

**DEPARTMENT OF COMPUTER SCIENCE
RAJAGIRI COLLEGE OF SOCIAL SCIENCES
(Autonomous)**



MASTER OF COMPUTER APPLICATIONS

**ANDROID
MCA 307
LAB RECORD**

NAME : BENJAMIN KOSHY BIJU

SEMESTER : THIRD

REGISTER NO : 2124017



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**MASTER OF COMPUTER APPLICATIONS
CERTIFICATE**

NAME : BENJAMIN KOSHY BIJU

SEMESTER : THIRD

REGISTER NO : 2124017

Certified that this is a bonafide record of work done by the student in the Software Laboratory of Rajagiri Department of Computer Science, Kalamassery.

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Date :

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Source Code:**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">

    <LinearLayout
        android:layout_width="257dp"
        android:layout_height="623dp"
        android:layout_marginStart="16dp"
        android:orientation="vertical"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toStartOf="parent">

        <EditText
            android:id="@+id/et1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:ems="10"
            android:inputType="textPersonName"
            android:text="number1"
            tools:layout_editor_absoluteX="29dp"
            tools:layout_editor_absoluteY="59dp" />

        <EditText
            android:id="@+id/et2"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:ems="10"
            android:inputType="textPersonName"
            android:text="number2"
            tools:layout_editor_absoluteX="31dp"
            tools:layout_editor_absoluteY="166dp" />

        <Button
            android:id="@+id/bt1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:onClick="onPlus"
            android:text="+"
            tools:layout_editor_absoluteX="145dp"
            tools:layout_editor_absoluteY="282dp" />

        <Button
            android:id="@+id/b2"
            android:layout_width="wrap_content"
            android:layout_height="60dp"
```

```

        android:onClick="onMinus"
        android:text="-"
        tools:layout_editor_absoluteX="158dp"
        tools:layout_editor_absoluteY="401dp" />

```

```

<TextView
    android:id="@+id/et3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="result"
    tools:layout_editor_absoluteX="176dp"
    tools:layout_editor_absoluteY="526dp" />

```

```

</LinearLayout>

```

```

</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java

```

package com.example.sumapp;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void onPlus(View v)
    {
        EditText et1,et2;
        TextView et3;
        int a,b,s;
        et1 = (EditText)findViewById(R.id.et1);
        et2 = (EditText)findViewById(R.id.et2);
        et3=(TextView)findViewById(R.id.et3);
        a = Integer.parseInt(et1.getText().toString());

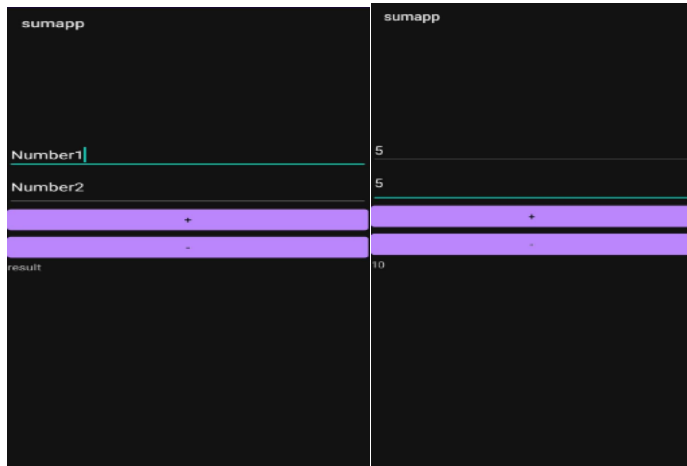
        b = Integer.parseInt(et2.getText().toString());
        s = a+b;
        et3.setText(""+ s);
    }

    public void onMinus(View v)
    {
        EditText et1,et2;
        TextView et3;
        int a,b,su;
        et1 = (EditText)findViewById(R.id.et1);
        et2 = (EditText)findViewById(R.id.et2);
        et3=(TextView)findViewById(R.id.et3);
        a = Integer.parseInt(et1.getText().toString());

```

```
b = Integer.parseInt(et2.getText().toString());  
su = a-b;  
et3.setText(""+ su);
```

Output:



Number App: Application to display the numbers one after the other in a text box when the corresponding button is pressed.

Source Code:

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">
    <LinearLayout
        android:layout_width="466dp"
        android:layout_height="0dp"
        android:orientation="vertical"
        app:layout_constraintStart_toStartOf="parent"
        tools:layout_editor_absoluteY="412dp">
        <Button
            android:id="@+id/b1"
            android:onClick="onB1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="1"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintHorizontal_bias="0.133"
            app:layout_constraintStart_toStartOf="parent"
            tools:layout_editor_absoluteY="54dp" />
        <EditText
            android:id="@+id/et1"
            android:layout_width="match_parent"
            android:layout_height="62dp"
            android:hint="Enter the second number"
            android:ems="10"
            android:inputType="textPersonName"
            android:text="" />
        <Button
            android:id="@+id/b2"
            android:onClick="onB2"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="2"
            tools:layout_editor_absoluteX="43dp"
            tools:layout_editor_absoluteY="142dp" />
        <Button
            android:id="@+id/b3"
            android:onClick="onB3"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="3"
```



```

tools:layout_editor_absoluteX="52dp"
tools:layout_editor_absoluteY="226dp" />

<Button
    android:id="@+id/b4"
    android:onClick="onB4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="4"
    tools:layout_editor_absoluteX="52dp"
    tools:layout_editor_absoluteY="303dp" />
<Button
    android:id="@+id/b5"
    android:onClick="onB4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="5"
    tools:layout_editor_absoluteX="52dp"
    tools:layout_editor_absoluteY="303dp" />

<TextView
    android:id="@+id/et"
    android:layout_width="277dp"
    android:layout_height="34dp"
    android:text=""
    tools:layout_editor_absoluteX="0dp"
    tools:layout_editor_absoluteY="378dp" />
</LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java

```

package com.example.numbers;

import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    int s=0;
    public void onMinus(View v)
    {

        EditText e3;
        e3=(EditText) findViewById(R.id.et1);
        e3.setText(e3.getText().toString()+"1");
    }
}

```

```

public void onSec(View v)
{
    EditText e3;
    e3=(EditText) findViewById(R.id.et1);

    e3.setText(e3.getText().toString()+"2");
}
public void on3(View v)
{
    EditText e3;
    e3=(EditText) findViewById(R.id.et1);

    e3.setText(e3.getText().toString()+"3");
}
public void on4(View v)
{
    EditText e3;
    e3=(EditText) findViewById(R.id.et1);

    e3.setText(e3.getText().toString()+"4");
}
public void on5(View v)
{
    EditText e3;
    e3=(EditText) findViewById(R.id.et1);

    e3.setText(e3.getText().toString()+"5");
}
}

```

Output:



Source Code:**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">
    <LinearLayout
        android:layout_width="410dp"
        android:layout_height="728dp"
        android:orientation="vertical"
        tools:layout_editor_absoluteX="1dp"
        tools:layout_editor_absoluteY="1dp"
        tools:ignore="MissingConstraints">

        <TextView
            android:id="@+id/textView"
            android:layout_width="match_parent"
            android:layout_height="59dp"
            android:text="SIMPLE CALCULATOR" />

        <EditText
            android:id="@+id/et1"
            android:layout_width="match_parent"
            android:layout_height="60dp"
            android:ems="10"
            android:hint="Enter the first number"
            android:inputType="textPersonName"
            android:text="" />

        <EditText
            android:id="@+id/et2"
            android:layout_width="match_parent"
            android:layout_height="62dp"
            android:hint="Enter the second number"
            android:ems="10"
            android:inputType="textPersonName"
            android:text="" />

        <Button
            android:id="@+id/b1"
            android:layout_width="match_parent"
            android:layout_height="58dp"
            android:onClick="add"
            android:text="+" />

        <Button
            android:id="@+id/b2"
            android:layout_width="match_parent
```

```
android:onClick="sub"
android:layout_height="wrap_content"
android:text="-" />
```

```
<Button
    android:id="@+id/b3"
    android:layout_width="match_parent"
    android:onClick="mul"
    android:layout_height="wrap_content"
    android:text="*" />
```

```
<Button
    android:id="@+id/b4"
    android:layout_width="match_parent"
    android:onClick="div"
    android:layout_height="wrap_content"
    android:text="/" />
```

```
<TextView
    android:id="@+id/t1"
    android:layout_width="match_parent"
    android:layout_height="48dp"
    android:text="" />
```

```
<Button
    android:id="@+id/b5"
    android:layout_width="match_parent"
    android:layout_height="68dp"
    android:onClick="reset"
    android:text="reset" />
```

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

MainActivity.java

```
package com.example.calapp;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
    EditText et1, et2;
    TextView t1;
    Button b1, b2, b3, b4;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        et1 = findViewById(R.id.et1);
        et2 = findViewById(R.id.et2);
        b1 = findViewById(R.id.b1);
        b2 = findViewById(R.id.b2);
        b3 = findViewById(R.id.b3);
        b4 = findViewById(R.id.b4);
```



```

    t1 = findViewById(R.id.t1);
}

public void add(View view) {
    String firstVal = et1.getText().toString();
    String secondVal = et2.getText().toString();
    int x = Integer.parseInt(firstVal);
    int y = Integer.parseInt(secondVal);
    t1.setText("" + (x + y));
}

public void sub(View view) {
    String firstVal = et1.getText().toString();
    String secondVal = et2.getText().toString();
    int x = Integer.parseInt(firstVal);
    int y = Integer.parseInt(secondVal);
    t1.setText("" + (x - y));
}

public void mul(View view) {
    String firstVal = et1.getText().toString();
    String secondVal = et2.getText().toString();
    int x = Integer.parseInt(firstVal);
    int y = Integer.parseInt(secondVal);
    t1.setText("" + (x * y));
}

public void div(View view) {
    String firstVal = et1.getText().toString();
    String secondVal = et2.getText().toString();
    int x = Integer.parseInt(firstVal);
    int y = Integer.parseInt(secondVal);
    t1.setText("" + (x / y));
}

public void reset(View view) {
    String firstVal = et1.getText().toString();
    String secondVal = et2.getText().toString();
    et1.setText(null);
    et2.setText(null);
}
}

```

Output:



Source Code:**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">

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Hello World!"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

<LinearLayout
    android:layout_width="413dp"
    android:layout_height="733dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">

    <Button
        android:id="@+id/bnext"
        android:layout_width="match_parent"
        android:layout_height="64dp"
        android:onClick="onNext"
        android:text="NEXT" />

    <Button
        android:id="@+id/bclose"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:onClick="onClose"
        android:text="CLOSE" />

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

MainActivity.java

```
package com.example.act1;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
public class MainActivity extends AppCompatActivity {
```

