnOnBluetooth();
        }
    });

    turnOffButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            turnOffBluetooth();
        }
    });
}

private void turnOnBluetooth() {
    bluetoothStatusTextView.setText("Bluetooth STATUS : " + this.status);
    this.status = "ON";
}

private void turnOffBluetooth() {
    bluetoothStatusTextView.setText("Bluetooth STATUS : " + this.status);
    this.status = "OFF";
}}
```

O/P


10:16
Bluetooth STATUS : OFF
Turn On Bluetooth
Turn Off Bluetooth


10:16
Bluetooth STATUS : ON
Turn On Bluetooth
Turn Off Bluetooth

7. Write android code to turn wifi on/off.

Activity_main.xml

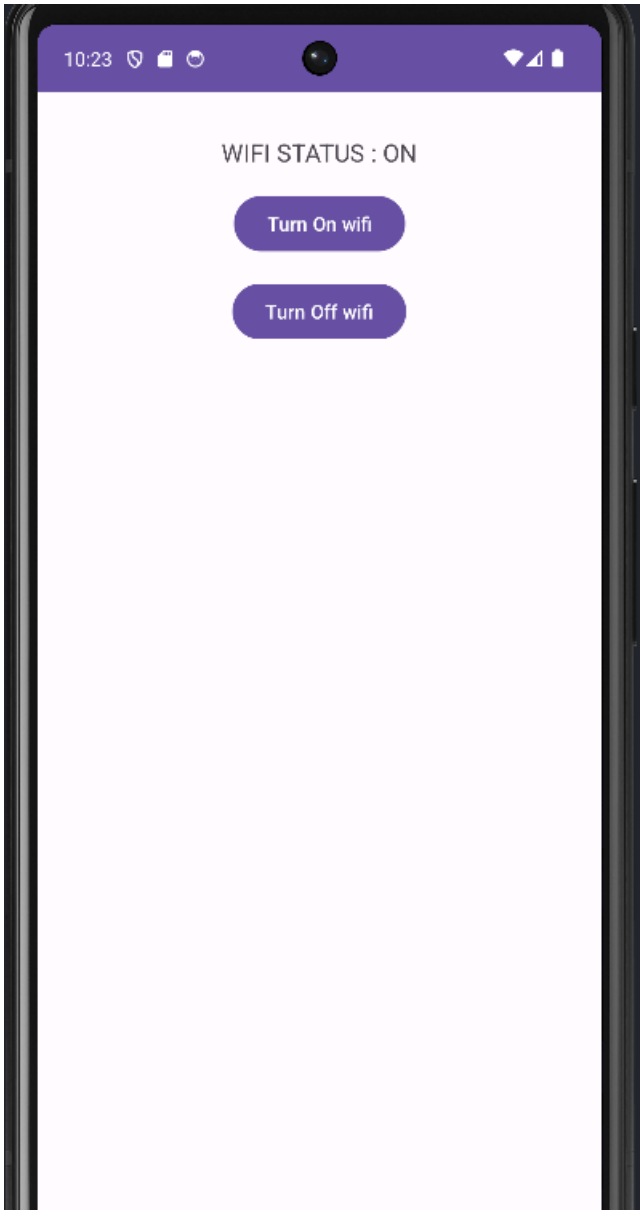
```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
   xmlns:tools="http://schemas.android.com/tools"
   android:layout_width="match_parent"
   android:layout_height="match_parent"
   tools:context=".MainActivity">

   <TextView
      android:id="@+id/wifiStatusTextView"
      android:text="wifi Status"/>

   <Button
      android:id="@+id/turnOnButton"
      android:text="Turn On wifi" />

   <Button
      android:id="@+id/turnOffButton"
      android:text="Turn Off wifi"
      android:layout_below="@id/turnOnButton"
      android:layout_centerHorizontal="true"
      android:layout_marginTop="16dp"/>

</RelativeLayout>
```

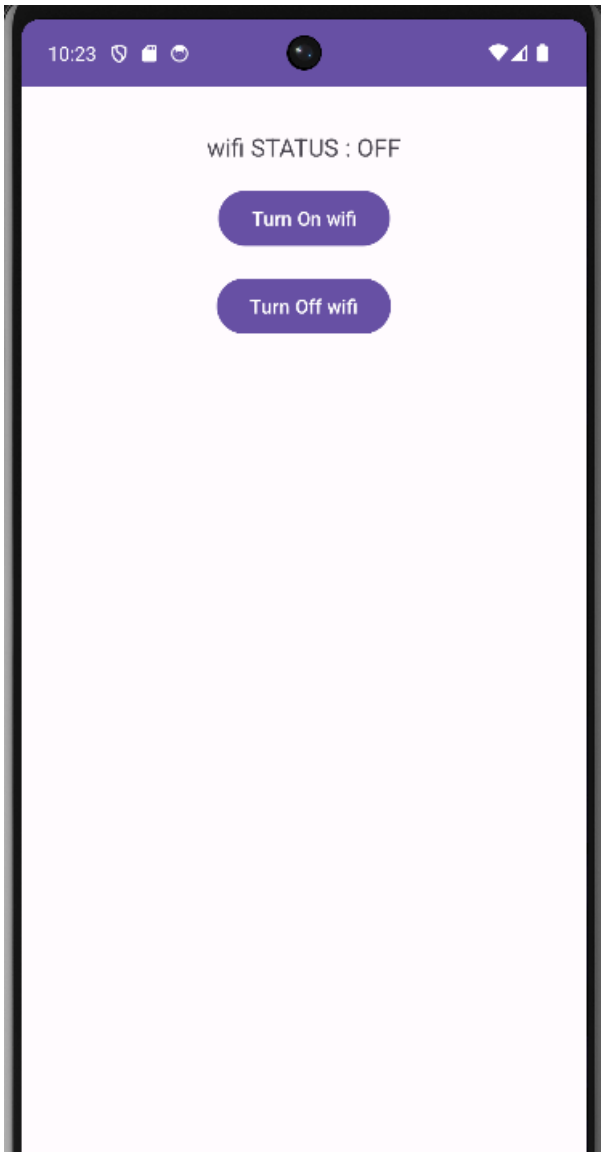
MainActivity.java

```
package com.example.question7;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.*;

public class MainActivity extends AppCompatActivity {
   private TextView wifiStatusTextView;
   private Button turnOnButton, turnOffButton;
   private String status = "OFF";
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);

      wifiStatusTextView = findViewById(R.id.wifiStatusTextView);
      turnOnButton = findViewById(R.id.turnOnButton);
      turnOffButton = findViewById(R.id.turnOffButton);
```

```
    turnOnButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            turnOnwifi();
        }    });

    turnOffButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            turnOffwifi();
        }
    });    }

  private void turnOnwifi() {
    this.status = "ON";
    wifiStatusTextView.setText("WIFI STATUS : " + this.status);
  }
  private void turnOffwifi() {
    this.status = "OFF";
    wifiStatusTextView.setText("wifi STATUS : " + this.status);
  }}
```

O/P


10:23
WIFI STATUS : ON
Turn On wifi
Turn Off wifi


10:23
wifi STATUS : OFF
Turn On wifi
Turn Off wifi

8.Write a program to display ON/OFF status of wifi and Bluetooth both.

Activity_main.xml

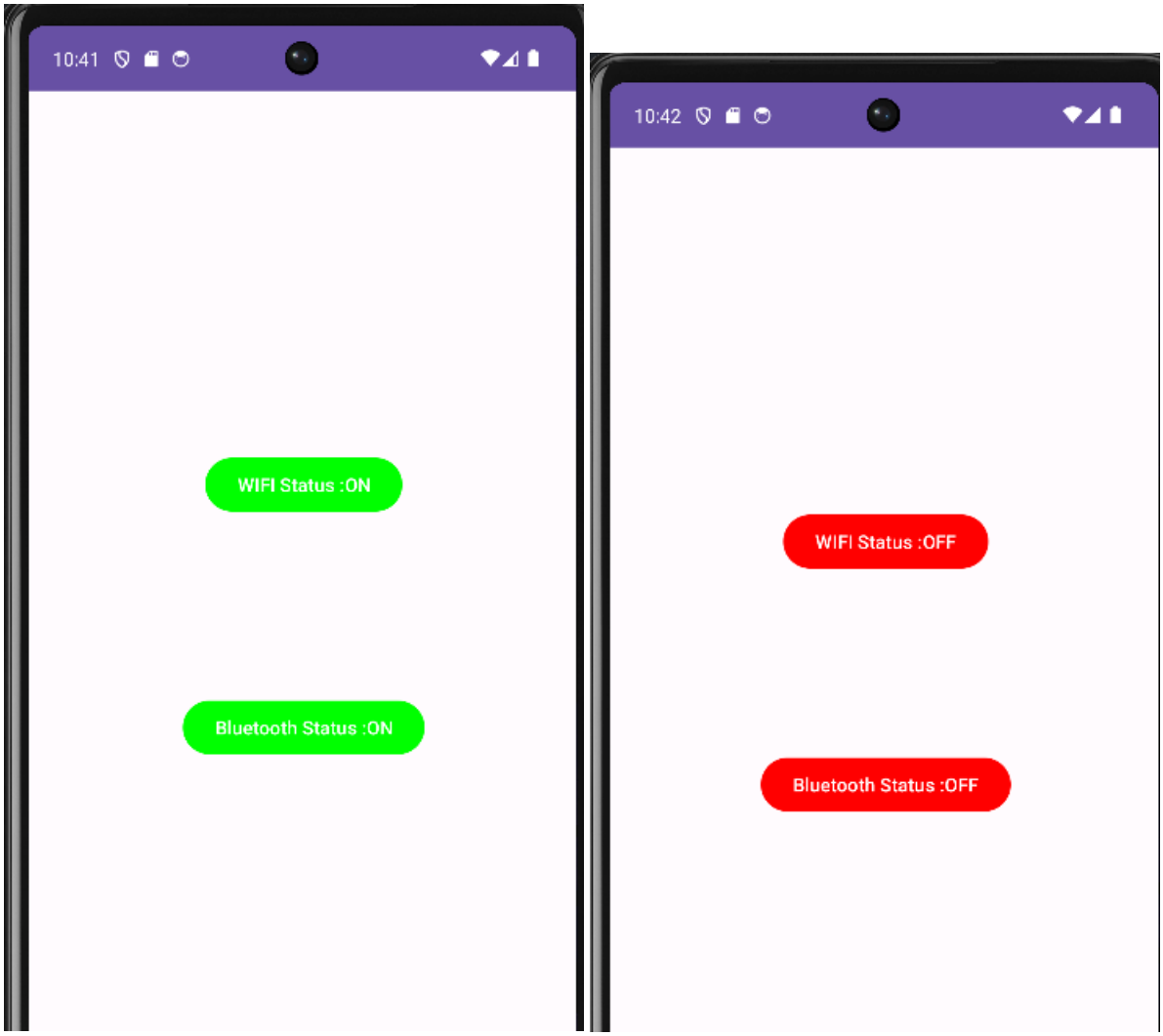
```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
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

    <Button
        android:id="@+id/bt1"
        android:layout_marginStart="163dp"
        android:layout_marginEnd="160dp"
        android:layout_marginBottom="340dp" />

    <Button
        android:id="@+id/bt2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="163dp"
        android:layout_marginTop="216dp"
        android:layout_marginEnd="160dp"
        android:layout_marginBottom="79dp"
/>
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.question8;

import androidx.appcompat.app.AppCompatActivity;

import android.graphics.Color;
import android.os.Bundle;
import android.view.View;
import android.widget.*;

public class MainActivity extends AppCompatActivity {
    private Button btn1, btn2;
    private String Bluetoothstatus = "OFF";
    private String Wifistatus = "OFF";

    @Override
```

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

    btn1 = findViewById(R.id.bt1);
    btn2 = findViewById(R.id.bt2);


    btn1.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            if(Bluetoothstatus == "OFF"){
                Bluetoothstatus = "ON";
                btn1.setBackgroundColor(Color.parseColor("GREEN"));
                btn1.setText("Bluetooth Status :" + Bluetoothstatus);
            }else{
                Bluetoothstatus = "OFF";
                btn1.setBackgroundColor(Color.parseColor("RED"));
                btn1.setText("Bluetooth Status :" + Bluetoothstatus);
            }
        }
    });

    btn2.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            if (Wifistatus == "OFF") {
                Wifistatus = "ON";
                btn2.setBackgroundColor(Color.parseColor("GREEN"));
                btn2.setText("WIFI Status :" + Wifistatus);
            } else {
                Wifistatus = "OFF";
                btn2.setBackgroundColor(Color.parseColor("RED"));
                btn2.setText("WIFI Status :" + Wifistatus);
            }
        }
    });
}}
```

O/P


10:41
WIFI Status :ON
Bluetooth Status :ON
10:42
WIFI Status :OFF
Bluetooth Status :OFF

9.Write a program to create a simple calculatior where addition, division, subtraction, multiplication, square, modulo division are possible.

Activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<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"
   tools:context=".MainActivity">

   <EditText
      android:id="@+id/input1"
      android:hint="Enter number 1"
      android:inputType="numberDecimal"
      android:layout_marginBottom="16dp"/>

   <EditText
      android:id="@+id/input2"
      android:hint="Enter number 2"
      android:inputType="numberDecimal"
      android:layout_marginBottom="16dp"/>

   <Button
      android:id="@+id/addButton"
      android:text="Add"
      android:layout_marginBottom="8dp"/>

   <Button
      android:id="@+id/subtractButton"
      android:text="Subtract"
      android:layout_marginBottom="8dp"/>

   <Button
      android:id="@+id/multiplyButton"
      android:text="Multiply"
      android:layout_marginBottom="8dp"/>

   <Button
      android:id="@+id/divideButton"
      android:text="Divide"
      android:layout_marginBottom="8dp"/>
```

```
    <Button
        android:id="@+id/squareButton"
        android:text="Square"
        android:layout_marginBottom="8dp"/>

    <Button
        android:id="@+id/moduloButton"
        android:text="Modulo"
        android:layout_marginBottom="8dp"/>