```

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
}
public void onNext(View v)
{
    Intent obj;
    obj=new Intent(this,secondactivity.class);
    startActivity(obj);

}
public void onClose()
{
    finish();}}

```

second.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=".secondactivity">

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Hello World!"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

<LinearLayout
    android:layout_width="413dp"
    android:layout_height="733dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">

    <Button
        android:id="@+id/bhide"
        android:layout_width="match_parent"
        android:layout_height="64dp"
        android:onClick="onhide"
        android:text="HIDE" />

</LinearLayout>

```

```

</androidx.constraintlayout.widget.ConstraintLayout>

```

secondactivity.java

```

package com.example.act1;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import androidx.appcompat.app.AppCompatActivity;

```



```

public class secondactivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.second);
    }
    public void onhide()
    {
        finish();
    }
}

```

AndroidManifest.xml

```

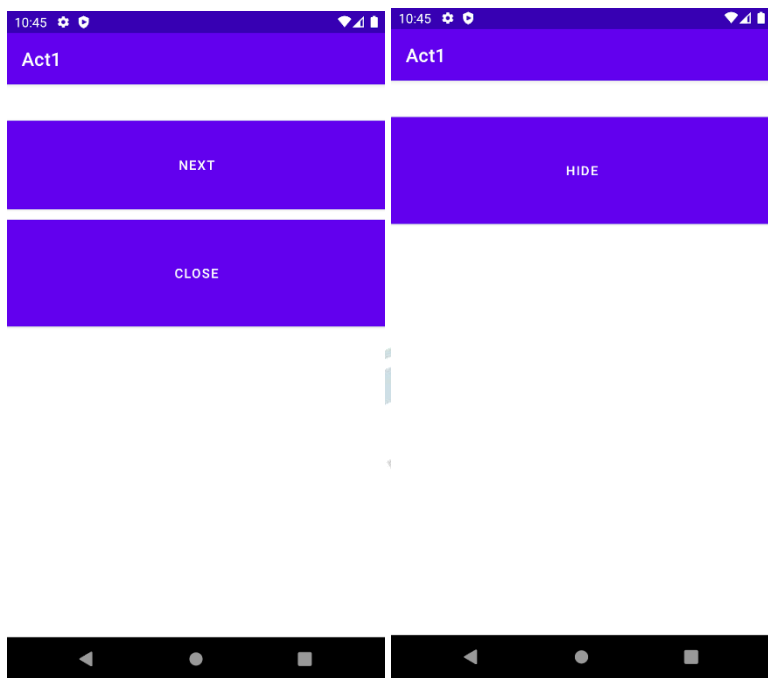
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    package="com.example.act1">

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportRtl="true"
        android:theme="@style/Theme.Act1"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>

        <activity
            android:name=".secondactivity"
            android:exported="true">
            <intent-filter>
                <action android:name="act.sec" />
                <category android:name="android.intent.category.DEFAULT" />
            </intent-filter>
        </activity>
    </application>
</manifest>

```

Output:



Source Code:**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">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <LinearLayout
        android:layout_width="409dp"
        android:layout_height="734dp"
        android:orientation="vertical"
        tools:layout_editor_absoluteX="-3dp"
        tools:layout_editor_absoluteY="-5dp">

        <TextView
            android:id="@+id/t1"
            android:layout_width="match_parent"
            android:layout_height="70dp"
            android:text="one" />

        <Button
            android:id="@+id/button"
            android:layout_width="match_parent"
            android:layout_height="75dp"
            android:onClick="second"
            android:text="SECOND" />

    </LinearLayout>

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

MainActivity.java

```
package com.example.act2;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
public class MainActivity extends AppCompatActivity
    @Override
```

```

protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
}
public void second(View v)
{

    Intent obj;
    obj=new Intent(this,secondactivity.class);
    startActivity(obj);

}
}

```

secondactivity.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=".secondactivity">

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Hello World!"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

<LinearLayout
    android:layout_width="409dp"
    android:layout_height="734dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="-3dp"
    tools:layout_editor_absoluteY="-5dp">

    <TextView
        android:id="@+id/t1"
        android:layout_width="match_parent"
        android:layout_height="70dp"
        android:text="two" />

    <Button
        android:id="@+id/b1"
        android:layout_width="match_parent"
        android:layout_height="75dp"
        android:onClick="second"
        android:text="THREE" />

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

```


secondactivity.java

```
package com.example.act2;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import androidx.appcompat.app.AppCompatActivity;
public class secondactivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.secondactivity);
    }
    public void second(View v)
    {
        Intent obj;
        obj=new Intent(this,three.class);
        startActivity(obj);
    }
}
```

threeactivity.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=".threeactivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <LinearLayout
        android:layout_width="409dp"
        android:layout_height="734dp"
        android:orientation="vertical"
        tools:layout_editor_absoluteX="-3dp"
        tools:layout_editor_absoluteY="-5dp">

        <TextView
            android:id="@+id/t1"
            android:layout_width="match_parent"
            android:layout_height="70dp"
            android:text="three" />

        <Button
            android:id="@+id/b1"
            android:layout_width="match_parent"
```

```
        android:layout_height="75dp"
        android:onClick="hide"
        android:text="HIDE" />
    </LinearLayout>
```

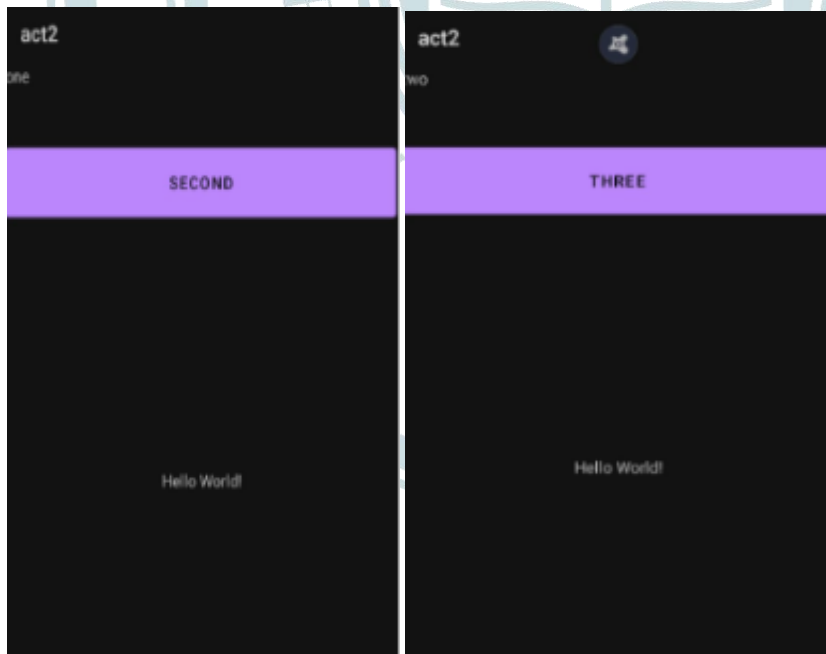
```
</androidx.constraintlayout.widget.ConstraintLayout>
```

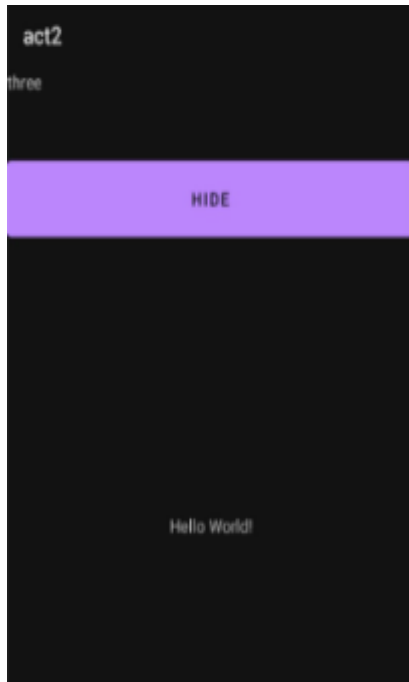
three.java

```
package com.example.act2;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import androidx.appcompat.app.AppCompatActivity;
public class three extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.threeactivity);
    }
    public void hide()
    {
        finish();
    }
}
```

Output:





Application to change the colour of a button when pressed.**Source Code:****activity_main.xml**

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent">
    <Button
        android:layout_height="wrap_content"
        android:layout_width="fill_parent"
        android:text="@string/button1_label"
        android:onClick="randomizeColor"/>
    <Button
        android:layout_height="wrap_content"
        android:layout_width="fill_parent"
        android:text="@string/button2_label"
        android:onClick="randomizeColor"/>
    <TextView
        android:layout_height="fill_parent"
        android:layout_width="fill_parent"
        android:textSize="48px"
        android:gravity="center_horizontal"
        android:text=" click on the button to see the color change "/>
</LinearLayout>

```

strings.xml

```

<resources>
<string name="app_name">projButtonColor</string>
<string name="button1_label">first</string>
<string name="button2_label">second</string>
</resources>

```

MainActivity.java

```

package com.example.projbuttoncolor;
import android.app.Activity;
import android.graphics.Color;
import android.os.Bundle;
import android.view.View;
import com.example.projbuttoncolor.R;
import java.util.Random;
public class MainActivity extends Activity {
    // All the standard colors EXCEPT black (in which case you couldn't see the button)
    private int[] mColorChoices =
        { Color.BLUE, Color.CYAN,
          Color.DKGRAY, Color.GRAY, Color.GREEN,
          Color.LTGRAY, Color.MAGENTA, Color.RED,
          Color.WHITE, Color.YELLOW };

    /** Initializes the app when it is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

```



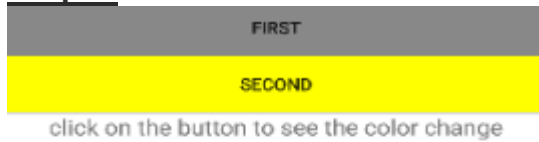
```

    setContentView(R.layout.activity_main);
}

/** Randomly changes the bg color of the button that was pressed.
 * The layout file (main.xml) designates this method as the event handler for both buttons.
 */
public void randomizeColor(View button) {
    Random generator = new Random();
    int index = generator.nextInt(mColorChoices.length);
    button.setBackgroundColor(mColorChoices[index]);
}
}

```

Output:



Source Code:**activity_main.xml**

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

    <Button
        android:id="@+id/text_region"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:onClick="randomizeColor"
        android:text="@string/button1_label" />
    <Button
        android:layout_height="wrap_content"
        android:layout_width="fill_parent"
        android:text="@string/button2_label"
        android:onClick="randomizeColor"/>
    <TextView
        android:layout_height="fill_parent"
        android:layout_width="fill_parent"
        android:textSize="48px"
        android:gravity="center_horizontal"
        android:text="click on the button to see the color change" />
</LinearLayout>
```

strings.xml

```
<resources>
    <string name="app_name">ProjBgColor</string>
    <string name="button1_label">firstbutton</string>
    <string name="button2_label">secondbutton</string>
</resources>
```

MainActivity.java

```
package com.example.projbgcolor;
import android.app.Activity;
import android.graphics.Color;
import android.os.Bundle;
import android.view.View;
import android.widget.TextView;
import com.example.projbgcolor.R;
import java.util.Random;
public class MainActivity extends Activity {
    // All the standard colors
    private int[] mColorChoices =
        { Color.BLACK, Color.BLUE, Color.CYAN,
          Color.DKGRAY, Color.GRAY, Color.GREEN,
          Color.LTGRAY, Color.MAGENTA, Color.RED,
          Color.WHITE, Color.YELLOW };
    private TextView mTextRegion;
```

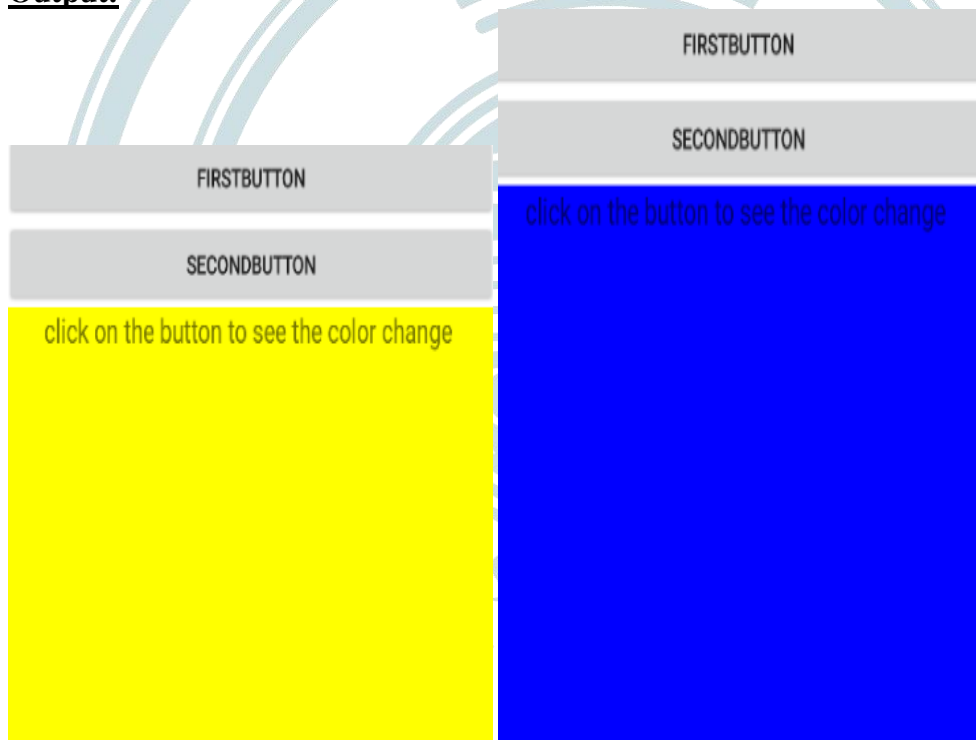
```

/** Initializes the app when it is first created. */
@Override
public void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    mTextRegion = (TextView)findViewById(R.id.text_region);
}

/** Randomly changes the bg color of the TextView.
 * The layout file (main.xml) designates this method as the event handler for both buttons.
 */
public void randomizeColor(View button) {
    Random generator = new Random();
    int index = generator.nextInt(mColorChoices.length);
    mTextRegion.setBackgroundColor(mColorChoices[index]);
}
}

```

Output:



Source Code:**activity_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent">
    <Button
        android:id="@+id/color_button"
        android:layout_height="wrap_content"
        android:layout_width="fill_parent"
        android:text="Press"/>
    <TextView
        android:id="@+id/color_region"
        android:layout_height="fill_parent"
        android:layout_width="fill_parent"/>
</LinearLayout>
```

MainActivity.java

```
package com.example.hybuttoncolor;
import android.app.Activity;
import android.graphics.Color;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
import android.view.View.OnClickListener;
import java.util.Random;

public class MainActivity extends Activity {
    private View mColorRegion;
    private int[] mColorChoices =
        { Color.BLACK, Color.BLUE, Color.CYAN,
          Color.DKGRAY, Color.GRAY, Color.GREEN,
          Color.LTGRAY, Color.MAGENTA, Color.RED,
          Color.WHITE, Color.YELLOW };

    /** Initializes the app when it is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        mColorRegion = findViewById(R.id.color_region);
        Button colorButton =
            (Button)findViewById(R.id.color_button);
        colorButton.setOnClickListener(new ColorRandomizer());
    }

    /** Sets the color of the color region. */

    private void setRegionColor(int color) {
        mColorRegion.setBackgroundColor(color);
    }
}
```

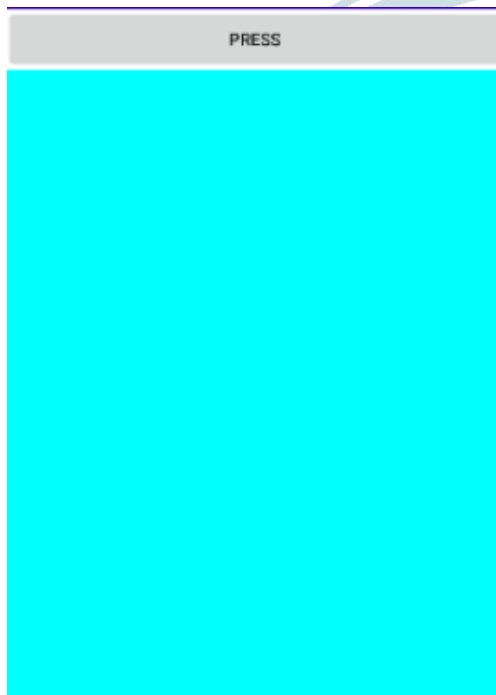
```

    }

    private class ColorRandomizer implements OnClickListener {
        /** Calls back to the outer class to set the color of View at the bottom. */
        public void onClick(View clickedButton) {
            Random generator = new Random();
            int index = generator.nextInt(mColorChoices.length);
            setRegionColor(mColorChoices[index]);
        }
    }
}

```

Output:



Source Code:**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">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <LinearLayout
        android:layout_width="414dp"
        android:layout_height="733dp"
        android:orientation="vertical"
        tools:layout_editor_absoluteX="1dp"
        tools:layout_editor_absoluteY="1dp">

        <EditText
            android:id="@+id/et"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:ems="10"
            android:inputType="textPersonName"
            android:text="" />

        <Button
            android:id="@+id/button"
            android:onClick="onNext"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Next" />

    </LinearLayout>

```

```

</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java

```

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

```



```

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
}
public void onNext(View v)
{
    EditText et;
    et=(EditText)findViewById(R.id.et);
    Intent obj;
    obj=new Intent(this,second.class);
    obj.putExtra("name",et.getText().toString());
    startActivity(obj);}}

```

secondactivity.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=".second">

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Hello World!"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

<LinearLayout
    android:layout_width="414dp"
    android:layout_height="733dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">

    <EditText
        android:id="@+id/et2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="" />

    <Button
        android:id="@+id/button"
        android:onClick="onHide"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="HIDE" />

</LinearLayout>

```

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

second.java

```
package com.example.valuepass;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import androidx.appcompat.app.AppCompatActivity;
public class second extends AppCompatActivity {
```

```
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.secondactivity);
        EditText et2;
        et2=(EditText)findViewById(R.id.et2);
        Intent obj=getIntent();
        String str=obj.getExtras().getString("name");
        et2.setText(str);
    }
    public void onHide()
    {
        finish();
    }
}
```

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    package="com.example.valuepass">

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportRtl="true"
        android:theme="@style/Theme.Valuepass"
        tools:targetApi="31">

        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>

        <activity
```



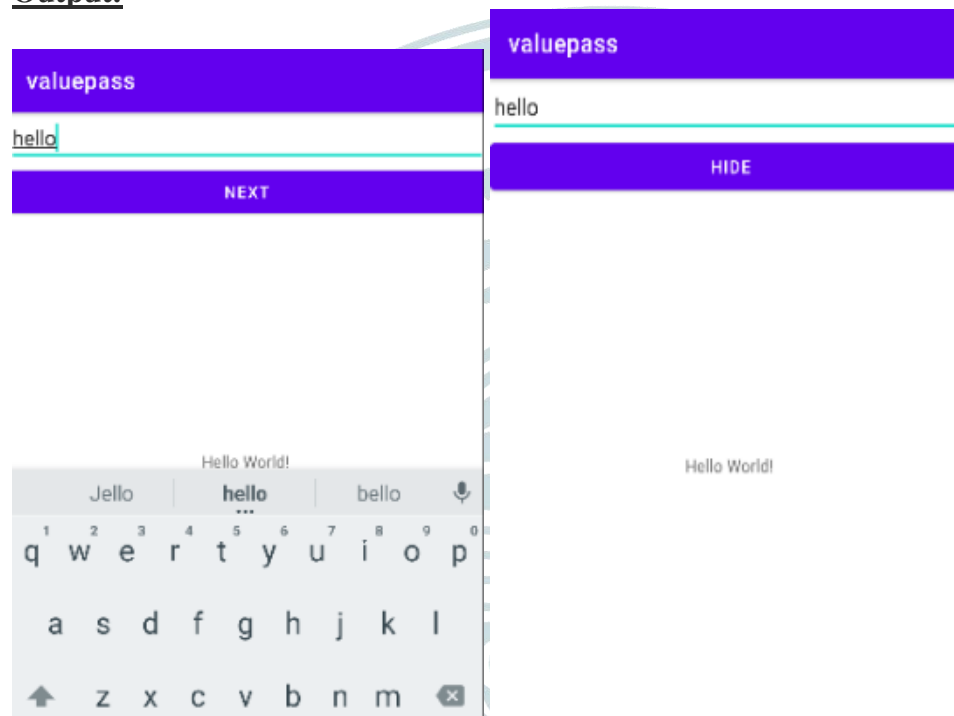
```

        android:name=".second"
        android:exported="true">
        <intent-filter>
            <action android:name="act.sec" />