    <TextView
        android:id="@+id/resultTextView"
        android:text=""
        android:textSize="18sp"
        android:layout_marginTop="16dp"/>
</LinearLayout>
```

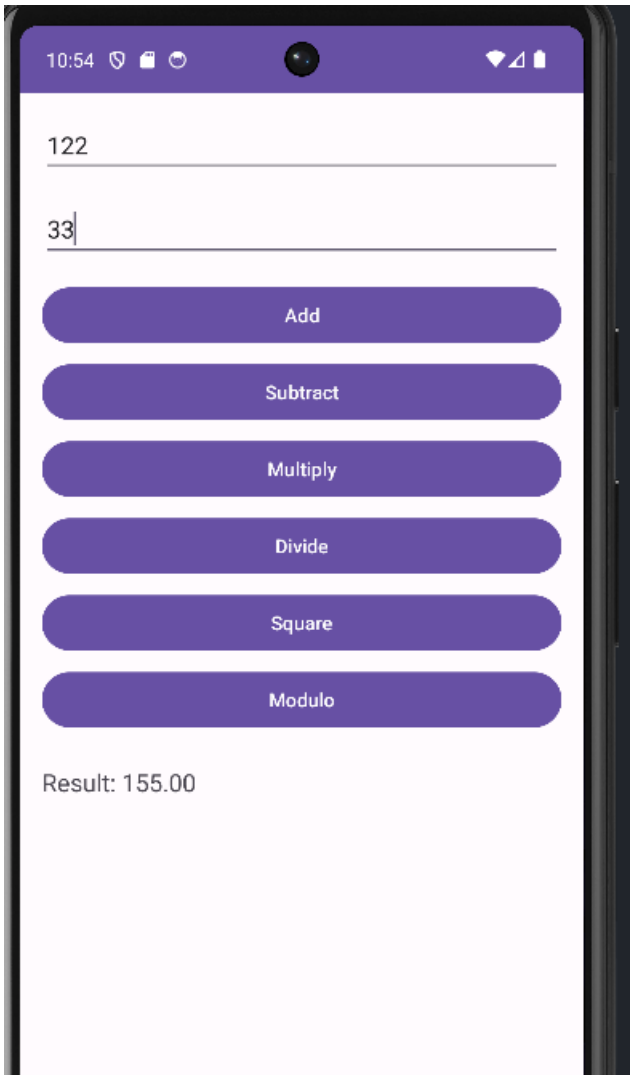
MainActivity.java

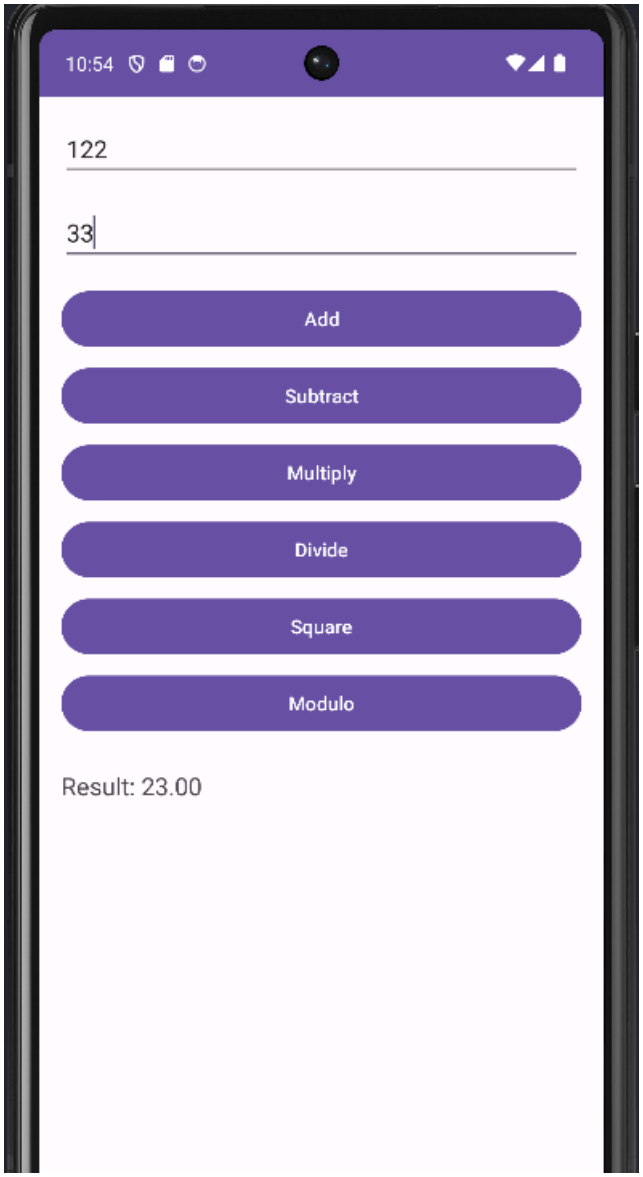
```
package com.example.question9;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.*;

public class MainActivity extends AppCompatActivity {

    private EditText input1, input2;
    private Button addButton, subtractButton, multiplyButton, divideButton, squareButton, moduloButton;
    private TextView resultTextView;

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

        input1 = findViewById(R.id.input1);
        input2 = findViewById(R.id.input2);
        addButton = findViewById(R.id.addButton);
        subtractButton = findViewById(R.id.subtractButton);
        multiplyButton = findViewById(R.id.multiplyButton);
        divideButton = findViewById(R.id.divideButton);
        squareButton = findViewById(R.id.squareButton);
        moduloButton = findViewById(R.id.moduloButton);
        resultTextView = findViewById(R.id.resultTextView);
```

```
    addButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            performOperation("+");
        }       });

    subtractButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            performOperation("-");
        }       });

    multiplyButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            performOperation("*");
        }       });

    divideButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            performOperation("/");
        }});

    squareButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            performOperation("square");
        }       });

    moduloButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            performOperation("%");
        }     });}

private void performOperation(String operation) {
        double num1 = Double.parseDouble(input1.getText().toString());
        double num2 = Double.parseDouble(input2.getText().toString());

        double result = 0;

        switch (operation) {
            case "+":
                result = num1 + num2;
```

```
            break;
        case "-":
            result = num1 - num2;
            break;
        case "*":
            result = num1 * num2;
            break;
        case "/":
            if (num2 != 0) {
                result = num1 / num2;
            } else {
                resultTextView.setText("Cannot divide by zero");
                return;                 }
            break;
        case "square":
            result = num1 * num1;
            break;
        case "%":
            if (num2 != 0) {
                result = num1 % num2;
            } else {
                resultTextView.setText("Cannot perform modulo with zero");
                return;                 }
            break;          }
    resultTextView.setText(String.format("Result: %.2f", result));    } }
```

O/P


10:54
122
33
Add
Subtract
Multiply
Divide
Square
Modulo
Result: 155.00


10:54
122
33
Add
Subtract
Multiply
Divide
Square
Modulo
Result: 23.00

10.Write a program to demonstrate rating bar.

Activity_main.xml

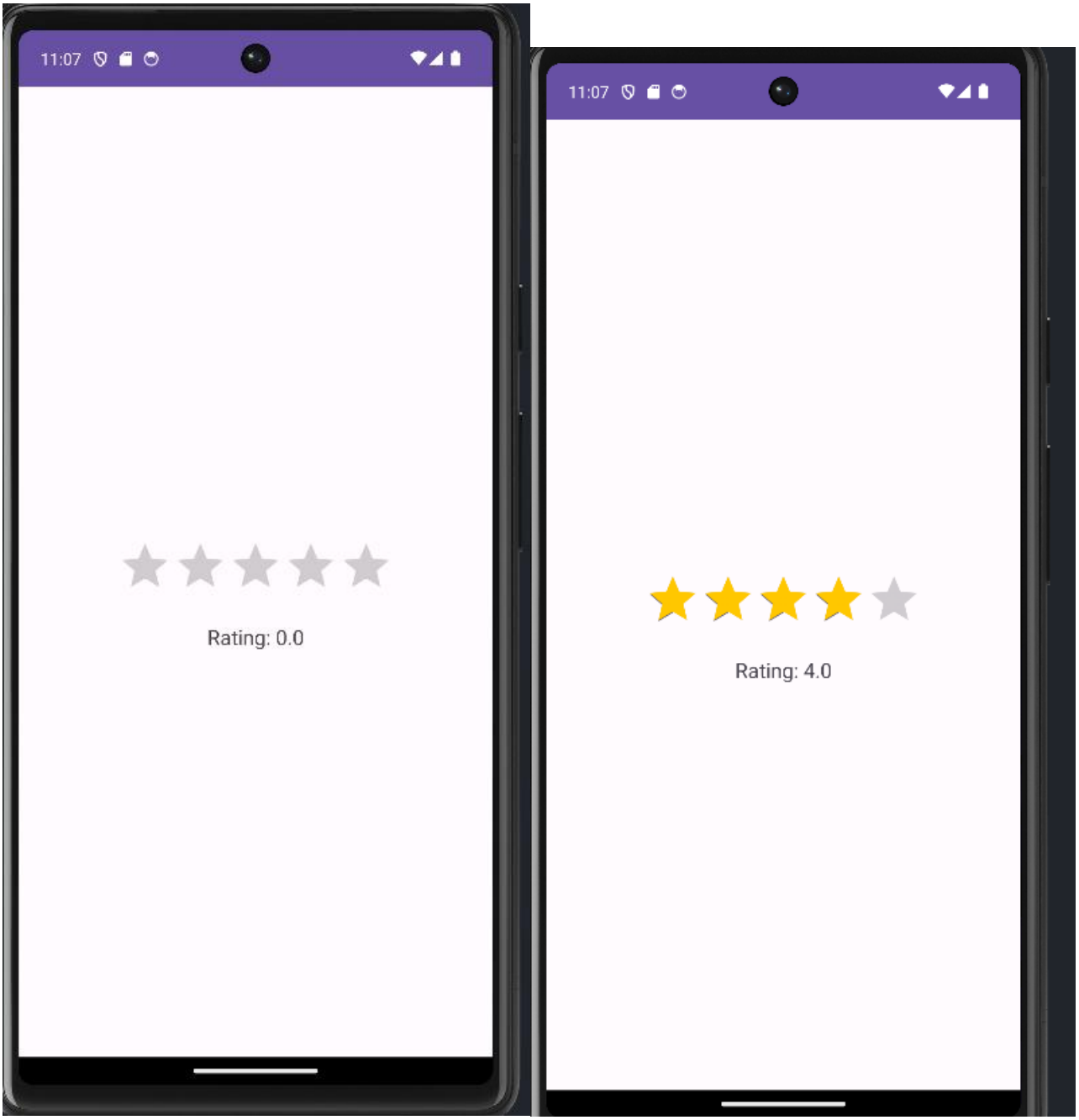
```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <RatingBar
        android:id="@+id/ratingBar"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerInParent="true"
        android:numStars="5"
        android:progressTint="#FFC700"
        android:stepSize="1.0" />

    <TextView
        android:id="@+id/ratingTextView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Rating: 0.0"
        android:textSize="18sp"
        android:layout_below="@+id/ratingBar"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="16dp"/>
</RelativeLayout>
```

MainActivity.java

```
package com.example.question10;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.*;
public class MainActivity extends AppCompatActivity {
    private RatingBar ratingBar;
    private TextView ratingTextView;

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

```
        ratingBar = findViewById(R.id.ratingBar);
        ratingTextView = findViewById(R.id.ratingTextView);

        ratingBar.setOnRatingBarChangeListener(new RatingBar.OnRatingBarChangeListener() {
            @Override
            public void onRatingChanged(RatingBar ratingBar, float rating, boolean fromUser) {
                ratingTextView.setText("Rating: " + rating);
            }
        });
}
}
```

O/P


11:07
Rating: 0.0
11:07
Rating: 4.0

11.Write a program to create Image view

Activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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"
    tools:context=".MainActivity">

    <ImageView
        android:id="@+id/imageView"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:scaleType="centerCrop" />

</RelativeLayout>
```

MainActivity.java

```
package com.example.question11;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.ImageView;

public class MainActivity extends AppCompatActivity {

    private ImageView imageView;

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

        imageView = findViewById(R.id.imageView);

        imageView.setImageResource(R.drawable.img);
    }
}
```

O/P


11:15

12. Write a program to create toggle button

Activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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"
    tools:context=".MainActivity">

    <ToggleButton
        android:id="@+id/toggleButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Toggle"
        android:layout_centerInParent="true"/>

    <TextView
        android:id="@+id/resultTextView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text=""
        android:textSize="18sp"
        android:layout_below="@+id/toggleButton"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="16dp"/>
</RelativeLayout>
```

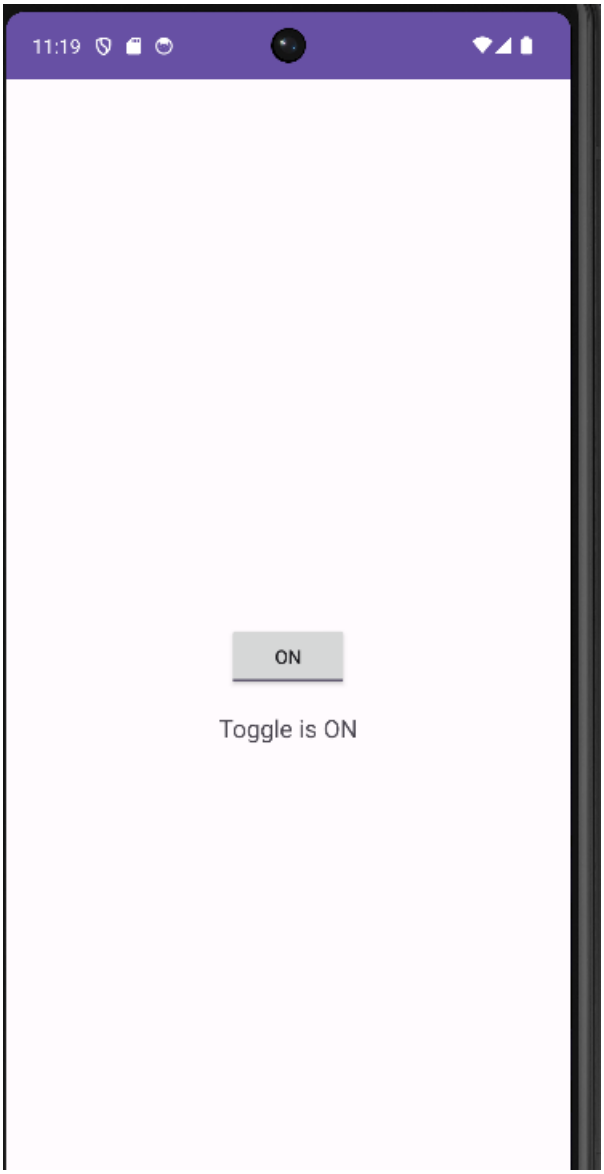
MainActivity.java

```
package com.example.question12;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.CompoundButton;
import android.widget.TextView;
import android.widget.ToggleButton;

public class MainActivity extends AppCompatActivity {

    private ToggleButton toggleButton;
    private TextView resultTextView;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
```

```
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        toggleButton = findViewById(R.id.toggleButton);
        resultTextView = findViewById(R.id.resultTextView);

        toggleButton.setOnCheckedChangeListener(new CompoundButton.OnCheckedChangeListener() {
            @Override
            public void onCheckedChanged(CompoundButton buttonView, boolean isChecked) {

                if (isChecked) {
                    resultTextView.setText("Toggle is ON");
                } else {
                    resultTextView.setText("Toggle is OFF");
                }
            }
        });
    }
}
```

O/P


11:19
OFF
Toggle is OFF


11:19
ON
Toggle is ON

13. Write a program to create audio player

Activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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"
    tools:context=".MainActivity">


    <Button
        android:id="@+id/playButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Play"
        android:layout_marginTop="16dp"
        android:layout_alignParentStart="true"
        android:layout_marginStart="16dp"/>

    <Button
        android:id="@+id/pauseButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Pause"
        android:layout_marginTop="16dp"
        android:layout_centerHorizontal="true"/>

    <Button
        android:id="@+id/stopButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Stop"
        android:layout_marginTop="16dp"
        android:layout_alignParentEnd="true"
        android:layout_marginEnd="16dp"/>

</RelativeLayout>
```

MainActivity.java

```
package com.example.question13;

import androidx.appcompat.app.AppCompatActivity;
```

```
import android.media.MediaPlayer;
import android.os.Bundle;
import android.os.Handler;
import android.view.View;
import android.widget.*;

public class MainActivity extends AppCompatActivity {

    private MediaPlayer mediaPlayer;

    private Button playButton, pauseButton, stopButton;

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

        mediaPlayer = MediaPlayer.create(this, R.raw.sample_audio);
        playButton = findViewById(R.id.playButton);
        pauseButton = findViewById(R.id.pauseButton);
        stopButton = findViewById(R.id.stopButton);

        playButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                mediaPlayer.start();
            }
        });

        pauseButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                mediaPlayer.pause();
            }
        });

        stopButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                mediaPlayer.seekTo(0);
                mediaPlayer.pause();
            }
        });

    }
}
```

O/P:

14. Write a program to create video player.

Activity_main.xml

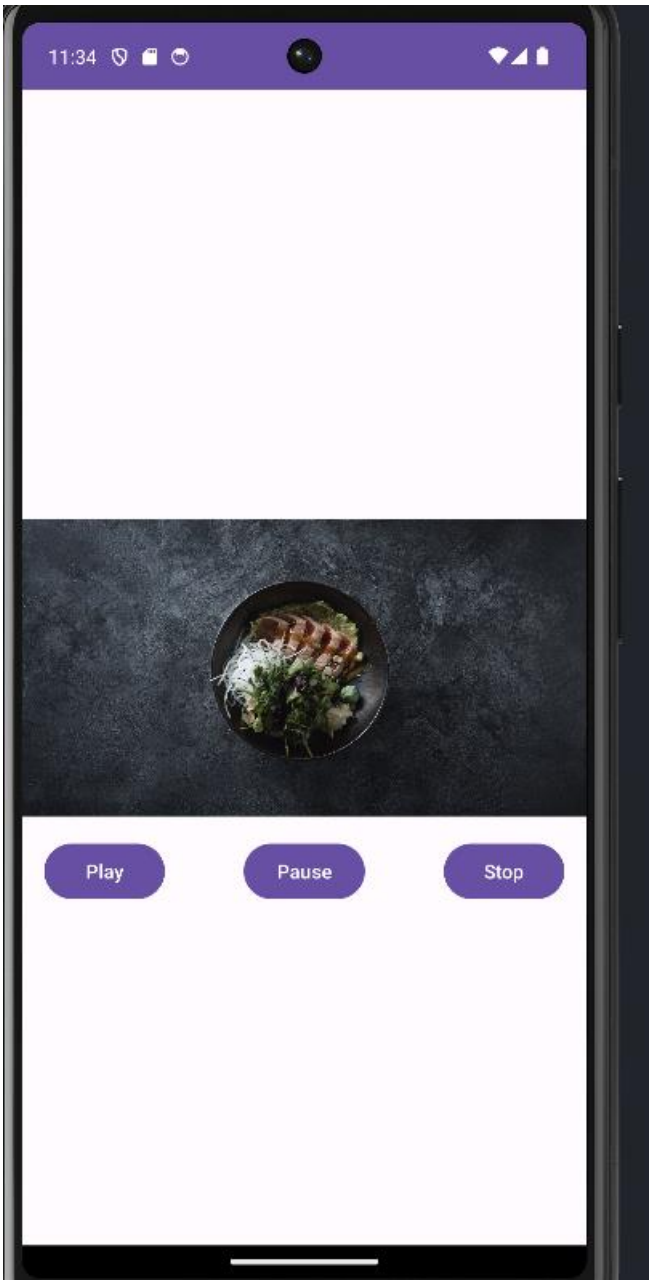
```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <VideoView
        android:id="@+id/videoView"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_centerInParent="true" />

    <Button
        android:id="@+id/playButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Play"/>

    <Button
        android:id="@+id/pauseButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Pause"
        android:layout_below="@id/videoView"
        android:layout_marginTop="16dp"
        android:layout_centerHorizontal="true"/>

    <Button
        android:id="@+id/stopButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Stop"
        android:layout_below="@id/videoView"/>
</RelativeLayout>
```

MainActivity.java

```
package com.example.question14;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
```

```
import android.view.View;
import android.widget.Button;
import android.widget.MediaController;
import android.widget.VideoView;

public class MainActivity extends AppCompatActivity {

    private VideoView videoView;
    private Button playButton, pauseButton, stopButton;

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

        videoView = findViewById(R.id.videoView);
        playButton = findViewById(R.id.playButton);
        pauseButton = findViewById(R.id.pauseButton);
        stopButton = findViewById(R.id.stopButton);

        String videoPath = "android.resource://" + getPackageName() + "/" + R.raw.sample_video;
        videoView.setVideoPath(videoPath);

        MediaController mediaController = new MediaController(this);
        mediaController.setAnchorView(videoView);
        videoView.setMediaController(mediaController);

        playButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                videoView.start();
            }
        });

        pauseButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                videoView.pause();
            }
        });

        stopButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                videoView.seekTo(0);
                videoView.pause();
```

```
            }
        });
    }
}
```


11:34
Play
Pause
Stop

15. Write an android code to make a phone call using intent

Activity_main.xml

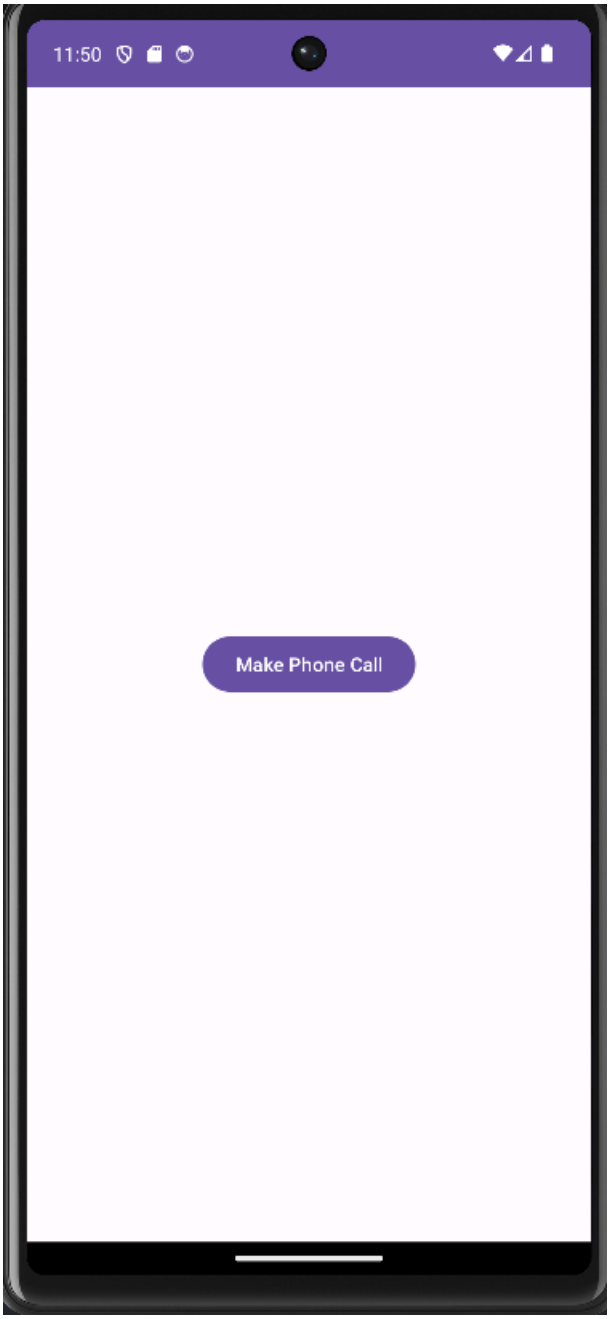
```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/callButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Make Phone Call"
        android:layout_centerInParent="true" />

</RelativeLayout>
```

MainActivity.java

```
package com.example.question15;

import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

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

        Button callButton = findViewById(R.id.callButton);

        callButton.setOnClickListener(new View.OnClickListener() {
```

```
        @Override
        public void onClick(View v) {
            makePhoneCall();
        }
    });
  }
  private void makePhoneCall() {
    String phoneNumber = "tel:" + "9922881122";

    Intent callIntent = new Intent(Intent.ACTION_DIAL);
    callIntent.setData(Uri.parse(phoneNumber));

    if (callIntent.resolveActivity(getPackageManager()) != null) {
      startActivity(callIntent);
    }
  }
}
```

O/P


11:50
Make Phone Call

16. Write a program to create a fragment that has its own UI and enabled your activities to communicate with fragments

Activity_main.xml

```
<RelativeLayout 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"
   tools:context=".MainActivity">

   <FrameLayout
      android:id="@+id/fragmentContainer"
      android:layout_width="match_parent"
      android:layout_height="match_parent"
      android:layout_above="@+id/buttonsContainer" />

   <LinearLayout
      android:id="@+id/buttonsContainer"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:layout_alignParentBottom="true"
      android:orientation="horizontal">

      <Button
         android:id="@+id/switchToFragmentButton1"
         android:layout_width="0dp"
         android:layout_height="wrap_content"
         android:layout_weight="1"
         android:text="Switch to Fragment 1" />

      <Button
         android:id="@+id/switchToFragmentButton2"
         android:layout_width="0dp"
         android:layout_height="wrap_content"
         android:layout_weight="1"
         android:text="Switch toFragment 2" />
   </LinearLayout>

</RelativeLayout>
```

Main_Activity.java

```
package com.example.question16;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
```

```
import androidx.appcompat.app.AppCompatActivity;
import androidx.fragment.app.Fragment;
import androidx.fragment.app.FragmentTransaction;

public class MainActivity extends AppCompatActivity {

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

        Button switchToFragment1Button = findViewById(R.id.switchToFragmentButton1);
        Button switchToFragment2Button = findViewById(R.id.switchToFragmentButton2);

        switchToFragment1Button.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                loadFragment(new Fragment1());
            }
        });

        switchToFragment2Button.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                loadFragment(new Fragment2());
            }
        });
    }
    private void loadFragment(Fragment fragment) {
        FragmentTransaction transaction = getSupportFragmentManager().beginTransaction();
        transaction.replace(R.id.fragmentContainer, fragment);
        transaction.commit();
    }
}
```

Fragment1.java

```
package com.example.question16;

import android.os.Bundle;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;

import androidx.fragment.app.Fragment;
```

```
public class Fragment1 extends Fragment {
   public Fragment1(){}
   @Override
   public View onCreateView(LayoutInflater inflater, ViewGroup container,
                        Bundle savedInstanceState) {
      return inflater.inflate(R.layout.fragment_1, container, false);
   }
}
```

Fragment_1.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">

   <TextView
      android:id="@+id/anotherFragmentTextView"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:backgroundTint="#00FFA6"
      android:text="Fragment 1" />

</LinearLayout>
```

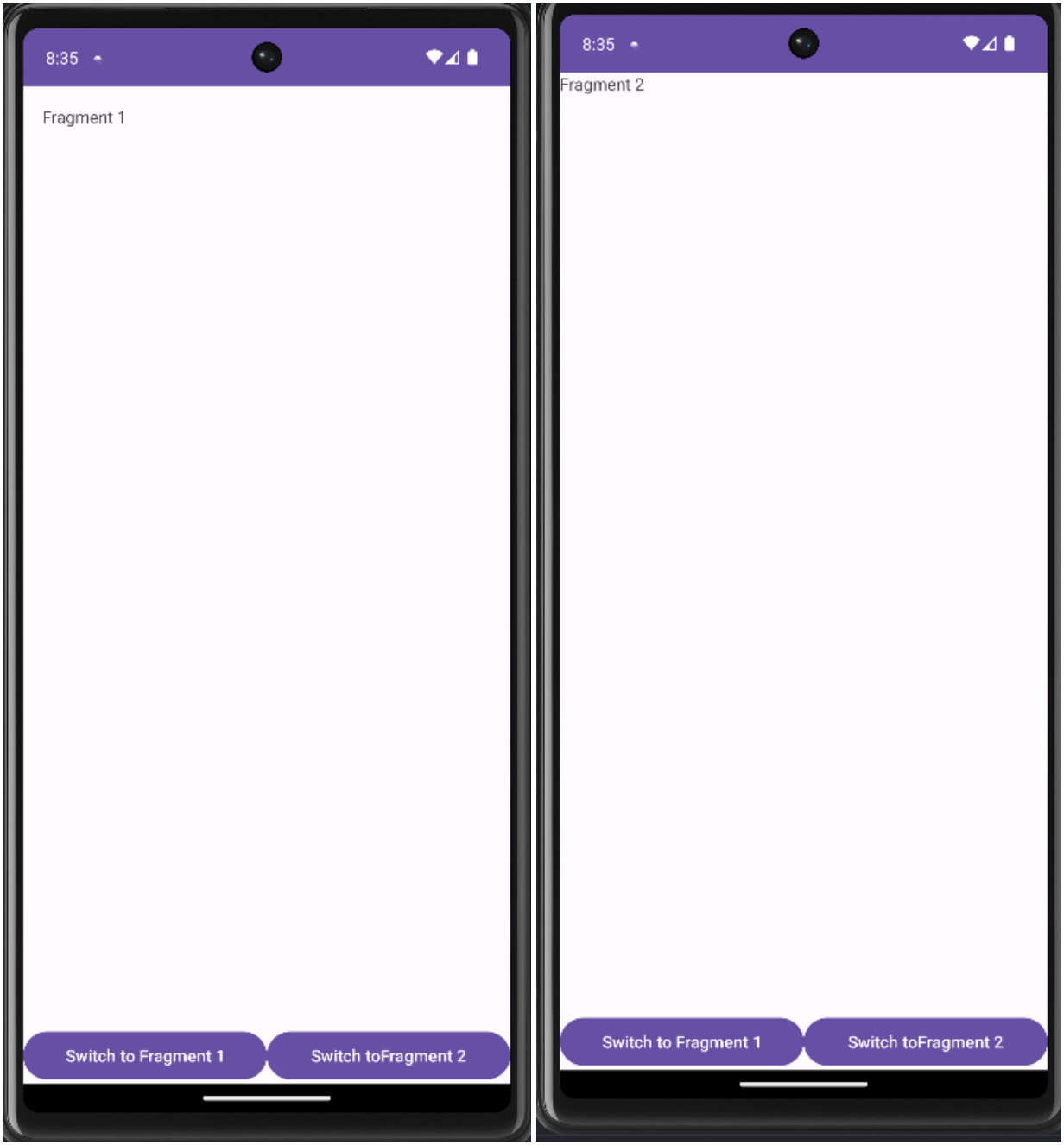
Fragment_2.xml

```
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout 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:backgroundTint="#AE19FF"
   tools:context=".Fragment2">

   <!-- TODO: Update blank fragment layout -->
   <TextView
      android:layout_width="match_parent"
      android:layout_height="match_parent"
      android:text="Fragment 2" />

</FrameLayout>
```

Fragment2.java

```
package com.example.question16;
```

```
import android.os.Bundle;

import androidx.fragment.app.Fragment;

import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
public class Fragment2 extends Fragment {
public Fragment2() {}


   @Override
   public View onCreateView(LayoutInflater inflater, ViewGroup container,
                        Bundle savedInstanceState) {

      return inflater.inflate(R.layout.fragment_2, container, false);
   }
```


8:35
Fragment 1
Switch to Fragment 1
Switch toFragment 2
8:35
Fragment 2
Switch to Fragment 1
Switch toFragment 2

17. Design an android application for login activity. Write android code to check login credentials with user name = “MCA” and Password= “android”. Display appropriate toast message to user.