            <category android:name="android.intent.category.DEFAULT" />
        </intent-filter>
    </activity>
</application>
</manifest>

```

Output:



Source Code:**activity_main.xml**

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

    <TextView
        android:id="@+id/textView2"
        android:layout_width="fill_parent"
        android:layout_height="fill_parent"
        android:layout_weight="0.9"
        android:text="Interest Calculation"
        android:textAppearance="?android:attr/textAppearanceLarge" />
    <TextView
        android:id="@+id/TextView02"
        android:layout_width="wrap_content"
        android:layout_height="39dp"
        android:text="Loan Amount"
        android:textAppearance="?android:attr/textAppearanceLarge" />
    <EditText
        android:id="@+id/e1"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content" />
    <TextView
        android:id="@+id/TextView01"
        android:layout_width="wrap_content"
        android:layout_height="39dp"
        android:text="Interest"
        android:textAppearance="?android:attr/textAppearanceLarge" />
    <EditText
        android:id="@+id/e2"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content" />
    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="39dp"
        android:text="No of Years"
        android:textAppearance="?android:attr/textAppearanceLarge" />
    <EditText
        android:id="@+id/e3"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content" />
    <Button
        android:id="@+id/b1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:onClick="onClick"
        android:text="Calculate Interest" />
    <TextView
```

```

        android:id="@+id/TextView03"
        android:layout_width="wrap_content"
        android:layout_height="39dp"
        android:text="Total Amount"
        android:textAppearance="?android:attr/textAppearanceLarge" />
    <EditText
        android:id="@+id/result"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content" />
</LinearLayout>

```

MainActivity.java

```

package com.example.emicalculator;
import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
public class MainActivity extends Activity {
    EditText e1,e2,e3,e4;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        e1=(EditText)findViewById(R.id.e1);
        e2=(EditText)findViewById(R.id.e2);
        e3=(EditText)findViewById(R.id.e3);
        e4=(EditText)findViewById(R.id.result);
    }
    public void onClick(View v) {
        String a,b,c;
        a=e1.getText().toString();
        b=e2.getText().toString();
        c=e3.getText().toString();
        int n1,n2,n3,si,i,in,am;
        n1=Integer.parseInt(a);
        n2=Integer.parseInt(b);
        n3=Integer.parseInt(c);
        am=n1;
        for(i=0;i<n3;i++)
        {
            in=(am*n2)/100;
            am=am+in;
        }
        e4.setText("Total Interest = " +am);
    }
}

```

Output:

Interest Calculation

Loan Amount

10000

Interest

8

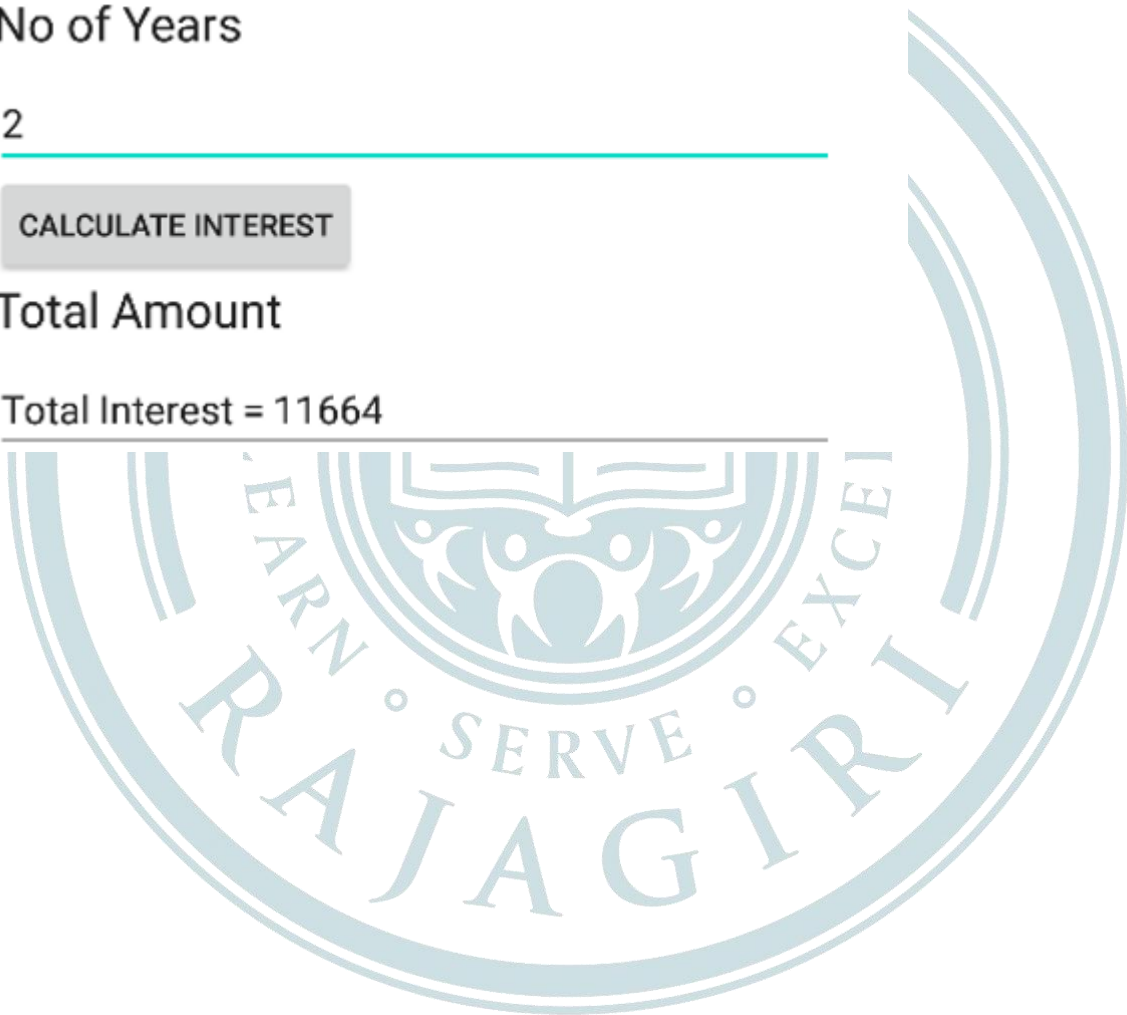
No of Years

2

CALCULATE INTEREST

Total Amount

Total Interest = 11664



Design an application to calculate the body mass index. The application should allow the user to enter the height in cm and weight in Kilograms. The application should present the BMI of the person. BMI can be calculated as per the following formula:

BMI=WEIGHT\HEIGHT*HEIGHT, HEIGHT is in meters

The application should recalculate the weight based on the BMI to be 22.5 in order to advice the user of the amount he/she need to loose/add in order to reach the stage to be HEALTHY. BMI

Ranges:

Please use the following ranges in your code BMI Status

BMI< 18 Under weight

18 ≤ BMI ≤ 25 Healthy range

BMI ≤ 30 Overweight

BMI >30 Obese

Source Code:

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    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"
    android:orientation="vertical"
    tools:context=".MainActivity">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginStart="10dp"
        android:layout_marginTop="10dp"
        android:layout_marginEnd="10dp"
        android:layout_gravity="center_vertical"
        android:orientation="horizontal">
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:textSize="18sp"
            android:textStyle="bold"
            android:textColor="@color/black"
            android:text="Height (cm)" />
        <EditText
            android:id="@+id/height_in"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_marginStart="5dp"
            android:inputType="number"/>
    </LinearLayout>
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginStart="10dp"
        android:layout_marginTop="10dp"
        android:layout_marginEnd="10dp"
        android:layout_gravity="center_vertical"
```



```

        android:orientation="horizontal">
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:textSize="18sp"
            android:textStyle="bold"
            android:textColor="@color/black"
            android:text="Weight (kg)" />
        <EditText
            android:id="@+id/weight_in"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_marginStart="5dp"
            android:inputType="number"/>
    </LinearLayout>
    <View
        android:layout_width="match_parent"
        android:layout_height="5dp"
        android:layout_marginStart="10dp"
        android:layout_marginTop="20dp"
        android:layout_marginEnd="10dp"
        android:background="@color/purple_700"/>
    <View
        android:layout_width="match_parent"
        android:layout_height="5dp"
        android:layout_marginStart="10dp"
        android:layout_marginTop="10dp"
        android:layout_marginEnd="10dp"
        android:background="@color/purple_500"/>
    <Button
        android:id="@+id/calc_button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="CALCULATE"
        android:layout_gravity="center"
        android:layout_marginTop="20dp"/>
    <TextView
        android:id="@+id/bmi_show"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="30dp"
        android:layout_marginStart="40dp"
        android:layout_marginEnd="40dp"
        android:layout_gravity="center"
        android:gravity="center"
        android:textSize="20sp"
        android:textStyle="bold"
        android:textColor="@color/black"
        android:text="BMI" />
    <View
        android:id="@+id/v1"
        android:layout_width="match_parent"
        android:layout_height="5dp"
        android:layout_marginStart="10dp"
        android:layout_marginTop="20dp"
        android:layout_marginEnd="10dp"

```

```

        android:background="@color/purple_700"/>
<TextView
    android:id="@+id/weight_show"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="30dp"
    android:layout_marginStart="40dp"
    android:layout_marginEnd="40dp"
    android:layout_gravity="center"
    android:gravity="center"
    android:textSize="20sp"
    android:textStyle="bold"
    android:textColor="@color/black"
    android:text="WEIGHT" />
<View
    android:id="@+id/v2"
    android:layout_width="match_parent"
    android:layout_height="5dp"
    android:layout_marginStart="10dp"
    android:layout_marginTop="10dp"
    android:layout_marginEnd="10dp"
    android:background="@color/purple_500"/>
<TextView
    android:id="@+id/weight_loss"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="30dp"
    android:layout_marginStart="40dp"
    android:layout_marginEnd="40dp"
    android:layout_gravity="center"
    android:gravity="center"
    android:textSize="20sp"
    android:textStyle="bold"
    android:textColor="@color/black"
    android:text="WEIGHT LOSS" />
</LinearLayout>

```

MainActivity.java

```

package com.example.bmicalculator;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.text.Editable;
import android.util.Log;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import java.math.BigDecimal;
import java.math.RoundingMode;
public class MainActivity extends AppCompatActivity {
    EditText height, weight;
    Button btn;
    TextView bmi_show, weight_show, gain_show;
    BMI bmi;
    String bmi_result;

```

```

double standard_bmi = 22.5, hei, opti_we, weight_g_l;
int bmi_r;
@Override
protected void onCreate(Bundle savedInstanceState)
{
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    height = findViewById(R.id.height_in);
    weight = findViewById(R.id.weight_in);
    btn = findViewById(R.id.calc_button);
    bmi_show = findViewById(R.id.bmi_show);
    weight_show = findViewById(R.id.weight_show);
    gain_show = findViewById(R.id.weight_loss);
    btn.setOnClickListener(new View.OnClickListener()
    {
        @Override
        public void onClick(View view) {
            String h = height.getText().toString();
            String w = weight.getText().toString();
            double d = Double.valueOf(h)/100;
            Log.d("height:", ""+d*d);
            opti_we = standard_bmi*(d*d);
            BigDecimal bd = new BigDecimal(opti_we).setScale(2, RoundingMode.HALF_UP);
            opti_we = bd.doubleValue();
            weight_g_l = Double.valueOf(w) - opti_we;
            BigDecimal bd1 = new BigDecimal(weight_g_l).setScale(2, RoundingMode.HALF_UP);
            weight_g_l = bd1.doubleValue();
            Log.d("Optimum Weight:", ""+opti_we);
            Intent intent = new Intent(MainActivity.this, BMI.class);
            intent.putExtra("h", h); // getText() SHOULD NOT be static!!!
            intent.putExtra("w", w);
            startActivityForResult(intent, 2);
        }
    });
}
// Call Back method to get the Message form other Activity
@Override
protected void onActivityResult(int requestCode, int resultCode, Intent data)
{
    super.onActivityResult(requestCode, resultCode, data);
    // check if the request code is same as what is passed here it is 2
    if(requestCode==2)
    {
        bmi_result = data.getExtras().getString("BMI");
        if (Double.valueOf(bmi_result) < 15 ) {
            bmi_show.setText("Your BMI is "+bmi_result+" and You are Under Weight");
            weight_show.setText("Your Optimum weight should be "+opti_we+ " Kg");
            gain_show.setText("You need to gain atleast "+weight_g_l+ " Kg");
        }
        else if (Double.valueOf(bmi_result) >= 15 && Double.valueOf(bmi_result) <= 25)
        {
            bmi_show.setText("Your BMI is "+bmi_result+" and You are in Healthy range");
            weight_show.setText("Your Optimum weight should be "+opti_we+ " Kg");
            gain_show.setText("You are in good condition");
        }
        else if (Double.valueOf(bmi_result) > 25 && Double.valueOf(bmi_result) <= 30) {
            bmi_show.setText("Your BMI is "+bmi_result+" and You are Over Weight");
            weight_show.setText("Your Optimum weight should be "+opti_we+ " Kg");
            gain_show.setText("You need to loose atleast "+weight_g_l+ " Kg");
        }
    }
}

```



```

    }
    else {
        bmi_show.setText("Your BMI is "+bmi_result+" and You are Obese");
        weight_show.setText("Your Optimum weight should be "+opti_we+ " Kg");
        gain_show.setText("You need to loose atleast "+weight_g_l+ " Kg");
    } } }

```

Bmi.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=".BMI">
</androidx.constraintlayout.widget.ConstraintLayout>

```

Bmi.java

```

package com.example.bmicalculator;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.util.Log;
import java.math.BigDecimal;
import java.math.RoundingMode;
public class BMI extends AppCompatActivity
{
    @Override
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.bmi);
        String h = getIntent().getExtras().getString("h");
        int h_in = Integer.parseInt(h);
        Log.d("Height:", ""+h_in);
        String w = getIntent().getExtras().getString("w");
        int w_in = Integer.parseInt(w);
        Log.d("Height:", ""+h_in);
        double d = (double) h_in/100;
        Log.d("h:", ""+d);
        Log.d("h:", ""+d*d);
        double bmi11 = w_in/(d*d);
        BigDecimal bd = new BigDecimal(bmi11).setScale(2, RoundingMode.HALF_UP);
        Log.d("Height:", ""+bmi11);
        double bmi = bd.doubleValue();
        Intent intent=new Intent();
        intent.putExtra("BMI",String.valueOf(bmi));
        setResult(2, intent);
        finish();
    } }

```

AndroidManifest.xml

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    package="com.example.bmicalculator">
<application

```

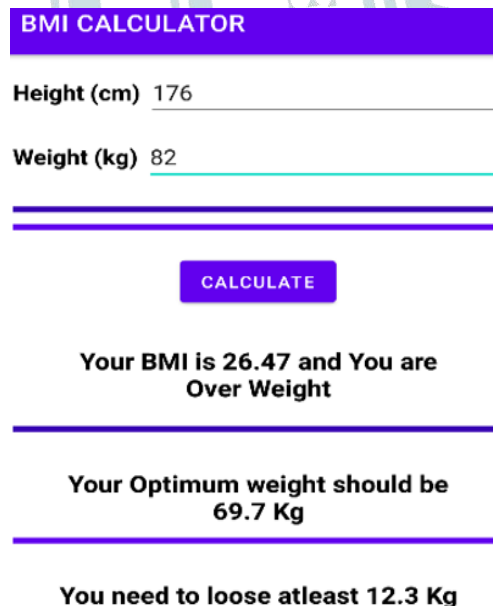
```

android:allowBackup="true"
android:dataExtractionRules="@xml/data_extraction_rules"
android:fullBackupContent="@xml/backup_rules"
android:icon="@mipmap/ic_launcher"
android:label="@string/app_name"
android:roundIcon="@mipmap/ic_launcher_round"
android:supportRtl="true"
android:theme="@style/Theme.BMICALCULATOR"
tools:targetApi="31">
<activity
    android:name=".MainActivity"
    android:exported="true">
    <intent-filter>
        <action android:name="android.intent.action.MAIN" />

        <category android:name="android.intent.category.LAUNCHER" />
    </intent-filter>
</activity>
<activity
    android:name=".BMI"
    android:exported="true">
    <intent-filter>
        <action android:name="act.sec" />
        <category android:name="android.intent.category.DEFAULT" />
    </intent-filter>
</activity>
</application></manifest>

```

Output:



BMI CALCULATOR

Height (cm) 176

Weight (kg) 82

CALCULATE

Your BMI is 26.47 and You are Over Weight

Your Optimum weight should be 69.7 Kg

You need to loose atleast 12.3 Kg

Payment Application: A company asked you to design a mobile application that help their workers to make sure that they received the accurate weekly total payment. The application should satisfy the following company policy:

1. If the worker done up to 39 hours, he/she will get paid based on their hourly rate. The formula is $\text{weekly payment} = \text{hourly rate} * \text{number of hours}$.
2. If the number of hours worked is up to 50 hours per week, then he/she will get paid 12% for the extra hours. The formula for this condition is: $\text{weekly payment} = \text{hourly rate} * 39 + (\text{hourly rate} * 1.12) * (\text{number of hours} - 39)$.
3. Finally, if the number of hours worked is more than 50 hours per week, then he/she will get paid overtime of 15% of their hourly rate for the hours above 50. The formula for such condition is: $\text{weekly payment} = \text{hourly rate} * 39 + (\text{hourly rate} * 1.12) * 11 + (\text{hourly rate} * 1.15) * (\text{number of hours} - 50)$

Based on the above policy, you are required to design the appropriate layout for the Payment application.

Source Code:

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    android:id="@+id/activity_main"
    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:paddingLeft="16dp"
    android:paddingRight="16dp"
    android:paddingTop="16dp"
    android:paddingBottom="16dp"
    tools:context=".MainActivity">
    <EditText
        android:id="@+id/editTextNumber"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginStart="43dp"
        android:layout_marginTop="286dp"
        android:layout_marginEnd="43dp"
        android:editable="true"
        android:ems="10"
        android:hint="Working hours"
        android:inputType="number"
        android:minHeight="48dp"
        android:selectAllOnFocus="true"
        android:textAppearance="@style/TextAppearance.AppCompat.Body1"
        tools:visibility="visible" />
    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerInParent="true"
        android:layout_marginStart="10dp"
        android:layout_marginTop="87dp"
```

```

        android:layout_marginBottom="10dp"
        android:text="Welcome to payment calculator"
        android:textAlignment="center"
        android:textAppearance="@style/TextAppearance.AppCompat.Large" />
<TextView
    android:id="@+id/textView2"
    android:layout_width="534dp"
    android:layout_height="53dp"
    android:layout_alignParentTop="true"
    android:layout_centerHorizontal="true"
    android:layout_marginStart="10dp"
    android:layout_marginTop="189dp"
    android:layout_marginBottom="10dp"
    android:text="Enter the number of working hours"
    android:textAlignment="center"
    android:textAppearance="@style/TextAppearance.AppCompat.Body2" />
<Button
    android:id="@+id/Add_button"
    style="@style/Widget.AppCompat.Button"
    android:layout_width="146dp"
    android:layout_height="48dp"
    android:layout_alignParentTop="true"
    android:layout_centerInParent="true"
    android:layout_marginStart="10dp"
    android:layout_marginTop="404dp"
    android:layout_marginEnd="10dp"
    android:layout_marginBottom="252dp"
    android:text="CALCULATE"
    android:textAppearance="@style/TextAppearance.AppCompat.Body2"
    tools:visibility="visible" /> </RelativeLayout>

```

MainActivity.java

```

package com.example.paymentapplication;
import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity implements View.OnClickListener
{
    EditText number1; // to get the input working hrs
    Button Add_button; // to create button event
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button Add_button=findViewById(R.id.Add_button); // calculate button object
        Add_button.setOnClickListener(this); //setting onClick listener
    }

    @Override
    public void onClick(View v) {
        double pay=0;
        double hr_rate = 10; // hourly pay fixed as 10$
        number1=(EditText) findViewById(R.id.editTextNumber); // Gets the input working hours
    }
}