Activity_main.xml

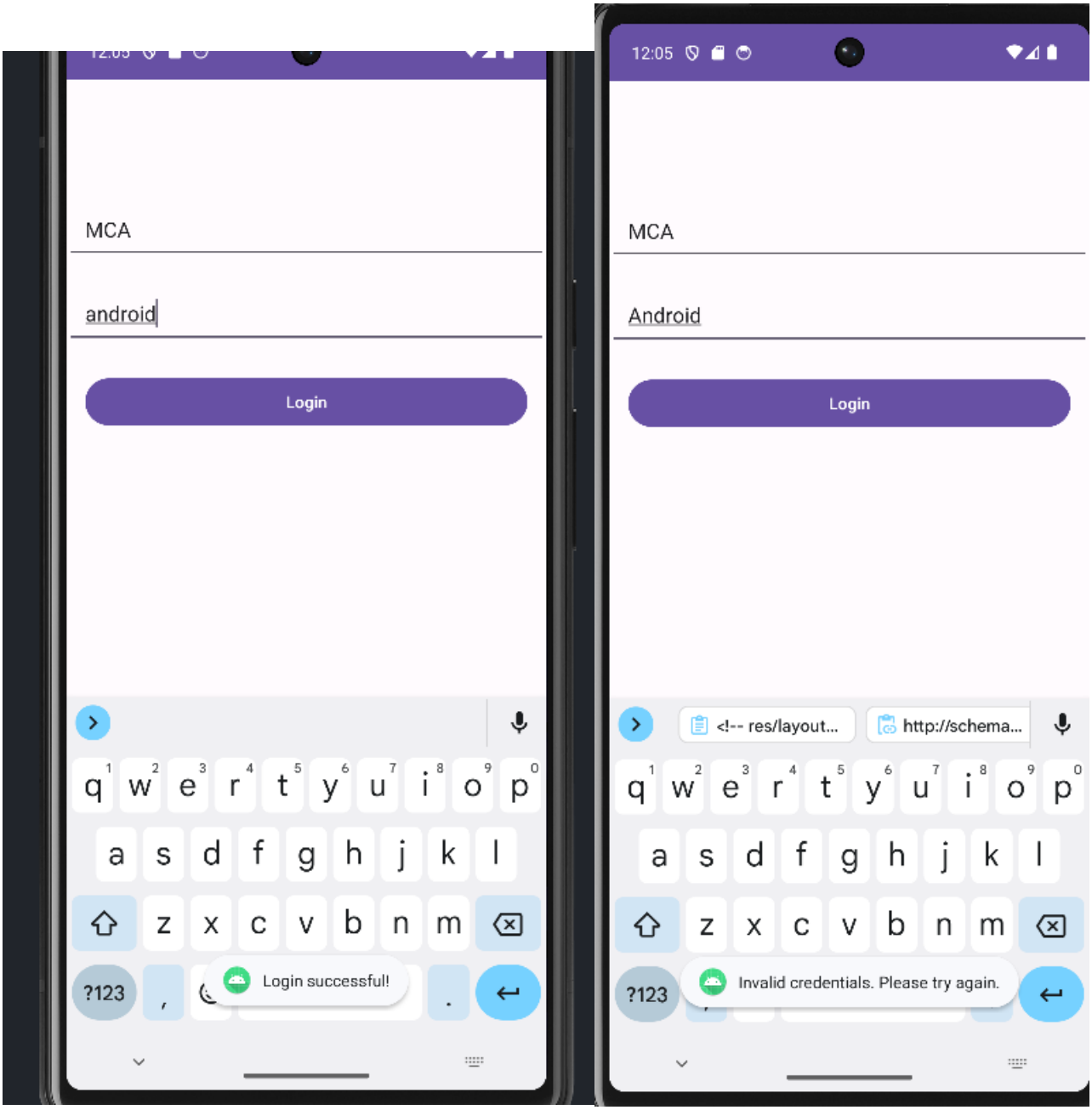
```
<!-- res/layout/activity_login.xml -->
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
   xmlns:tools="http://schemas.android.com/tools"
   android:layout_width="match_parent"
   android:layout_height="match_parent"
   tools:context=".MainActivity">

   <EditText
      android:id="@+id/editTextUsername"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:hint="Username"
      android:layout_marginTop="100dp"
      android:padding="16dp"/>

   <EditText
      android:id="@+id/editTextPassword"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:hint="Password"
      android:layout_below="@id/editTextUsername"
      android:layout_marginTop="16dp"
      android:padding="16dp"/>

   <Button
      android:id="@+id/buttonLogin"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:text="Login"
      android:layout_below="@id/editTextPassword"
      android:layout_marginTop="24dp"
      android:layout_marginHorizontal="16dp"/>
</RelativeLayout>
```

MainActivity.java

```
package com.example.question16;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
```

```
import android.widget.EditText;
import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    private EditText usernameEditText, passwordEditText;
    private Button loginButton;

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

        usernameEditText = findViewById(R.id.editTextUsername);
        passwordEditText = findViewById(R.id.editTextPassword);
        loginButton = findViewById(R.id.buttonLogin);

        loginButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                checkLogin();
            }
        });
    }

    private void checkLogin() {
        String enteredUsername = usernameEditText.getText().toString();
        String enteredPassword = passwordEditText.getText().toString();

        if (enteredUsername.equals("MCA") && enteredPassword.equals("android")) {
            Toast.makeText(this, "Login successful!", Toast.LENGTH_SHORT).show();
        } else {
            Toast.makeText(this, "Invalid credentials. Please try again.", Toast.LENGTH_SHORT).show();
        }
    }
}
```

O/P


MCA
android
Login
Login successful!
MCA
Android
Login
Invalid credentials. Please try again.

18. Demonstrate Array Adapter using List View to display list of subjects.

Activity_main.xml

```
<RelativeLayout 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"
    tools:context=".MainActivity">

    <ListView
        android:id="@+id/listViewSubjects"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:padding="16dp"/>
</RelativeLayout>
```

List_item_subject.xml

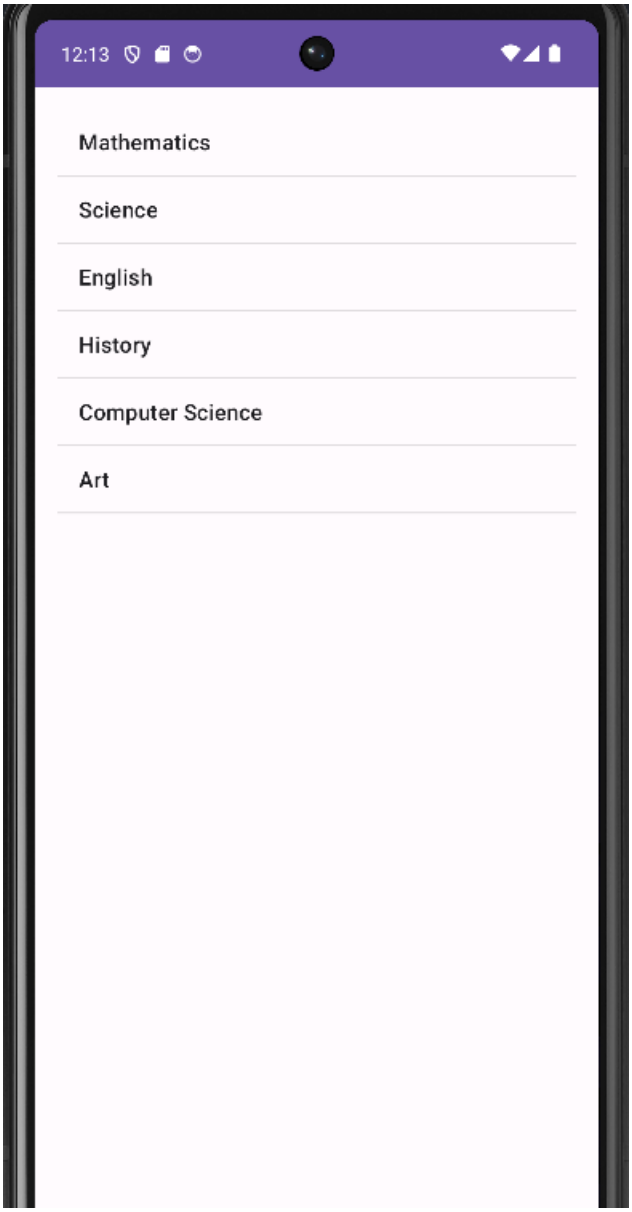
```
<!-- res/layout/list_item_subject.xml -->
<TextView xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@android:id/text1"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:textAppearance="?android:attr/textAppearanceListItemSmall"
    android:gravity="center_vertical"
    android:paddingStart="?android:attr/listPreferredItemPaddingStart"
    android:paddingEnd="?android:attr/listPreferredItemPaddingEnd"
    android:minHeight="?android:attr/listPreferredItemHeightSmall"/>
```

MainActivity.java

```
package com.example.question18;
import android.os.Bundle;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import androidx.appcompat.app.AppCompatActivity;
import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {

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

```
        ListView listViewSubjects = findViewById(R.id.listViewSubjects);


        ArrayList<String> subjectsList = new ArrayList<>();
        subjectsList.add("Mathematics");
        subjectsList.add("Science");
        subjectsList.add("English");
        subjectsList.add("History");
        subjectsList.add("Computer Science");
        subjectsList.add("Art");

        ArrayAdapter<String> arrayAdapter = new ArrayAdapter<>(
                this,
                android.R.layout.simple_list_item_1,
                subjectsList
        );

        listViewSubjects.setAdapter(arrayAdapter);
    }
}
```

O/P :


12:13
Mathematics
Science
English
History
Computer Science
Art

19. Write a program to demonstrate POP up Menu in android.

Activity_main.xml

```
<!-- res/layout/activity_main.xml -->
<RelativeLayout 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"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/btnShowPopup"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Show Popup Menu"
        android:layout_centerInParent="true"/>
</RelativeLayout>
```

Popup_menu.xml

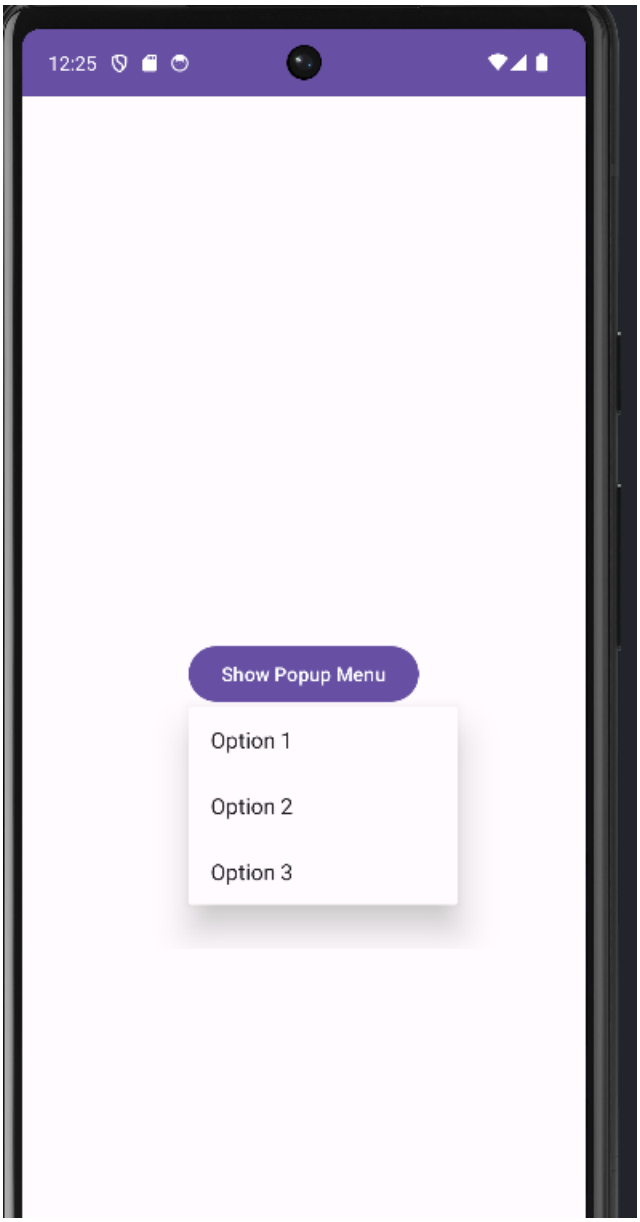
```
<menu xmlns:android="http://schemas.android.com/apk/res/android">
    <item
        android:id="@+id/menu_item1"
        android:title="Option 1" />
    <item
        android:id="@+id/menu_item2"
        android:title="Option 2" />
    <item
        android:id="@+id/menu_item3"
        android:title="Option 3" />
</menu>
```

MainActivity.java

```
package com.example.question19;

import android.os.Bundle;
import android.view.MenuItem;
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);

        Button btnShowPopup = findViewById(R.id.btnShowPopup);

        btnShowPopup.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                PopupMenu popupMenu = new PopupMenu(MainActivity.this, btnShowPopup);
                popupMenu.getMenuInflater().inflate(R.menu.popup_menu, popupMenu.getMenu());


                popupMenu.setOnMenuItemClickListener(new PopupMenu.OnMenuItemClickListener() {
                    @Override
                    public boolean onMenuItemClick(MenuItem menuItem) {
                        int itemId = menuItem.getItemId();
                            if (itemId == R.id.menu_item1) {
                                Toast.makeText(getApplicationContext(), "Option 1 selected",
Toast.LENGTH_SHORT).show();
                                return true;
                            } else if (itemId == R.id.menu_item2) {
                                Toast.makeText(getApplicationContext(), "Option 2 selected",
Toast.LENGTH_SHORT).show();
                                return true;
                            } else if (itemId == R.id.menu_item3) {
                                Toast.makeText(getApplicationContext(), "Option 3 selected",
Toast.LENGTH_SHORT).show();
                                return true;
                            }
                            else{
                                return false;
                            }
                    }
                });
                popupMenu.show();
            }
        });
    }
}
```

O/P:



20. Write a program to demonstrate Context Menu in android.

Activity_main.xml

```
<!-- res/layout/activity_main.xml -->
<RelativeLayout 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"
   tools:context=".MainActivity">