```

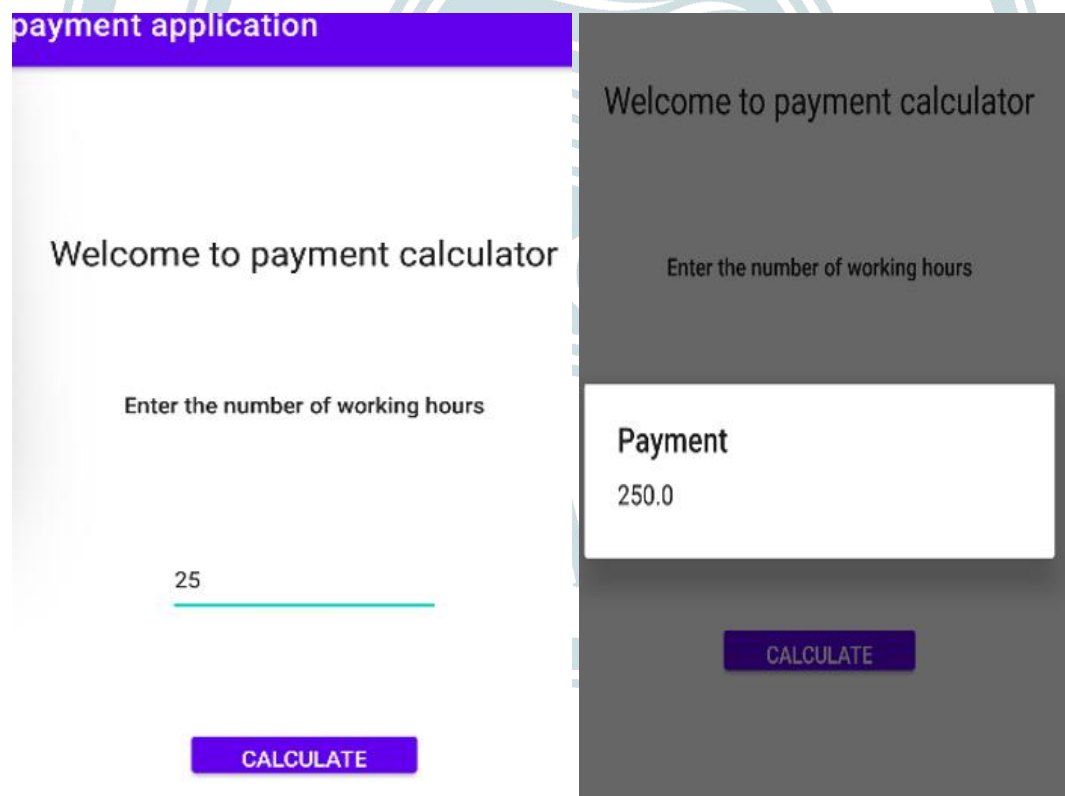


```

// get data which is in edittext, convert it to string    // using parse Double convert it to Double
type//
double num1 = Double.parseDouble(number1.getText().toString());
//calculate pay
if(num1 <= 39){
    pay = hr_rate * num1;
}
else if(num1 > 39 && num1 <= 50){
    pay = (hr_rate * 39)+((hr_rate*1.12)*(num1-39));
}
else{
    pay = (hr_rate * 39)+((hr_rate*1.12)*11)+((hr_rate*1.15)*(num1-50));
}
// To display the calculated pay
AlertDialog alert = new AlertDialog.Builder(this).create();
alert.setTitle("Payment");
alert.setMessage(String.valueOf(pay));
alert.setCancelMessage(null);
alert.show();
}
}

```

Output:



Source Code:**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">

<LinearLayout
    android:layout_width="409dp"
    android:layout_height="354dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">

    <EditText
        android:id="@+id/editTextTextPersonName"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="" />

    <Button
        android:id="@+id/button"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:onClick="onnext"
        android:text="NEXT" />

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

MainActivity.java

```
package com.example.valuepass2;
import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void onnext(View v) {
        Intent is = new Intent(this, secondactivity.class);
        startActivityForResult(is,1);
    }
}
```



```

    }
    @Override
    protected void onActivityResult(int rq, int rc, Intent data)
    {
        super.onActivityResult(rq,rc,data);
        EditText et;
        et = (EditText) findViewById(R.id.editTextTextPersonName);
        if(rc==RESULT_OK)
        {
            et.setText(data.getData().toString());
        }
    }
}

```

Second.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=".secondactivity">
    <LinearLayout
        android:layout_width="409dp"
        android:layout_height="354dp"
        android:orientation="vertical"
        tools:layout_editor_absoluteX="1dp"
        tools:layout_editor_absoluteY="1dp">
        <EditText
            android:id="@+id/editTextTextPersonName1"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:ems="10"
            android:inputType="textPersonName"
            android:text="" />
        <Button
            android:id="@+id/button"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:onClick="onassign"
            android:text="ASSIGN" />
    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>

```

Secondactivity.java

```

package com.example.valuepass2;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import androidx.appcompat.app.AppCompatActivity;
public class secondactivity extends AppCompatActivity {

```

```

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.second);
}
public void onassign(View v)
{
    EditText et;
    et=(EditText) findViewById(R.id.editTextTextPersonName1);
    Intent ir=new Intent();
    ir.setData(Uri.parse(""+et.getText().toString()));
    setResult(RESULT_OK,ir);
    finish();
}
}

```

AndroidManifest.xml

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    package="com.example.valuepass2">
    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportRtl="true"
        android:theme="@style/Theme.Valuepass2"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
        <activity
            android:name=".secondactivity"
            android:exported="true">
            <intent-filter>
                <action android:name="act.sec" />

                <category android:name="android.intent.category.DEFAULT" />
            </intent-filter>
        </activity>
    </application>
</manifest>

```

Output:

valuepass2	valuepass2
<u>android</u>	android
ASSIGN	NEXT



Source Code:**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">

<LinearLayout
    android:layout_width="409dp"
    android:layout_height="729dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">

    <EditText
        android:id="@+id/et1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="" />

    <EditText
        android:id="@+id/et2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="" />

    <Button
        android:id="@+id/button"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="calculate"
        android:onClick="onnext"/>

    <EditText
        android:id="@+id/et3"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="" />

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

MainActivity.java


```

package com.example.sum;
import androidx.annotation.Nullable;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
public class MainActivity extends AppCompatActivity {
    EditText et1,et2,et3;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        et1 = findViewById(R.id.et1);
        et2 = findViewById(R.id.et2);
        et3 = findViewById(R.id.et3);
    }
    public void onnext(View view) {

        Intent obj = new Intent(getApplicationContext(), secondactivity.class);
        obj.putExtra("num1", et1.getText().
            toString());
        obj.putExtra("num2", et2.getText().
            toString());
        startActivityForResult(obj, 1);
    }
    @Override
    protected void onActivityResult(int requestCode, int resultCode, @Nullable Intent data) {
        super.onActivityResult(requestCode, resultCode, data);
        et3.setText(data.getData().toString());
    }
}

```

Second.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=".secondactivity">

```

```

<LinearLayout
    android:layout_width="409dp"
    android:layout_height="729dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">

```

```

<TextView
    android:id="@+id/t1"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="" />

```



```

<TextView
    android:id="@+id/t2"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="" />

<Button
    android:id="@+id/button2"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="sum"
    android:onClick="onassign"/>
</LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>

```

Secondactivity.java

```

package com.example.sum;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;
public class secondactivity extends AppCompatActivity {
    TextView t1,t2;
    int n1,n2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.second);
        Intent obj2 = getIntent();
        t1 = findViewById(R.id.t1);
        t2 = findViewById(R.id.t2);
        t1.setText(obj2.getStringExtra("num1"));
        t2.setText(obj2.getStringExtra("num2"));
        n1 = Integer.parseInt(t1.getText().toString());
        n2 = Integer.parseInt(t2.getText().toString());
    }
    public void onassign(View v)
    {
        Intent obj3 = new Intent();
        obj3.setData(Uri.parse("" + Integer.toString(n1+n2)));
        setResult(RESULT_OK,obj3);
        finish();
    }
}

```

AndroidManifest.xml

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    package="com.example.sum">
    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"

```

```

android:fullBackupContent="@xml/backup_rules"
android:icon="@mipmap/ic_launcher"
android:label="@string/app_name"
android:roundIcon="@mipmap/ic_launcher_round"
android:supportRtl="true"
android:theme="@style/Theme.Sum"
tools:targetApi="31">
<activity
    android:name=".MainActivity"
    android:exported="true">
    <intent-filter>
        <action android:name="android.intent.action.MAIN" />

        <category android:name="android.intent.category.LAUNCHER" />
    </intent-filter>
</activity>
<activity
    android:name=".secondactivity"
    android:exported="true">
    <intent-filter>
        <action android:name="act.sec" />
        <category android:name="android.intent.category.DEFAULT" />
    </intent-filter>
</activity> </application></manifest>

```

Output:

Source Code:**menu.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:app="http://schemas.android.com/apk/res-auto"
      xmlns:android="http://schemas.android.com/apk/res/android">

    <item android:title="New"
          android:id="@+id/new1"/>
    <item android:title="Help"
          android:id="@+id/help"/>
    <item android:title="Exit"
          android:id="@+id/exit"/>
</menu>
```

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">

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Hello World!"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

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

MainActivity.java

```
package com.example.menudemo;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    @Override
    public boolean onCreateOptionsMenu(Menu menu)
```

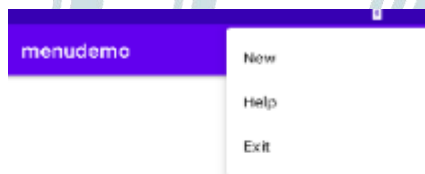
```

{
    getMenuInflater().inflate(R.menu.menu,menu);
    return true;
}
@Override
public boolean onOptionsItemSelected(MenuItem item)
{
    if(item.getTitle().toString().equals("Exit"))
    {
        finish();
        return true;

    }
    else if(item.getItemId()==R.id.new1)
    {
        Toast.makeText(this,"New Menu Clicked",Toast.LENGTH_SHORT).show();
    }
    else if(item.getItemId()==R.id.help)
    {
        Toast.makeText(this,"Help Menu Clicked",Toast.LENGTH_SHORT).show();
    }
    return true;
}
}

```

Output:



Source Code:**menu.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:app="http://schemas.android.com/apk/res-auto"
      xmlns:android="http://schemas.android.com/apk/res/android">
    <group
        android:id="@+id/File">
        <item android:id="@+id/new1"
            android:title="New"></item>
        <item android:id="@+id/exit"
            android:title="Exit"></item>
    </group>
    <group android:id="@+id/Help">
        <item android:id="@+id/about"
            android:title="About"></item>
    </group></menu>
```

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">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.groupedmenudemo;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {

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



```

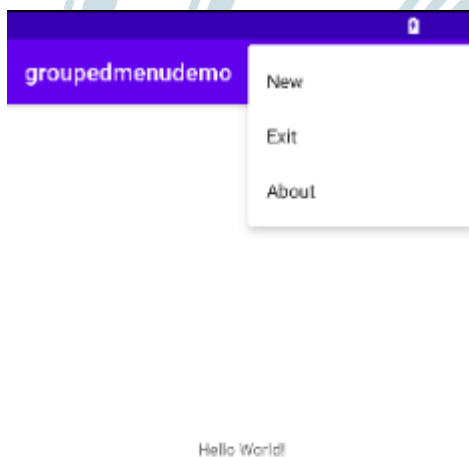
@Override
public boolean onCreateOptionsMenu(Menu menu) {
    getMenuInflater().inflate(R.menu.menu, menu);
    return true;
}

@Override
public boolean onOptionsItemSelected(MenuItem item) {
    if (item.getTitle().toString().equals("Exit")) {
        finish();
        return true;

    } else if (item.getItemId() == R.id.new1) {
        Toast.makeText(this, "New Menu Clicked", Toast.LENGTH_SHORT).show();
    } else if (item.getItemId() == R.id.Help) {
        Toast.makeText(this, "Help Menu Clicked", Toast.LENGTH_SHORT).show();
    }
    return true;
}
}

```

Output:



Source Code:**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">

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Hello World!"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

<LinearLayout
    android:layout_width="410dp"
    android:layout_height="730dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">

    <EditText
        android:id="@+id/e1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="" />

    <Button
        android:id="@+id/bright"
        android:layout_width="match_parent"
        android:layout_height="59dp"
        android:text="Right click" />

</LinearLayout>

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

MainActivity.java

```
package com.example.contextmenu;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.ContextMenu;
import android.view.MenuItem;
import android.view.View;
```

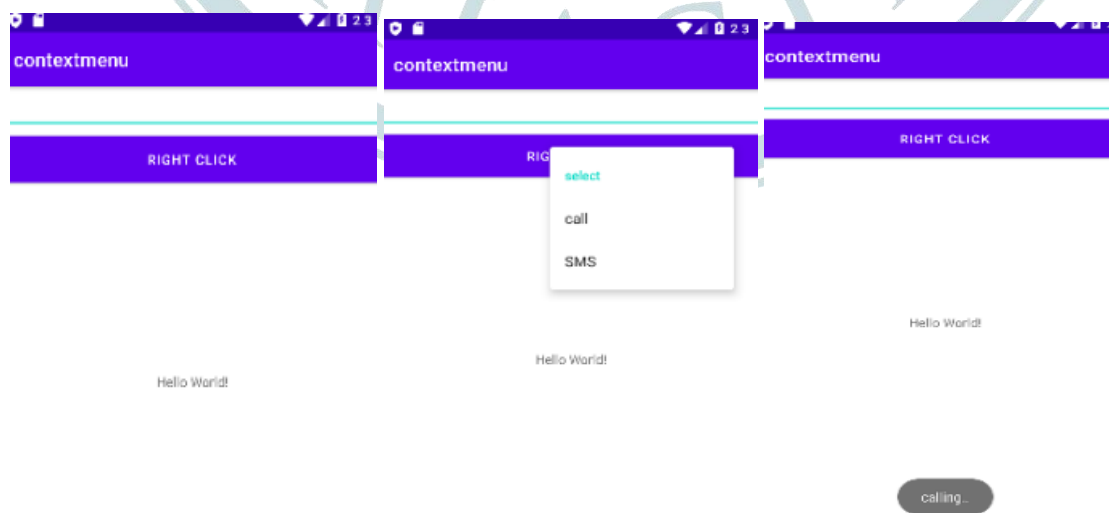
```

import android.widget.Button;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    Button btn;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        btn=(Button)findViewById(R.id.bright);
        registerForContextMenu(btn);
    }
    @Override
    public void onCreateContextMenu(ContextMenu menu, View v, ContextMenu.ContextMenuInfo
    menuInfo)
    {
        super.onCreateContextMenu(menu,v,menuInfo);
        menu.setHeaderTitle("select");
        menu.add("call");
        menu.add("SMS");
    }
    @Override
    public boolean onOptionsItemSelected(MenuItem item)
    {
        if(item.getTitle().toString().equals("call"))
        {
            Toast.makeText(this,"calling..",Toast.LENGTH_SHORT).show();
        }
        else if(item.getTitle().toString().equals("SMS"))
        {
            Toast.makeText(this,"sending...",Toast.LENGTH_SHORT).show();
        }
        return super.onOptionsItemSelected(item);
    }
}

```

Output:



Source Code:**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">

<LinearLayout
    android:layout_width="409dp"
    android:layout_height="729dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">

    <EditText
        android:id="@+id/e1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="" />

    <Button
        android:id="@+id/button4"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:onClick="onCall"
        android:text="CALL" />

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

```

MainActivity.java

```

package com.example.calldemo;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

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

```



```

    }
    public void onCall(View v)
    {
        Intent callIntent=new Intent(Intent.ACTION_CALL);
        EditText ed=(EditText) findViewById(R.id.e1);
        callIntent.setData(Uri.parse("tel:"+ed.getText().toString()));
        startActivity(callIntent);
    }
}

```

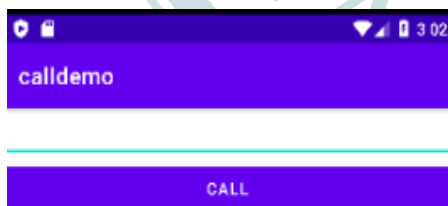
AndroidManifest.xml

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    package="com.example.calldemo">
<uses-permission android:name="android.permission.CALL_PHONE"/>
<application
    android:allowBackup="true"
    android:dataExtractionRules="@xml/data_extraction_rules"
    android:fullBackupContent="@xml/backup_rules"
    android:icon="@mipmap/ic_launcher"
    android:label="@string/app_name"
    android:roundIcon="@mipmap/ic_launcher_round"
    android:supportRtl="true"
    android:theme="@style/Theme.Calldemo"
    tools:targetApi="31">
<activity
    android:name=".MainActivity"
    android:exported="true">
    <intent-filter>
        <action android:name="android.intent.action.MAIN" />
        <category android:name="android.intent.category.LAUNCHER" />
    </intent-filter>
</activity>
</application>
</manifest>

```

Output:



Source Code:**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">
<LinearLayout
    android:layout_width="409dp"
    android:layout_height="726dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text=""
        android:id="@+id/t1"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
    <ListView
        android:id="@+id/lv"
        android:layout_width="match_parent"
        android:layout_height="454dp" />
    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java

```

package com.example.lview;
import androidx.appcompat.app.AppCompatActivity;
import android.app.ListActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import android.widget.TextView;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity implements
AdapterView.OnItemClickListener {

static final String []list=new String[] { "one","two","three"};
ListView listView;
TextView textView;
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);

```

```

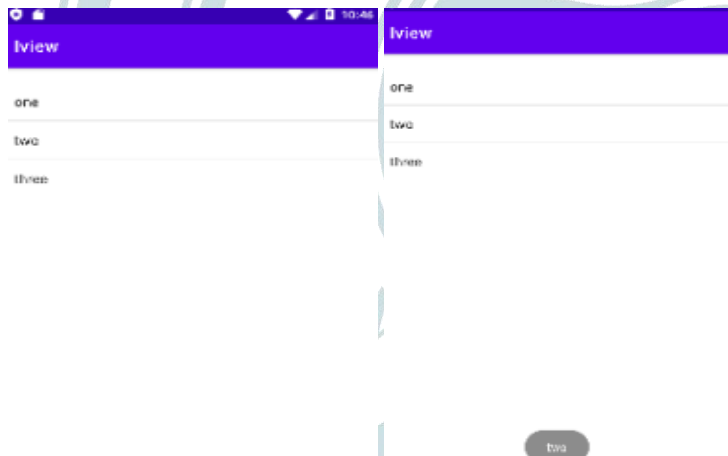
setContentView(R.layout.activity_main);
listView=(ListView)findViewById(R.id.lv);
textView=(TextView)findViewById(R.id.t1);
final ArrayAdapter<String> adapter=new
ArrayAdapter<String>(this,android.R.layout.simple_list_item_1,
    android.R.id.text1,list);
listView.setAdapter(adapter);

// setListAdapter(new ArrayAdapter<String>(this,R.layout.activity_main,list));
// ListView listView=getListView();
//listView.setTextFilterEnabled(true);
listView.setOnItemClickListener(this);

}
@Override
public void onItemClick(AdapterView<?> arg0, View arg1, int arg2, long arg3) {
    String s;
    TextView tv=(TextView)arg1;
    s=(String)tv.getText().toString();
    Toast.makeText(this,s,Toast.LENGTH_SHORT).show();
}
}

```

Output:



Source Code:**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">

<LinearLayout
    android:layout_width="407dp"
    android:layout_height="733dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">

    <Button
        android:id="@+id/b1"
        android:onClick="ongoogle"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="GOOGLE" />

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

MainActivity.java

```
package com.example.browseapp;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void ongoogle(View v)
    {
        Intent intent=new Intent(Intent.ACTION_VIEW);
        intent.setData(Uri.parse("http://www.google.com"));
        startActivity(intent);
    }
}
```

Output:



Source Code:**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">
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Hello World!"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
<LinearLayout
    android:layout_width="409dp"
    android:layout_height="354dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">
    <EditText
        android:id="@+id/et1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="" />
    <Button
        android:id="@+id/b1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="GO"
        android:onClick="onBrowseClick"/>
    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java

```

package com.example.browseapptext;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
public class MainActivity extends AppCompatActivity {
    EditText et1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}

```



```

}
public void onBrowseClick(View v) {
    et1=(EditText)findViewById(R.id.et1);
    String url = et1.getText().toString();
    Intent intent = new Intent(Intent.ACTION_VIEW);
    intent.setData(Uri.parse(url));
    startActivity(intent);
}
}

```

Output:

browseapptext

http://www.rajagiri.edu

GO



Application to search by different browsers. (App should contain the feature where the user should be able to choose the search engine of his choice).

Source Code:

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">
<LinearLayout
    android:layout_width="409dp"
    android:layout_height="729dp"
    android:orientation="vertical"
    app:layout_constraintEnd_toEndOf="parent"
    tools:layout_editor_absoluteY="1dp">
    <EditText
        android:id="@+id/e1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text=""
        android:hint="Enter keyword"/>
    <Button
        android:id="@+id/b1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:onClick="onGo"
        android:text="Go" />
    <RadioButton
        android:id="@+id/rdgoogle"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Google" />
    <RadioButton
        android:id="@+id/rdyahoo"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="yahoo" />
    <RadioButton
        android:id="@+id/rdbing"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Bing" />
    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.browse3keywordapp;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.RadioGroup;

public class MainActivity extends AppCompatActivity {
```

```
    RadioButton rdgoogle;
    RadioButton rdyahoo;
    RadioButton rdbing;
```

```
    @Override
```

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

```
    public void onGo(View v)
    {
```

```
        rdgoogle=(RadioButton) findViewById(R.id.rdgoogle);
        rdyahoo=(RadioButton) findViewById(R.id.rdyahoo);
        rdbing=(RadioButton) findViewById(R.id.rdbing);
        if(rdgoogle.isChecked())
        {
```

```
            String goog="https://www.google.com/search?q=";
            EditText e1=(EditText)findViewById(R.id.e1);
            String str1=e1.getText().toString();
            String res=goog+str1;
            Intent intent=new Intent(Intent.ACTION_VIEW);
            intent.setData(Uri.parse(res));
            startActivity(intent);
        }
```