   <TextView
      android:id="@+id/textView"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Long-press to show context menu"
      android:layout_centerInParent="true"
      android:textSize="18sp"/>
</RelativeLayout>
```

Context_menu.xml

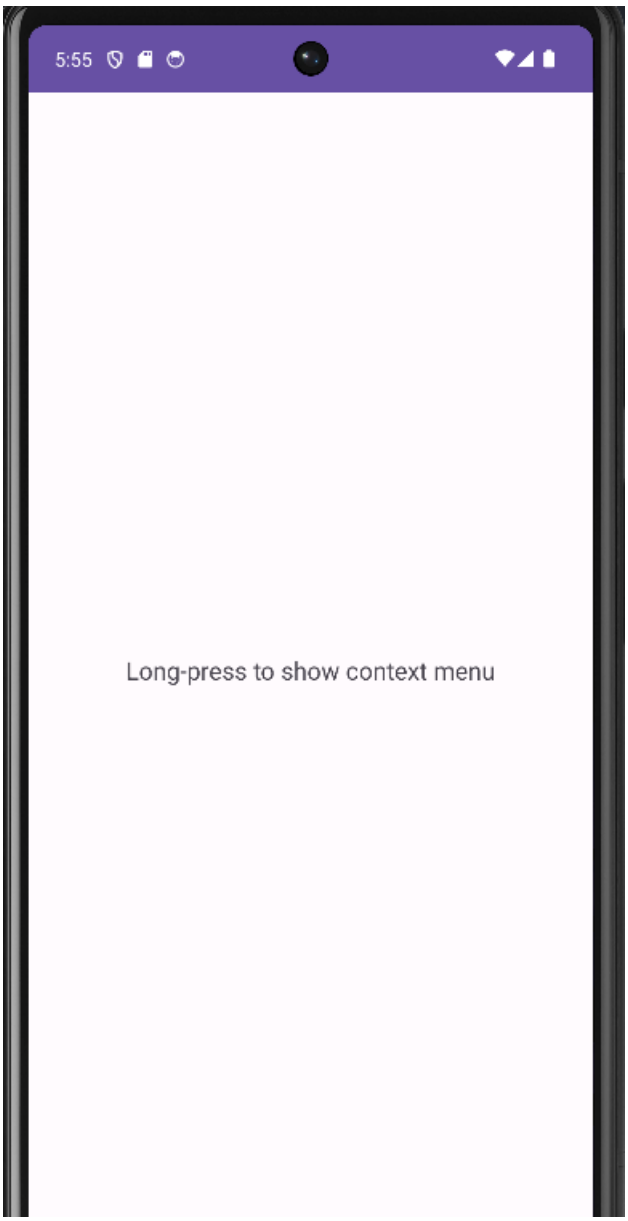
```
<!-- res/menu/context_menu.xml -->
<menu xmlns:android="http://schemas.android.com/apk/res/android">
   <item
      android:id="@+id/menu_item1"
      android:title="Option 1" />
   <item
      android:id="@+id/menu_item2"
      android:title="Option 2" />
   <item
      android:id="@+id/menu_item3"
      android:title="Option 3" />
</menu>
```

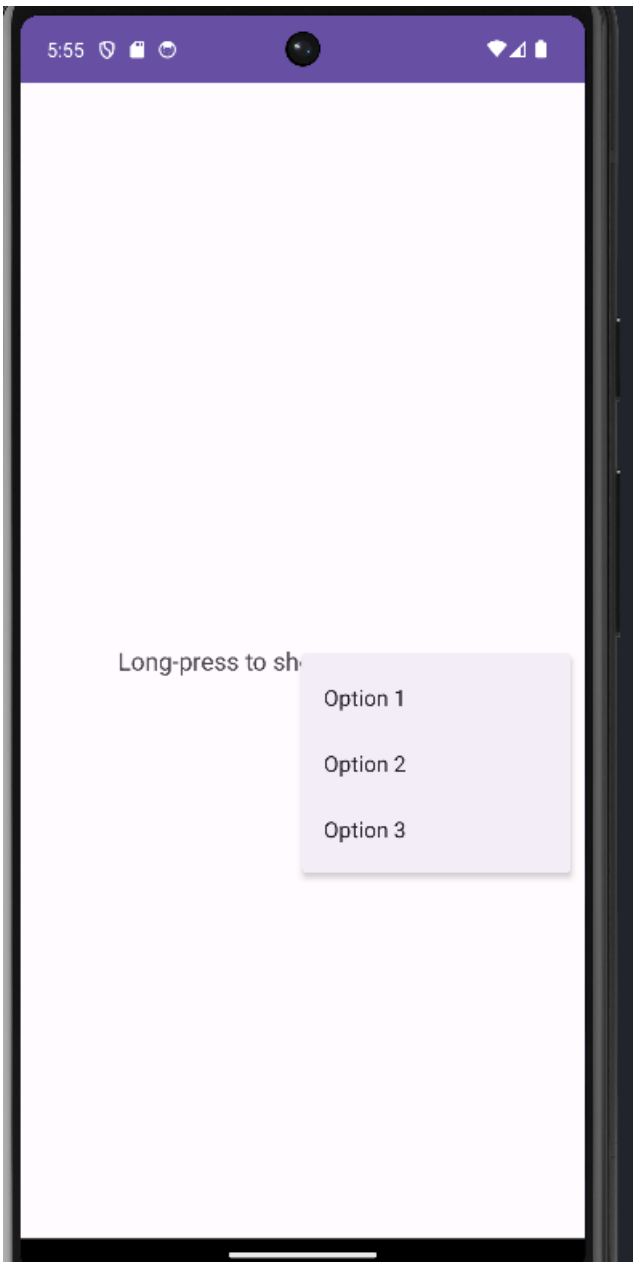
MainActivity.java

```
import android.os.Bundle;
import android.view.ContextMenu;
import android.view.MenuItem;
import android.view.View;
```

```
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    private TextView textView;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        textView = findViewById(R.id.textView);
        registerForContextMenu(textView);
    }

    @Override
    public void onCreateContextMenu(ContextMenu menu, View v, ContextMenu.ContextMenuInfo
menuInfo) {
        super.onCreateContextMenu(menu, v, menuInfo);

        // Inflate the context menu from the XML resource
        getMenuInflater().inflate(R.menu.context_menu, menu);
    }

    @Override
    public boolean onContextItemSelected(MenuItem item) {
        // Handle context menu item clicks
        switch (item.getItemId()) {
            case R.id.menu_item1:
                textView.setText("Option 1 selected");
                return true;
            case R.id.menu_item2:
                textView.setText("Option 2 selected");
                return true;
            case R.id.menu_item3:
                textView.setText("Option 3 selected");
                return true;
            default:
                return super.onContextItemSelected(item);
        }
    }
}
```

O/P:


5:55
Long-press to show context menu


5:55
Long-press to sh
Option 1
Option 2
Option 3

21. Write an application to demonstrate Alert Dialog Box in android.

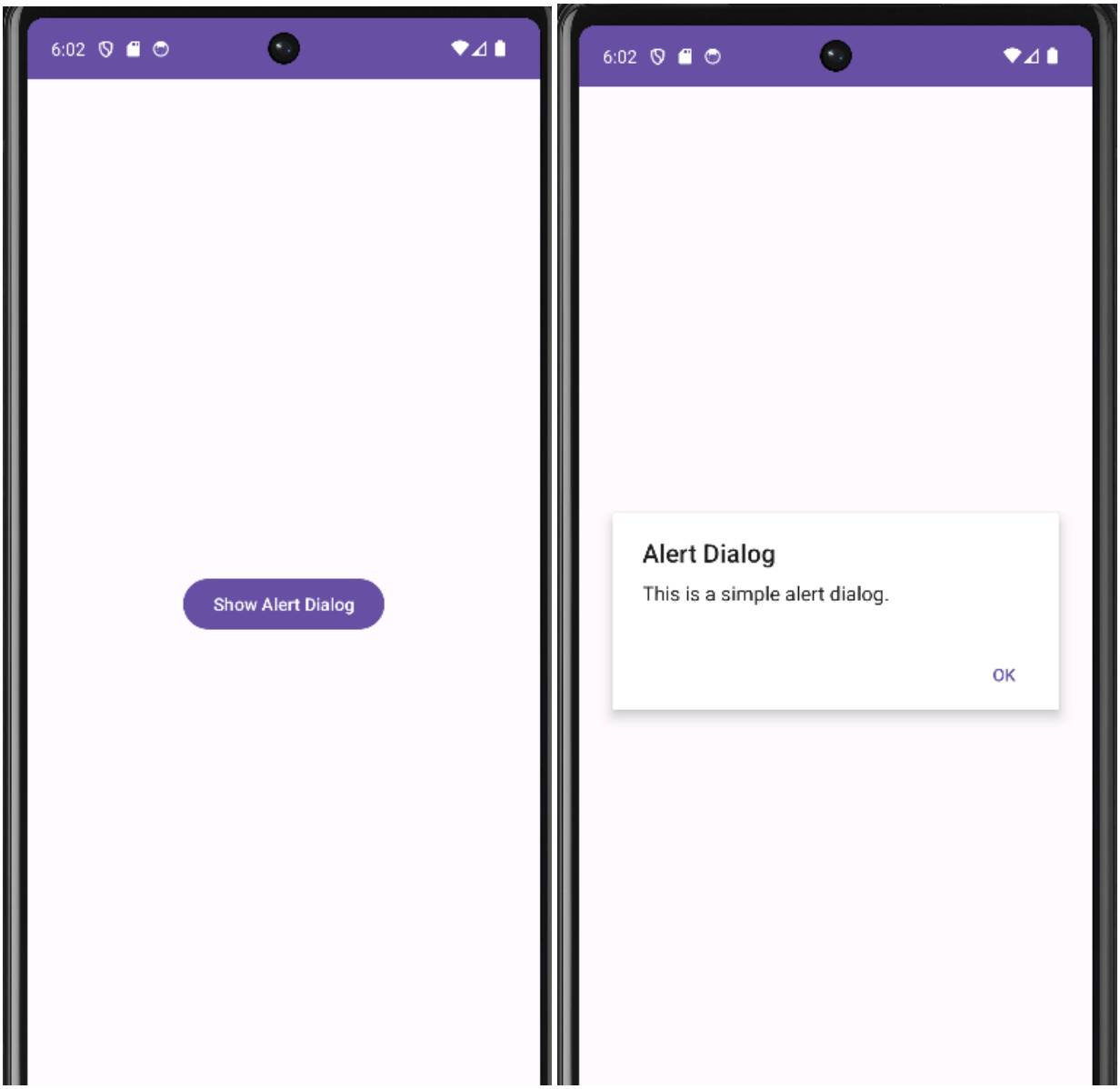
Activity_main.xml

```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
   xmlns:tools="http://schemas.android.com/tools"
   tools:context=".MainActivity">

   <Button
      android:id="@+id/btnShowDialog"
      android:text="Show Alert Dialog"/>
</RelativeLayout>
```

MainActivity.java

```
package com.example.question21;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);
      Button btnShowDialog = findViewById(R.id.btnShowDialog);
      btnShowDialog.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View view) {
            AlertDialog.Builder builder = new AlertDialog.Builder(MainActivity.this);
            builder.setTitle("Alert Dialog")
                  .setMessage("This is a simple alert dialog.")
                  .setPositiveButton("OK", null);
            AlertDialog alertDialog = builder.create();
            alertDialog.show();
         }
      });
   }
}
```

O/P


6:02
Show Alert Dialog
6:02
Alert Dialog
This is a simple alert dialog.
OK

22. Write an application in android to generate Notification.

Activity_main.xml

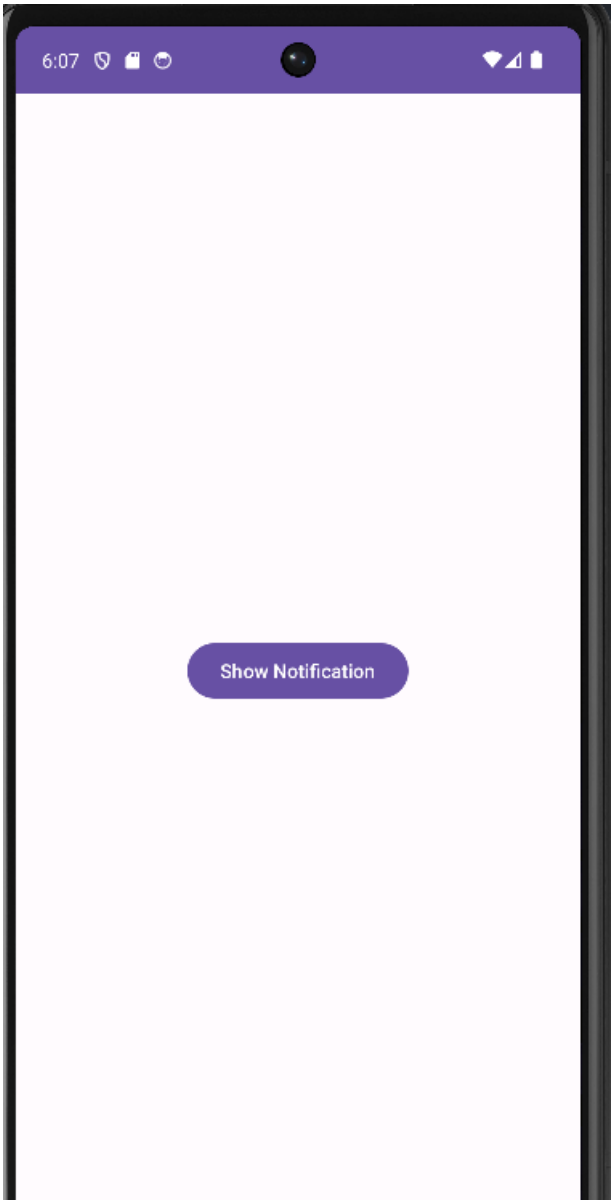
```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
   xmlns:tools="http://schemas.android.com/tools"
   android:layout_width="match_parent"
   android:layout_height="match_parent"
   tools:context=".MainActivity">

   <Button
      android:id="@+id/btnShowNotification"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Show Notification"
      android:layout_centerInParent="true"/>
</RelativeLayout>
```

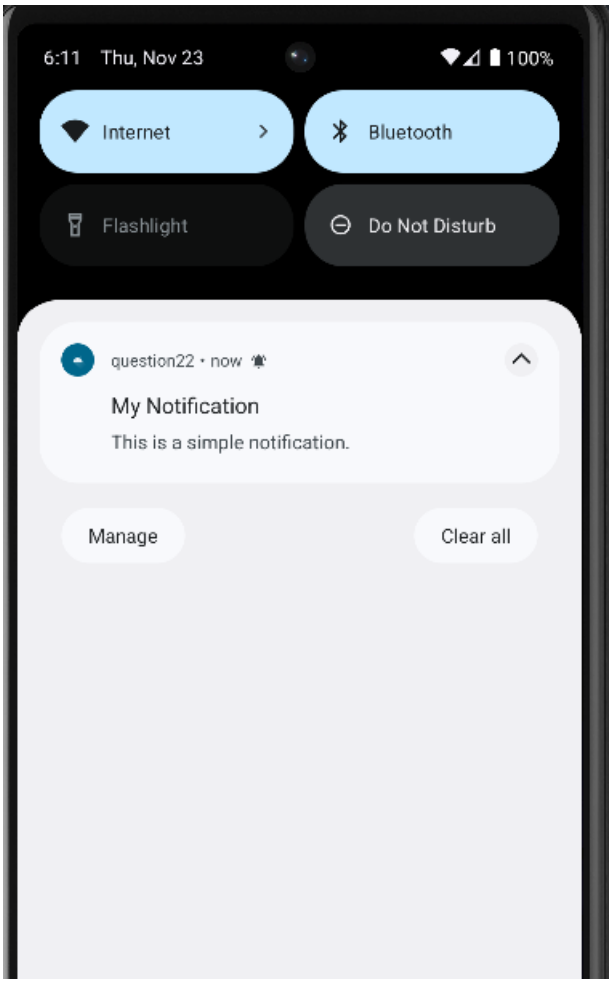
MainActivity.java

```
package com.example.question22;

import android.app.Notification;
import android.app.NotificationChannel;
import android.app.NotificationManager;
import android.content.Context;
import android.os.Build;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.NotificationCompat;

public class MainActivity extends AppCompatActivity {

   private static final String CHANNEL_ID = "MyChannel";

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

      Button btnShowNotification = findViewById(R.id.btnShowNotification);
```

```
        btnShowNotification.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {

                showNotification();
            }
        });

        createNotificationChannel();
    }



    private void showNotification() {

        NotificationCompat.Builder builder = new NotificationCompat.Builder(this, CHANNEL_ID)
                .setSmallIcon(R.drawable.ic_launcher_foreground)
                .setContentTitle("My Notification")
                .setContentText("This is a simple notification.")
                .setPriority(NotificationCompat.PRIORITY_DEFAULT);