```
        else if(rdyahoo.isChecked())
        {
```

```
            String
```

```
yah="https://in.search.yahoo.com/search;_ylt=Awr1SSbQpstiy00gLGG6HAX.;_ylc=X1MDMjExNDcyMzAwMgRfcgMyBGZyAwRmcjIDc2ItDG9wLXNIYXJjaARncHJpZANwOXNka1prNFFZaXFrYmFkS0d3cENBBG5fcNsdAMwBG5fc3VnZWxMARvcmlnaW4DaW4uc2VhcmNoLnIhaG9vLmNvbQRwb3MDMARwcXN0cgMEcHFzdHJsAzAEcXN0cmwDNwRxdWVyeQNmb290YmFsBHRfc3RtcAMxNjU3NTEzNzg0?p=";
```

```
            EditText e1=(EditText)findViewById(R.id.e1);
            String str1=e1.getText().toString();
            String res=yah+str1;
            Intent intent=new Intent(Intent.ACTION_VIEW);
            intent.setData(Uri.parse(res));
            startActivity(intent);
        }
```

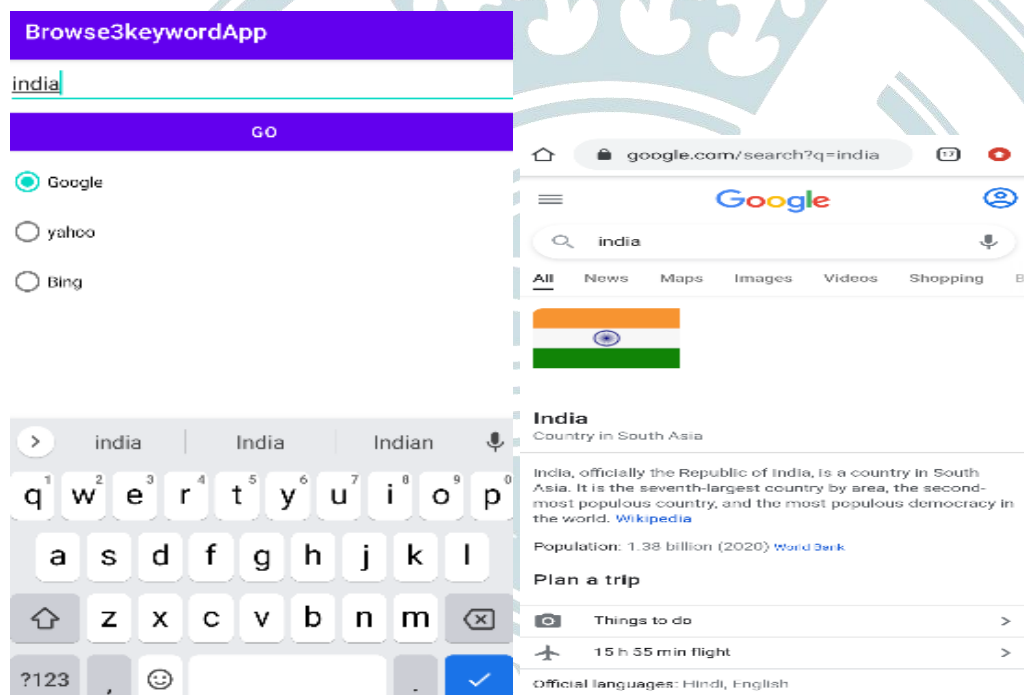
```
    }
    else
```

```

{
    String bing="https://www.bing.com/search?q=";
    EditText e1=(EditText)findViewById(R.id.e1);
    String str1=e1.getText().toString();
    String res=bing+str1;
    Intent intent=new Intent(Intent.ACTION_VIEW);
    intent.setData(Uri.parse(res));
    startActivity(intent);
}
}
}

```

Output:



Source Code:**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">
<LinearLayout
    android:layout_width="409dp"
    android:layout_height="729dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">
    <EditText
        android:id="@+id/e1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="" />
    <EditText
        android:id="@+id/e2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="" />
    <Button
        android:id="@+id/bLogin"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Login"
        android:onClick="onLogin"/>
    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

Mainactivity.java

```
package com.example.spdemo;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Context;
import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
public class MainActivity extends AppCompatActivity {
    EditText ed1,ed2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
```



```

        setContentView(R.layout.activity_main);
    }
    public void onLogin(View v)
    {
        ed1=(EditText) findViewById(R.id.e1);
        ed2=(EditText) findViewById(R.id.e2);
        SharedPreferences sp;
        sp=getSharedPreferences("SD", Context.MODE_PRIVATE);
        SharedPreferences.Editor ed=sp.edit();
        ed.putString("un",ed1.getText().toString());
        ed.putString("up",ed2.getText().toString());
        ed.commit();
        Intent in=new Intent(this,Sec.class);
        startActivity(in);
    }
}

```

Sec.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=".Sec">
<LinearLayout
    android:layout_width="409dp"
    android:layout_height="729dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">
<EditText
    android:id="@+id/e1"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPersonName"
    android:text="" />
<EditText
    android:id="@+id/e2"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPersonName"
    android:text="" />
<Button
    android:id="@+id/bClose"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Close"
    android:onClick="onClose"/>
</LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>

```

Sec.java

```

package com.example.spdemo;
import android.content.Context;

```

```

import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import androidx.appcompat.app.AppCompatActivity;
public class Sec extends AppCompatActivity {
    EditText ed1,ed2;
    SharedPreferences sp;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.sec);
        ed1=(EditText) findViewById(R.id.e1);
        ed2=(EditText) findViewById(R.id.e2);
        sp=getSharedPreferences("SD",Context.MODE_PRIVATE);
        ed1.setText(sp.getString("un","").toString());
        ed2.setText(sp.getString("up","").toString());
    }
    public void onClose(View v)
    {
        finish();
    }
}

```

AndroidManifest.xml

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    package="com.example.spdemo">
    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportRtl="true"
        android:theme="@style/Theme.SPDemo"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
        <activity
            android:name=".Sec"
            android:exported="true">
            <intent-filter>
                <action android:name="act.sec" />
                <category android:name="android.intent.category.DEFAULT" />
            </intent-filter>
        </activity>
    </application>
</manifest>

```

```
</activity>
</application>
</manifest>
```

Output:

SPDemo

android

android12

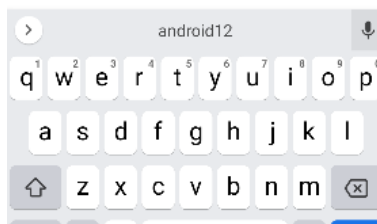
LOGIN

SPDemo

android

android12

CLOSE



Source Code:**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">
<LinearLayout
    android:layout_width="409dp"
    android:layout_height="729dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">
    <EditText
        android:id="@+id/e1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="" />
    <Button
        android:id="@+id/bHome"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Home"
        android:onClick="onHome"/>
    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

mainActivity.java

```
package com.example.smultiplepagesdemo;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Context;
import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
public class MainActivity extends AppCompatActivity {
    EditText ed1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void onHome(View v)
    {
        ed1=(EditText) findViewById(R.id.e1);
        SharedPreferences sp;
        sp=getSharedPreferences("HD", Context.MODE_PRIVATE);
```



```

        SharedPreferences.Editor ed=sp.edit();
        ed.putString("hv",ed1.getText().toString());
        ed.commit();
        Intent in=new Intent(this,Sec.class);
        startActivity(in);
    }
}

```

Sec.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=".Sec">
    <LinearLayout
        android:layout_width="409dp"
        android:layout_height="729dp"
        android:orientation="vertical"
        tools:layout_editor_absoluteX="1dp"
        tools:layout_editor_absoluteY="1dp">
        <Button
            android:id="@+id/bShow"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Show"
            android:onClick="onShow"/>
        </LinearLayout>
    </androidx.constraintlayout.widget.ConstraintLayout>

```

Sec.java

```

package com.example.spmultiplepagesdemo;
import android.content.Context;
import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import androidx.appcompat.app.AppCompatActivity;
public class Sec extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.sec);
    }
    public void onShow(View v)
    {
        Intent in=new Intent(this,Third.class);
        startActivity(in);
    }
}

```

Third.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=".Third">
    <LinearLayout
        android:layout_width="409dp"
        android:layout_height="729dp"
        android:orientation="vertical"
        tools:layout_editor_absoluteX="1dp"
        tools:layout_editor_absoluteY="1dp">
        <TextView
            android:id="@+id/t1"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="" />
        </LinearLayout>
    </androidx.constraintlayout.widget.ConstraintLayout>

```

Third.java

```

package com.example.spmultiplepagesdemo;
import android.content.Context;
import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;
public class Third extends AppCompatActivity {
    TextView tv1;
    SharedPreferences sp;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.third);
        tv1=(TextView) findViewById(R.id.t1);
        sp=getSharedPreferences("HD",Context.MODE_PRIVATE);
        tv1.setText(sp.getString("hv","").toString());
    }
}

```

Manifest.xml

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    package="com.example.spmultiplepagesdemo">
    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportRtl="true"

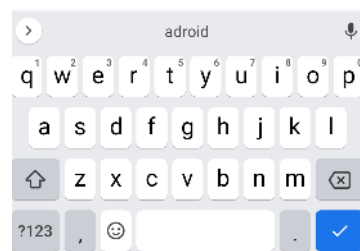
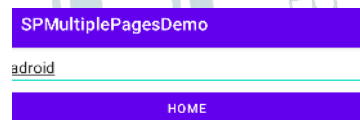
```

```

android:theme="@style/Theme.SPMultiplePagesDemo"
tools:targetApi="31">
<activity
    android:name=".MainActivity"
    android:exported="true">
    <intent-filter>
        <action android:name="android.intent.action.MAIN" />
        <category android:name="android.intent.category.LAUNCHER" />
    </intent-filter>
</activity>
<activity
    android:name=".Sec"
    android:exported="true">
    <intent-filter>
        <action android:name="act.sec" />
        <category android:name="android.intent.category.DEFAULT" />
    </intent-filter>
</activity>
<activity
    android:name=".Third"
    android:exported="true">
    <intent-filter>
        <action android:name="act.third" />
        <category android:name="android.intent.category.DEFAULT" />
    </intent-filter>
</activity>
</application>
</manifest>

```

Output:



Source Code:**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">

<LinearLayout
    android:layout_width="409dp"
    android:layout_height="729dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">

    <EditText
        android:id="@+id/e1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="" />

    <EditText
        android:id="@+id/e2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="" />

    <Button
        android:id="@+id/bsave"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Save"
        android:onClick="onSave"/>

    <Button
        android:id="@+id/bread"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Read"
        android:onClick="onRead"/>

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

Mainactivity.java

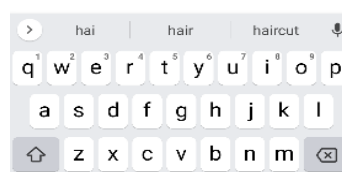