        Notification notification = builder.build();
        NotificationManager notificationManager = getSystemService(NotificationManager.class);
        notificationManager.notify(1, notification);
    }

    private void createNotificationChannel() {
        if (Build.VERSION.SDK_INT >= Build.VERSION_CODES.O) {
            NotificationChannel channel = new NotificationChannel(
                    CHANNEL_ID,
                    "My Channel",
                    NotificationManager.IMPORTANCE_DEFAULT
            );
            NotificationManager notificationManager = getSystemService(NotificationManager.class);
            notificationManager.createNotificationChannel(channel);
        }
    }
}
```

O/P


6:07
Show Notification


6:11 Thu, Nov 23
100%
Internet
Bluetooth
Flashlight
Do Not Disturb
question22 • now
My Notification
This is a simple notification.
Manage
Clear all

23. Write a program using spinner to display names of 12 months.

Activity_main.xml

```
<!-- res/layout/activity_main.xml -->
<RelativeLayout 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"
    tools:context=".MainActivity">

    <Spinner
        android:id="@+id/spinnerMonths"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerInParent="true"/>
</RelativeLayout>
```

MainActivity.java

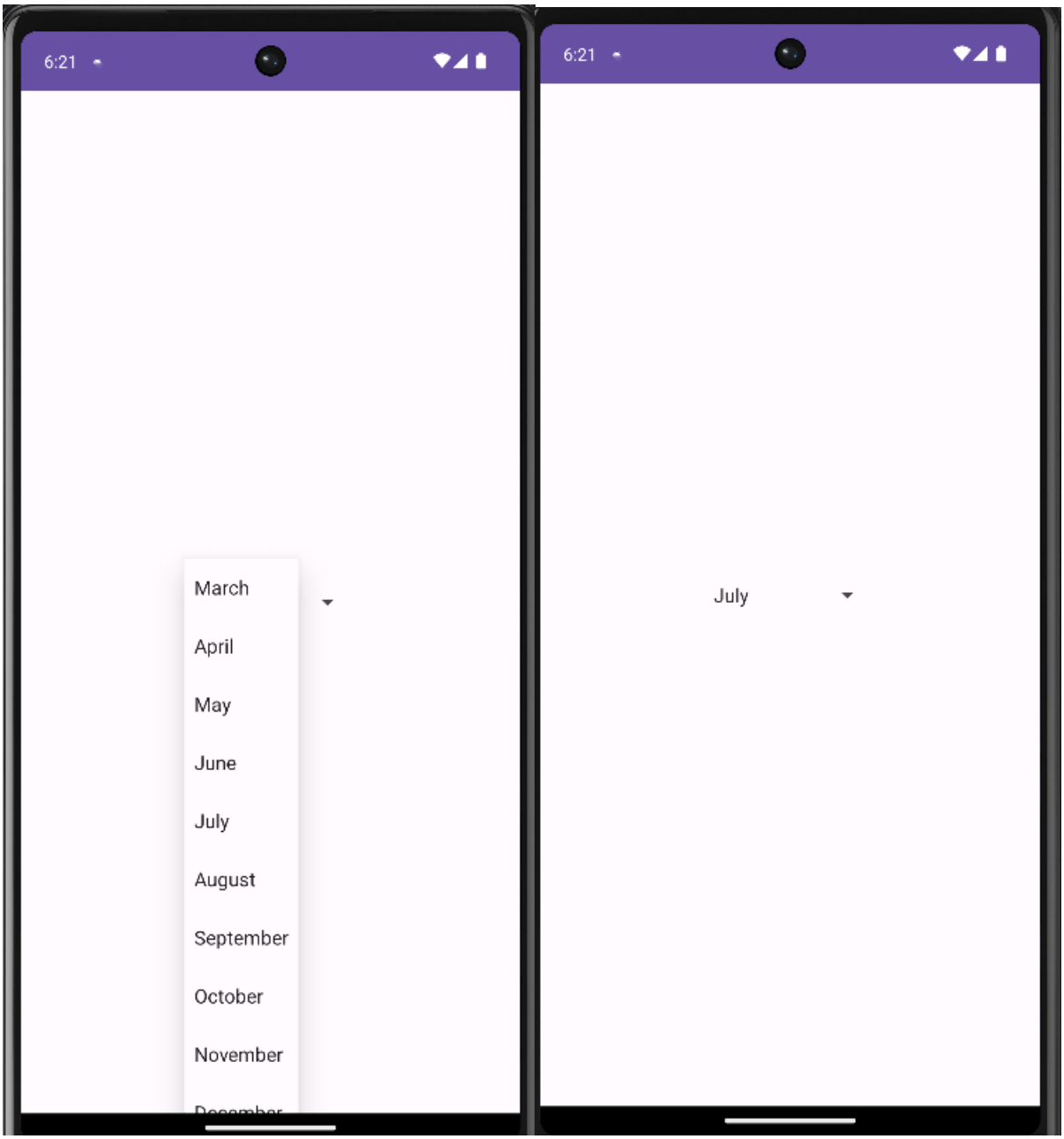
```
package com.example.question23;

import android.os.Bundle;
import android.widget.ArrayAdapter;
import android.widget.Spinner;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Spinner spinnerMonths = findViewById(R.id.spinnerMonths);
        ArrayAdapter<CharSequence> adapter = ArrayAdapter.createFromResource(
                this,
                R.array.months_array,
                android.R.layout.simple_spinner_item
        );
        adapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
        spinnerMonths.setAdapter(adapter);
    }}
```

Strings.xml

```
<resources>
    <string-array name="months_array">
        <item>January</item>
        <item>February</item>
        <item>March</item>
        <item>April</item>
        <item>May</item>
```

```
        <item>June</item>
        <item>July</item>
        <item>August</item>
        <item>September</item>
        <item>October</item>
        <item>November</item>
        <item>December</item>
    </string-array>
</resources>
```

O/P:



24. Write a program to change the colour of a text.

Activity_main.xml

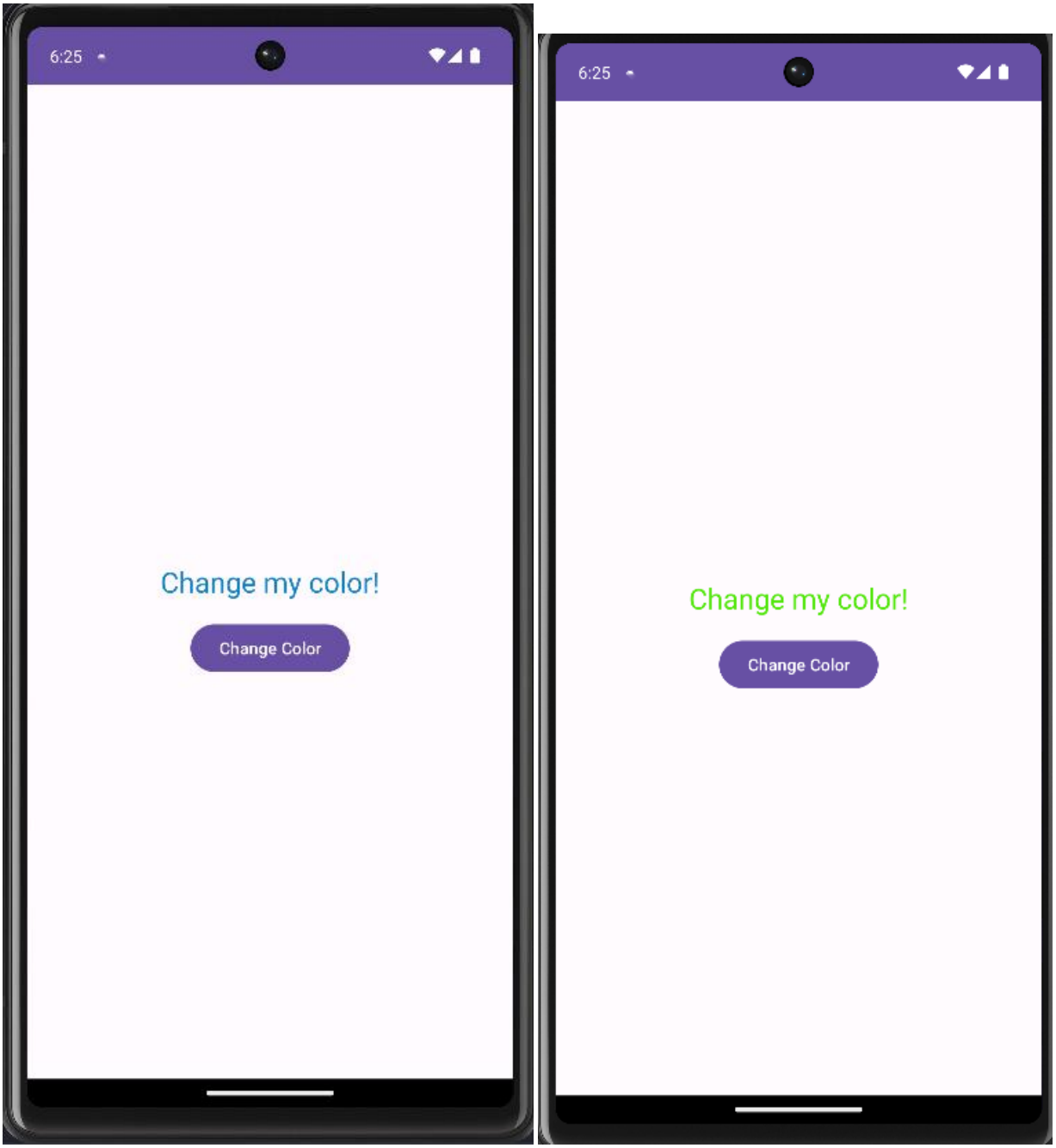
```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/textViewColor"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Change my color!"
        android:textSize="24sp"
        android:layout_centerInParent="true"/>

    <Button
        android:id="@+id/btnChangeColor"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Change Color"
        android:layout_below="@id/textViewColor"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="16dp"/>


</RelativeLayout>
```

MainActivity.java

```
package com.example.question24;

import android.graphics.Color;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    private TextView textViewColor;
```

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

        textViewColor = findViewById(R.id.textViewColor);
        Button btnChangeColor = findViewById(R.id.btnChangeColor);

        btnChangeColor.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                int randomColor = Color.rgb(
                        (int) (Math.random() * 255),
                        (int) (Math.random() * 255),
                        (int) (Math.random() * 255)
                );
                textViewColor.setTextColor(randomColor);
            }
        });
    }
}
```

O/P:


6:25
Change my color!
Change Color
6:25
Change my color!
Change Color

25. Demonstrate web view to display web page in android application.

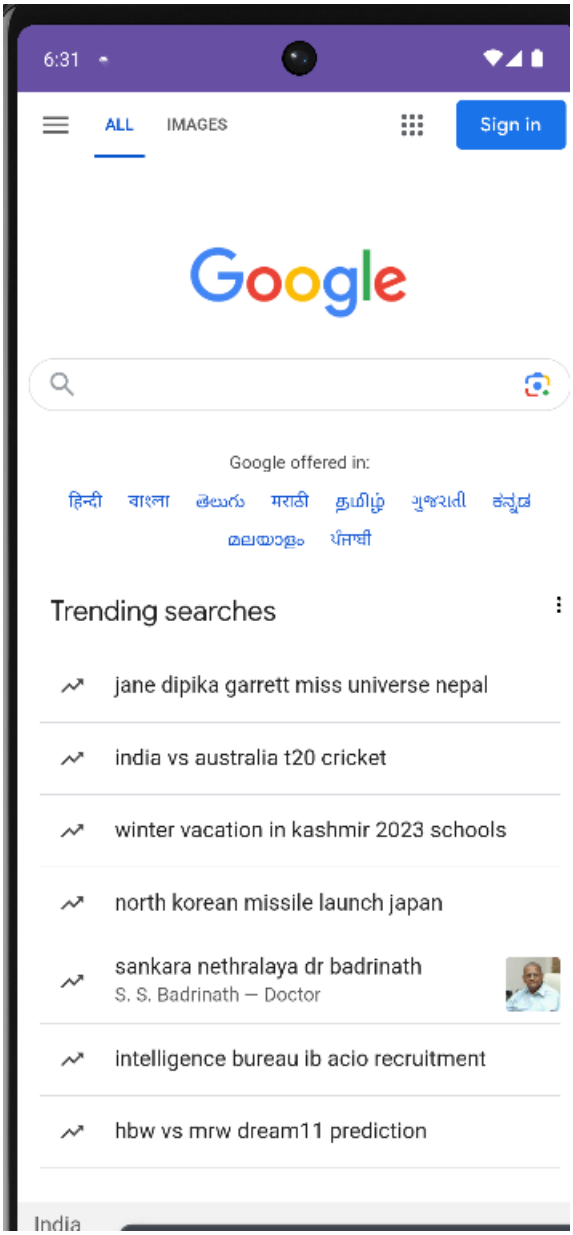
Activity_main.xml

```
<RelativeLayout 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"
    tools:context=".MainActivity">

    <WebView
        android:id="@+id/webView"
        android:layout_width="match_parent"
        android:layout_height="match_parent"/>
</RelativeLayout>
```

MainActivity.java

```
package com.example.question25;

import android.os.Bundle;
import android.webkit.WebSettings;
import android.webkit.WebView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    private WebView webView;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        webView = findViewById(R.id.webView);
        WebSettings webSettings = webView.getSettings();
        webSettings.setJavaScriptEnabled(true);
        webView.loadUrl("https://www.youtube.com");
    }
}
```

O/P:


6:31
ALL
IMAGES
Sign in
Google
Google offered in:
हिन्दी বাংলা తెలుగు मराठी தமிழ் ગુજરાતી ಕನ್ನಡ
മലയാളം ਪੰਜਾਬੀ
Trending searches
jane dipika garrett miss universe nepal
india vs australia t20 cricket
winter vacation in kashmir 2023 schools
north korean missile launch japan
sankara nethralaya dr badrinath
S. S. Badrinath — Doctor
intelligence bureau ib acio recruitment
hbw vs mrw dream11 prediction
India

26. Write an android application using SQLite to create table and perform crud operation. Ex- employee recorde , field ID, Name ,Mob no , Designation. Perform add, update, read and delete operations.

Activity_main.xml

```
<RelativeLayout 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"
   tools:context=".MainActivity">

   <EditText
      android:id="@+id/editTextID"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:hint="Employee ID"/>

   <EditText
      android:id="@+id/editTextName"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:layout_below="@id/editTextID"
      android:layout_marginTop="16dp"
      android:hint="Name"/>

   <EditText
      android:id="@+id/editTextMobile"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:layout_below="@id/editTextName"
      android:layout_marginTop="16dp"
      android:inputType="phone"
      android:hint="Mobile Number"/>

   <EditText
      android:id="@+id/editTextDesignation"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:layout_below="@id/editTextMobile"
      android:layout_marginTop="16dp"
      android:hint="Designation"/>

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

```
        android:layout_below="@id/editTextDesignation"
        android:layout_marginTop="16dp"
        android:text="Add"/>

    <Button
        android:id="@+id/btnRead"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@id/btnAdd"
        android:layout_marginTop="16dp"
        android:text="Read"/>

    <Button
        android:id="@+id/btnUpdate"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@id/btnRead"
        android:layout_marginTop="16dp"
        android:text="Update"/>

    <Button
        android:id="@+id/btnDelete"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@id/btnUpdate"
        android:layout_marginTop="16dp"
        android:text="Delete"/>

    <ListView
        android:id="@+id/listViewEmployees"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_below="@id/btnDelete"
        android:layout_marginTop="16dp"/>
</RelativeLayout>
```

MainActivity.java

```
package com.example.question26;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.database.Cursor;
import android.view.View;
import android.widget.ArrayAdapter;
import android.widget.Button;
```

```
import android.widget.EditText;
import android.widget.ListView;
import android.widget.Toast;

import java.util.ArrayList;
import java.util.List;

public class MainActivity extends AppCompatActivity {

    private EmployeeDataSource dataSource;
    private EditText editTextID, editTextName, editTextMobile, editTextDesignation;

    private ListView listViewEmployees;
    private ArrayAdapter<String> adapter;
    private List<String> employeeList;

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

        dataSource = new EmployeeDataSource(this);
        dataSource.open();


        editTextID = findViewById(R.id.editTextID);
        editTextName = findViewById(R.id.editTextName);
        editTextMobile = findViewById(R.id.editTextMobile);
        editTextDesignation = findViewById(R.id.editTextDesignation);
        listViewEmployees = findViewById(R.id.listViewEmployees);

        employeeList = new ArrayList<>();
        adapter = new ArrayAdapter<>(this, android.R.layout.simple_list_item_1, employeeList);
        listViewEmployees.setAdapter(adapter);

        Button btnAdd = findViewById(R.id.btnAdd);
        Button btnRead = findViewById(R.id.btnRead);
        Button btnUpdate = findViewById(R.id.btnUpdate);
        Button btnDelete = findViewById(R.id.btnDelete);


        btnAdd.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                addEmployee();
            }
```

```
    });

    btnRead.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            readEmployees();
        }
    });

    btnUpdate.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            updateEmployee();
        }
    });

    btnDelete.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            deleteEmployee();
        }
    });
}

private void addEmployee() {
    String name = editTextName.getText().toString();
    String mobile = editTextMobile.getText().toString();
    String designation = editTextDesignation.getText().toString();

    Employee newEmployee = new Employee();
    newEmployee.setName(name);
    newEmployee.setMobile(mobile);
    newEmployee.setDesignation(designation);

    long result = dataSource.addEmployee(newEmployee);

    if (result != -1) {
        Toast.makeText(this, "Employee added with ID " + result, Toast.LENGTH_SHORT).show();
    } else {
        Toast.makeText(this, "Error adding employee", Toast.LENGTH_SHORT).show();
    }
}

private void readEmployees() {
    Cursor cursor = dataSource.getAllEmployees();
```

```
        employeeList.clear();

        while (cursor.moveToNext()) {
            long id = cursor.getLong(cursor.getColumnIndex(EmployeeDatabaseHelper.COLUMN_ID));
            String name =
cursor.getString(cursor.getColumnIndex(EmployeeDatabaseHelper.COLUMN_NAME));
            String mobile =
cursor.getString(cursor.getColumnIndex(EmployeeDatabaseHelper.COLUMN_MOBILE));
            String designation =
cursor.getString(cursor.getColumnIndex(EmployeeDatabaseHelper.COLUMN_DESIGNATION));


            employeeList.add("ID: " + id + ", Name: " + name + ", Mobile: " + mobile + ", Designation: " +
designation);
        }
        adapter.notifyDataSetChanged();
        if (employeeList.isEmpty()) {
            Toast.makeText(this, "No employees found", Toast.LENGTH_SHORT).show();
        }
    }

    private void updateEmployee() {
        String idString = editTextID.getText().toString();

        if (idString.isEmpty()) {
            Toast.makeText(this, "Enter ID for updating", Toast.LENGTH_SHORT).show();
            return;
        }

        long id = Long.parseLong(idString);
        String name = editTextName.getText().toString();
        String mobile = editTextMobile.getText().toString();
        String designation = editTextDesignation.getText().toString();

        Employee updatedEmployee = new Employee();
        updatedEmployee.setName(name);
        updatedEmployee.setMobile(mobile);
        updatedEmployee.setDesignation(designation);

        int rowsUpdated = dataSource.updateEmployee(id, updatedEmployee);

        if (rowsUpdated > 0) {
            Toast.makeText(this, "Employee updated", Toast.LENGTH_SHORT).show();
        } else {
            Toast.makeText(this, "No employee found with the given ID", Toast.LENGTH_SHORT).show();
        }
```

```
    }

    private void deleteEmployee() {
        String idString = editTextID.getText().toString();

        if (idString.isEmpty()) {
            Toast.makeText(this, "Enter ID for deleting", Toast.LENGTH_SHORT).show();
            return;
        }

        long id = Long.parseLong(idString);
        dataSource.deleteEmployee(id);

        Toast.makeText(this, "Employee deleted", Toast.LENGTH_SHORT).show();
    }

    @Override
    protected void onDestroy() {
        super.onDestroy();
        dataSource.close();
    }
}
```

EmployeeDatabaseHelper.java

```
package com.example.question26;

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

public class EmployeeDatabaseHelper extends SQLiteOpenHelper {

    private static final String DATABASE_NAME = "EmployeeDatabase";
    private static final int DATABASE_VERSION = 1;

    public static final String TABLE_EMPLOYEE = "employees";
    public static final String COLUMN_ID = "id";
    public static final String COLUMN_NAME = "name";
    public static final String COLUMN_MOBILE = "mobile";
    public static final String COLUMN_DESIGNATION = "designation";

    private static final String DATABASE_CREATE = "create table "
            + TABLE_EMPLOYEE + "(" + COLUMN_ID
            + " integer primary key autoincrement, " + COLUMN_NAME
            + " text not null, " + COLUMN_MOBILE + " text not null, "
```

```
        + COLUMN_DESIGNATION + " text not null);";

    public EmployeeDatabaseHelper(Context context) {
        super(context, DATABASE_NAME, null, DATABASE_VERSION);
    }

    @Override
    public void onCreate(SQLiteDatabase database) {
        database.execSQL(DATABASE_CREATE);
    }

    @Override
    public void onUpgrade(SQLiteDatabase database, int oldVersion, int newVersion) {
    }
}
```

Employee.java

```
package com.example.question26;
public class Employee {

    private long id;
    private String name;
    private String mobile;
    private String designation;
    public Employee(){}
    public Employee(String name, String mobile, String designation) {
        this.name = name;
        this.mobile = mobile;
        this.designation = designation;
    }
    public long getId() {
        return id;
    }
    public void setId(long id) {
        this.id = id;
    }
    public String getName() {
        return name;
    }
    public void setName(String name) {
        this.name = name;
    }
    public String getMobile() {
        return mobile;
    }
    public void setMobile(String mobile) {
```

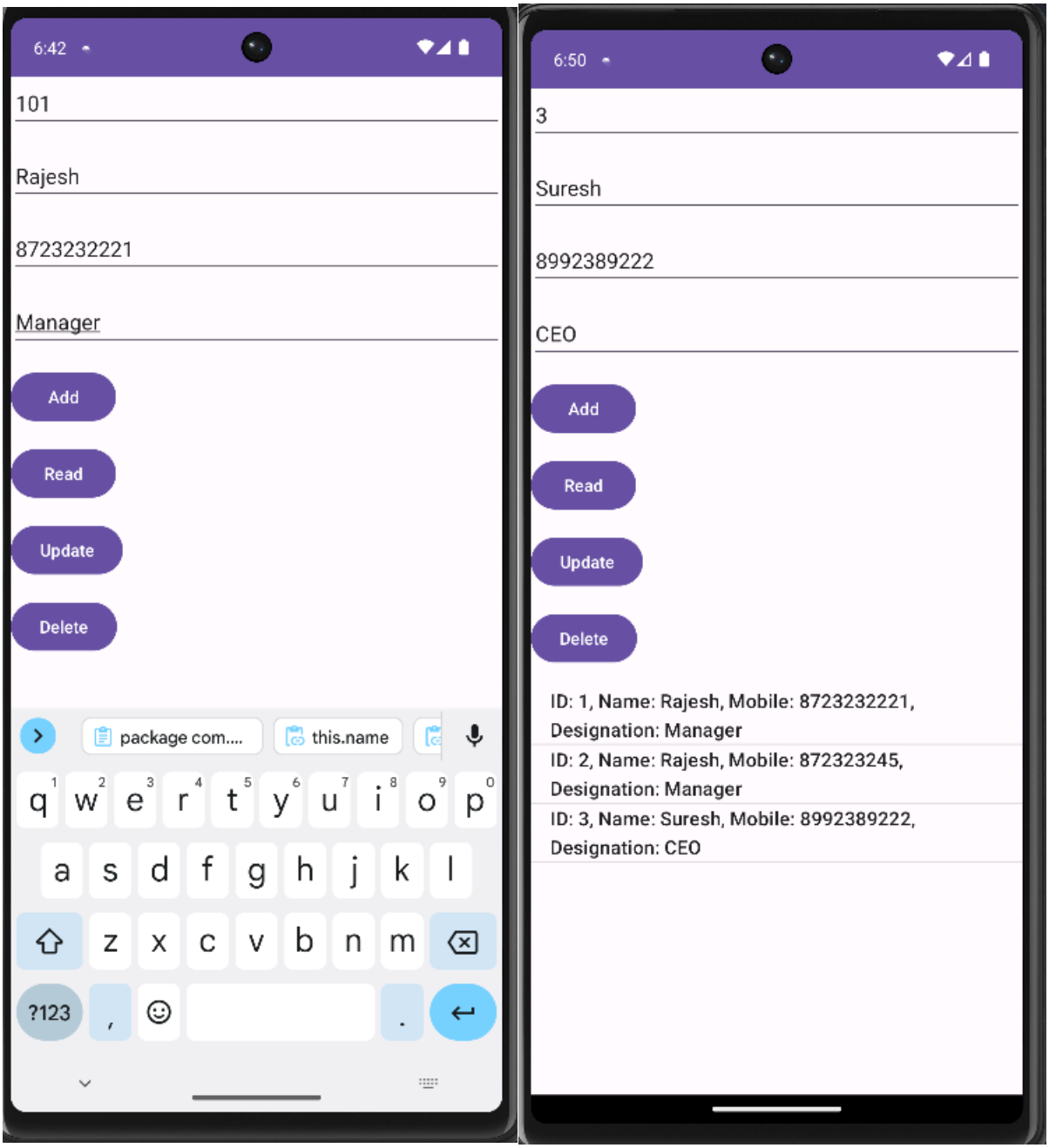
```
        this.mobile = mobile;
    }
    public String getDesignation() {
        return designation;
    }
    public void setDesignation(String designation) {
        this.designation = designation;
    }
}
```

EmployeeDataSource.java

```
package com.example.question26;
import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.SQLException;
import android.database.sqlite.SQLiteDatabase;

public class EmployeeDataSource {

    private SQLiteDatabase database;
    private EmployeeDatabaseHelper dbHelper;

    public EmployeeDataSource(Context context) {
        dbHelper = new EmployeeDatabaseHelper(context);
    }

    public void open() throws SQLException {
        database = dbHelper.getWritableDatabase();
    }

    public void close() {
        dbHelper.close();
    }

    public long addEmployee(Employee employee) {
        ContentValues values = new ContentValues();
        values.put(EmployeeDatabaseHelper.COLUMN_NAME, employee.getName());
        values.put(EmployeeDatabaseHelper.COLUMN_MOBILE, employee.getMobile());
        values.put(EmployeeDatabaseHelper.COLUMN_DESIGNATION, employee.getDesignation());

        return database.insert(EmployeeDatabaseHelper.TABLE_EMPLOYEE, null, values);
    }

    public Cursor getAllEmployees() {
        return database.query(EmployeeDatabaseHelper.TABLE_EMPLOYEE,
                null, null, null, null, null, null);
```

```
    }

    public int updateEmployee(long id, Employee employee) {
        ContentValues values = new ContentValues();
        values.put(EmployeeDatabaseHelper.COLUMN_NAME, employee.getName());
        values.put(EmployeeDatabaseHelper.COLUMN_MOBILE, employee.getMobile());
        values.put(EmployeeDatabaseHelper.COLUMN_DESIGNATION, employee.getDesignation());

        return database.update(EmployeeDatabaseHelper.TABLE_EMPLOYEE, values,
                EmployeeDatabaseHelper.COLUMN_ID + " = " + id, null);
    }

    public void deleteEmployee(long id) {
        database.delete(EmployeeDatabaseHelper.TABLE_EMPLOYEE,
                EmployeeDatabaseHelper.COLUMN_ID + " = " + id, null);
    }
}
```

O/P:


6:42
101
Rajesh
8723232221
Manager
Add
Read
Update
Delete
package com....
this.name
6:50
3
Suresh
8992389222
CEO
Add
Read
Update
Delete
ID: 1, Name: Rajesh, Mobile: 8723232221, Designation: Manager
ID: 2, Name: Rajesh, Mobile: 872323245, Designation: Manager
ID: 3, Name: Suresh, Mobile: 8992389222, Designation: CEO

27.Create an android app powered by firebase real time database that supports adding data, Retrieving data, Deleting data from firebase data.

MainActivity.java

```
package com.example.question27;

import android.os.Bundle;
import android.view.View;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ListView;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;

import com.google.firebase.database.DataSnapshot;
import com.google.firebase.database.DatabaseError;
import com.google.firebase.database.ValueEventListener;

public class MainActivity extends AppCompatActivity {

    private FirebaseDBHelper firebaseDBHelper;
    private EditText editTextTask;
    private ArrayAdapter<String> adapter;
    private ListView listViewTasks;

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

        firebaseDBHelper = new FirebaseDBHelper();
        editTextTask = findViewById(R.id.editTextTask);
        listViewTasks = findViewById(R.id.listViewTasks);
        adapter = new ArrayAdapter<>(this, android.R.layout.simple_list_item_1);
        listViewTasks.setAdapter(adapter);

        Button btnAddTask = findViewById(R.id.btnAddTask);
        Button btnGetTasks = findViewById(R.id.btnGetTasks);

        btnAddTask.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                addTask();
            }
```

```
        });

        btnGetTasks.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                getTasks();
            }
        });
    }

    private void addTask() {
        String taskTitle = editTextTask.getText().toString();
        if (!taskTitle.isEmpty()) {
            Task task = new Task();
            task.setTitle(taskTitle);
            firebaseDBHelper.addTask(task);
            editTextTask.setText("");
        }
    }

    private void getTasks() {
        firebaseDBHelper.getAllTasks().addValueEventListener(new ValueEventListener() {
            @Override
            public void onDataChange(@NonNull DataSnapshot dataSnapshot) {
                adapter.clear();
                for (DataSnapshot snapshot : dataSnapshot.getChildren()) {
                    Task task = snapshot.getValue(Task.class);
                    if (task != null) {
                        adapter.add(task.getTitle());
                    }
                }
            }

            @Override
            public void onCancelled(@NonNull DatabaseError error) {}
        });
    }
}
```

FirebaseDBHelper.java

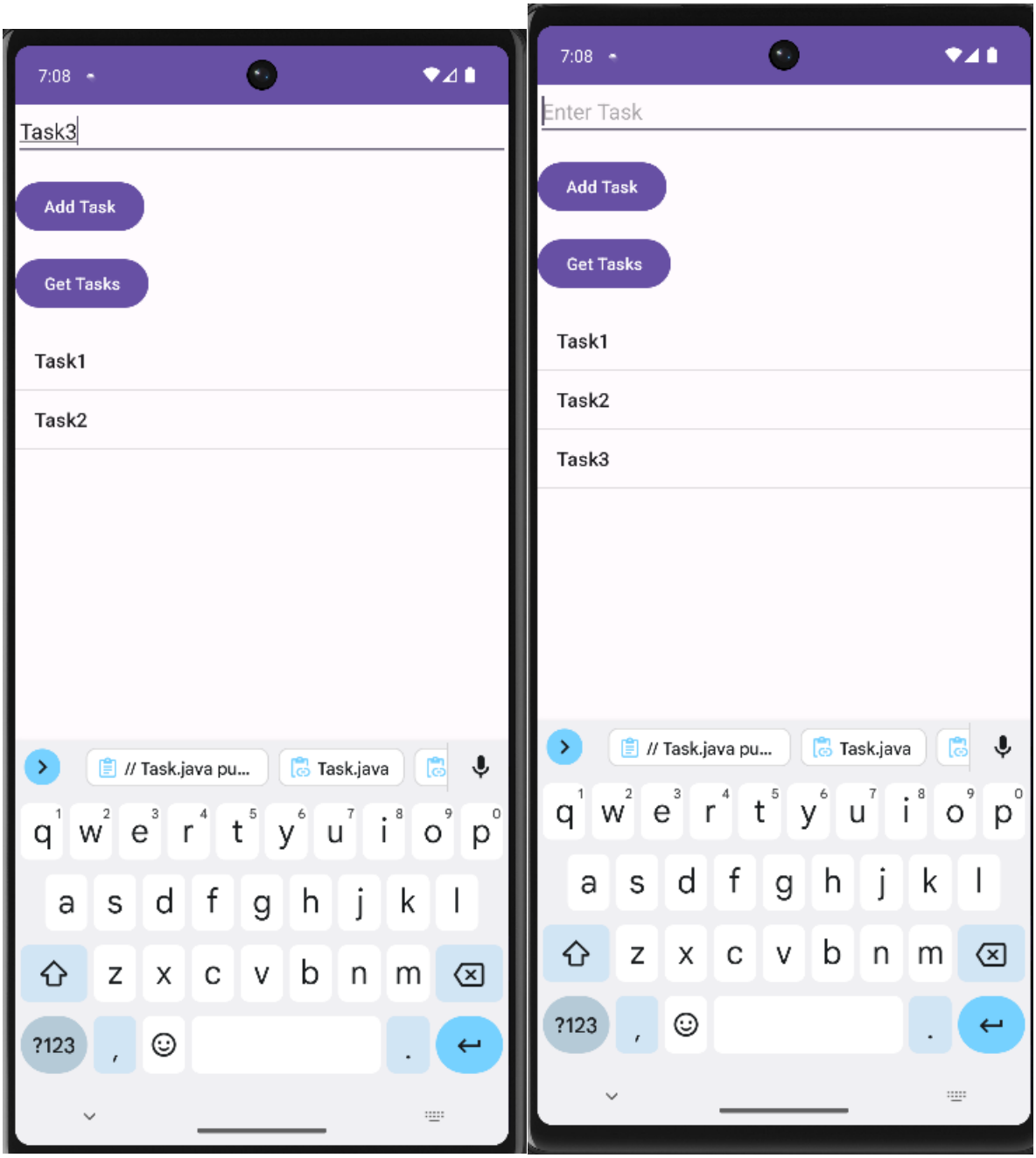
```
package com.example.question27;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;

public class FirebaseDBHelper {

    private static final String TASKS_NODE = "tasks";
    private DatabaseReference databaseReference;

    public FirebaseDBHelper() {
        this.databaseReference = FirebaseDatabase.getInstance().getReference(TASKS_NODE);
    }
    public void addTask(Task task) {
        String taskId = databaseReference.push().getKey();
        task.setId(taskId);
        databaseReference.child(taskId).setValue(task);
    }
    public DatabaseReference getAllTasks() {
        return databaseReference;
    }
    public void deleteTask(String taskId) {
        databaseReference.child(taskId).removeValue();
    }
}
```

Task.java

```
package com.example.question27;
public class Task {
    private String id;
    private String title;
    private boolean completed;
    public Task() {}
    public Task(String title, boolean completed) {
        this.title = title;
        this.completed = completed;
    }
    public String getId() {
        return id;
    }
    public void setId(String id) {
        this.id = id;
    }
    public String getTitle() {
        return title;
    }
```

```
    public void setTitle(String title) {
        this.title = title;
    }
    public boolean isCompleted() {
        return completed;
    }
    public void setCompleted(boolean completed) {
        this.completed = completed;
    }
}
```

O/P:


7:08
Task3
Add Task
Get Tasks
Task1
Task2
// Task.java pu...
Task.java
7:08
Enter Task
Add Task
Get Tasks
Task1
Task2
Task3
// Task.java pu...
Task.java

28. Write a program to demonstrate JSON parsing of single data.

Activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
   xmlns:android="http://schemas.android.com/apk/res/android"
   xmlns:tools="http://schemas.android.com/tools"
   xmlns:app="http://schemas.android.com/apk/res-auto"
   android:layout_width="match_parent"
   android:layout_height="match_parent"
   tools:context=".MainActivity">
   <TextView
      android:id="@+id/resultTextView"
      android:text="Result will be displayed here"
      android:layout_width="wrap_content"
     android:layout_height="wrap_content"
     app:layout_constraintBottom_toBottomOf="parent"
     app:layout_constraintStart_toStartOf="parent"
     app:layout_constraintEnd_toEndOf="parent"
     app:layout_constraintTop_toTopOf="parent" />

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

MainActivity.java

```
package com.example.question28;

import android.os.Bundle;
import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

import org.json.JSONException;
import org.json.JSONObject;


public class MainActivity extends AppCompatActivity {

   private TextView resultTextView;

   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);
      resultTextView = findViewById(R.id.resultTextView);
```

```
        String jsonString = "{ \"name\": \"John Doe\", \"age\": 25, \"city\": \"New York\" }";
        JSONObject jsonObject = null;
        int age = 0;
        try {
            jsonObject = new JSONObject(jsonString);
             age = jsonObject.getInt("age");
            String city = jsonObject.getString("city");
            String name = jsonObject.getString("name");

            resultTextView.setText("Name: " + name + "\nAge: " + age + "\nCity: " + city);
        } catch (JSONException e) {
            throw new RuntimeException(e);
        }
    }
}
```

O/P:

29.Write a program to demonstrate JSON parsing of array.

Activity_main.xml

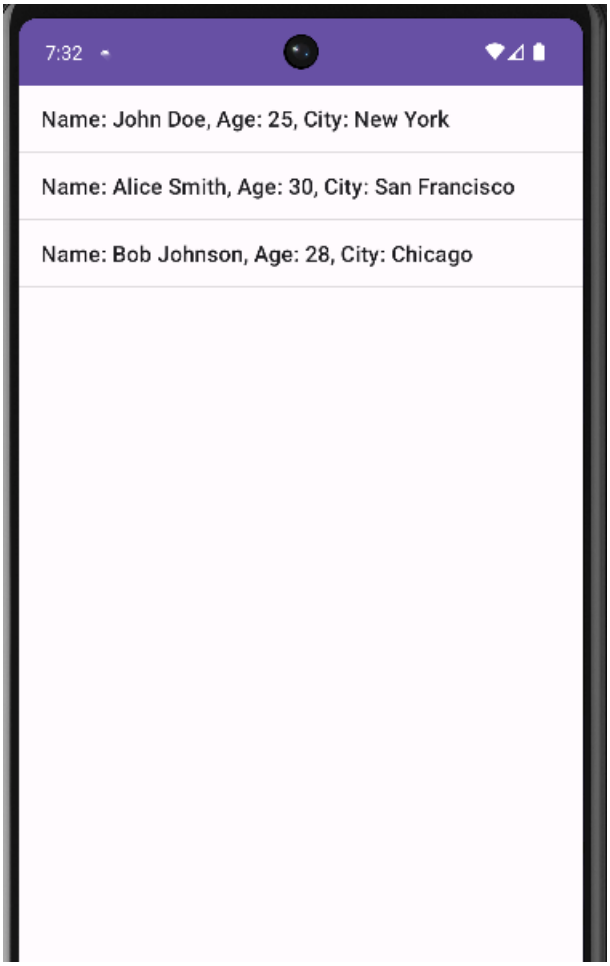
```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
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

    <ListView
        android:id="@+id/listView"
        android:layout_width="match_parent"
        android:layout_height="match_parent"/>

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

MainActivity.java

```
package com.example.question29;

import android.os.Bundle;
import android.widget.ArrayAdapter;
import android.widget.ListView;

import androidx.appcompat.app.AppCompatActivity;

import org.json.JSONArray;
import org.json.JSONException;
import org.json.JSONObject;

import java.util.ArrayList;
import java.util.List;

public class MainActivity extends AppCompatActivity {
    private ListView listView;
    private ArrayAdapter<String> adapter;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        listView = findViewById(R.id.listView);
        adapter = new ArrayAdapter<>(this, android.R.layout.simple_list_item_1);
        listView.setAdapter(adapter);
```

```
        String jsonArrayString = "[{ \"name\": \"John Doe\", \"age\": 25, \"city\": \"New York\" }, " +
                "{ \"name\": \"Alice Smith\", \"age\": 30, \"city\": \"San Francisco\" }, " +
                "{ \"name\": \"Bob Johnson\", \"age\": 28, \"city\": \"Chicago\" }]";
        List<String> parsedData = parseJsonArray(jsonArrayString);

        if (parsedData != null) {
            adapter.addAll(parsedData);
        }
    }
    private List<String> parseJsonArray(String jsonArrayString) {
        List<String> parsedData = new ArrayList<>();

        try {
            JSONArray jsonArray = new JSONArray(jsonArrayString);
            for (int i = 0; i < jsonArray.length(); i++) {
                JSONObject jsonObject = jsonArray.getJSONObject(i);
                String name = jsonObject.getString("name");
                int age = jsonObject.getInt("age");
                String city = jsonObject.getString("city");
                parsedData.add("Name: " + name + ", Age: " + age + ", City: " + city);
            }
        } catch (JSONException e) {
            e.printStackTrace();
        }
        return parsedData;
    }
}
```

O/P


7:32
Name: John Doe, Age: 25, City: New York
Name: Alice Smith, Age: 30, City: San Francisco
Name: Bob Johnson, Age: 28, City: Chicago

30. Write an application to display a pdf as an image in React app using URL.

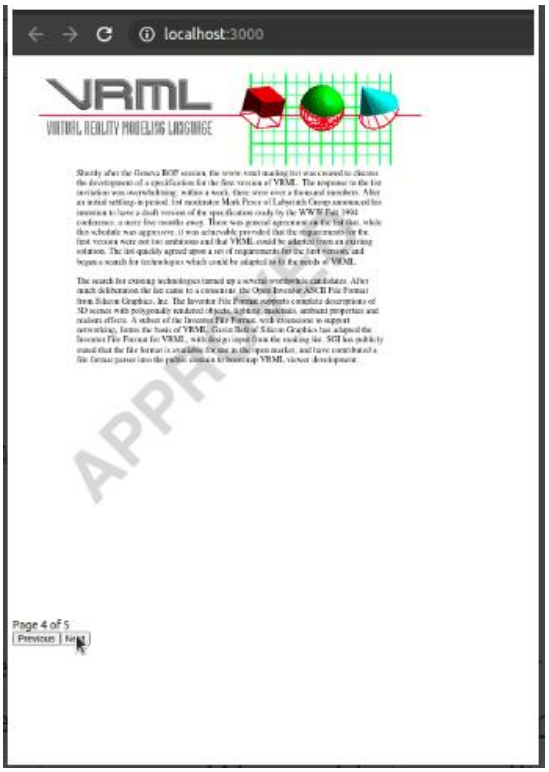
App.js

```
import React from 'react';
import Pdf from './Pdf'


const App = ()=> {

return (
        <div className="App">
                //Rendering a pdf component
                <Pdf />
        </div>
);
}
export default App;
import React, { useState } from 'react';
import { Document, Page,pdfjs } from 'react-pdf';
import './pdf.css'
//PDFjs worker from an external cdn
const url =
"https://cors-anywhere.herokuapp.com/http://www.pdf995.com/samples/pdf.pdf"
export default function Test() {
        pdfjs.GlobalWorkerOptions.workerSrc =
        `//cdnjs.cloudflare.com/ajax/libs/pdf.js/${pdfjs.version}/pdf.worker.js`;
        const [numPages, setNumPages] = useState(null);
        const [pageNumber, setPageNumber] = useState(1);
        function onDocumentLoadSuccess({ numPages }) {
        setNumPages(numPages);
        setPageNumber(1);
}
return (
        <>
        <div className="main">
        <Document
                file={url}
                onLoadSuccess={onDocumentLoadSuccess}
                >
                <Page pageNumber={pageNumber} />
        </Document>
        </div>
        </>
);
}
import React, { useState } from 'react';
```

```
import { Document, Page,pdfjs } from 'react-pdf';


const url =
"https://cors-anywhere.herokuapp.com/http://www.pdf995.com/samples/pdf.pdf"

export default function Test() {

pdfjs.GlobalWorkerOptions.workerSrc =
`//cdnjs.cloudflare.com/ajax/libs/pdf.js/${pdfjs.version}/pdf.worker.js`;
const [numPages, setNumPages] = useState(null);
const [pageNumber, setPageNumber] = useState(1);

/*To Prevent right click on screen*/
document.addEventListener("contextmenu", (event) => {
        event.preventDefault();
});

/*When document gets loaded successfully*/
function onDocumentLoadSuccess({ numPages }) {
        setNumPages(numPages);
        setPageNumber(1);
}

function changePage(offset) {
        setPageNumber(prevPageNumber => prevPageNumber + offset);
}

function previousPage() {
        changePage(-1);
}

function nextPage() {
        changePage(1);
}
return (
        <>
        <div className="main">
        <Document
                file={url}
                onLoadSuccess={onDocumentLoadSuccess}
        >
                <Page pageNumber={pageNumber} />
        </Document>
        <div>
                <div className="pagec">
```

```
                Page {pageNumber || (numPages ? 1 : '--')} of {numPages || '--'}
                </div>
                <div className="buttonc">
                <button
                type="button"
                disabled={pageNumber <= 1}
                onClick={previousPage}
                className="Pre"
                >
                Previous
                </button>
                <button
                type="button"
                disabled={pageNumber >= numPages}
                onClick={nextPage}
                >
                Next
                </button>
                </div>
        </div>
        </div>
        </>
);
}
```

Output:



31. Develop simple flutter application to open a browser using Android SDK.

Main.dart

```
// Importing important packages require to connect
// Flutter and Dart
import 'package:flutter/material.dart';

// Main Function
void main() {
// Giving command to runApp() to run the app.

/* The purpose of the runApp() function is to attach
the given widget to the screen. */
runApp(const MyApp());
}

// Widget is used to create UI in flutter framework.

/* StatelessWidget is a widget, which does not maintain
any state of the widget. */

/* MyApp extends StatelessWidget and overrides its
build method. */
class MyApp extends StatelessWidget {
const MyApp({Key? key}) : super(key: key);

// This widget is the root of your application.
@override
Widget build(BuildContext context) {
        return MaterialApp(
        // title of the application
        title: 'Hello World Demo Application',
        // theme of the widget
        theme: ThemeData(
                primarySwatch: Colors.lightGreen,
        ),
        // Inner UI of the application
        home: const MyHomePage(title: 'Home page'),
        );
}
}

/* This class is similar to MyApp instead it
returns Scaffold Widget */
class MyHomePage extends StatelessWidget {
const MyHomePage({Key? key, required this.title}) : super(key: key);
```

```
final String title;

@override
Widget build(BuildContext context) {
        return Scaffold(
        appBar: AppBar(
                title: Text(title),
        ),
        // Sets the content to the
        // center of the application page
        body: const Center(
                // Sets the content of the Application
                child: Text(
                'Welcome to GeeksForGeeks!',
        )),
        );
}
}
```

Output: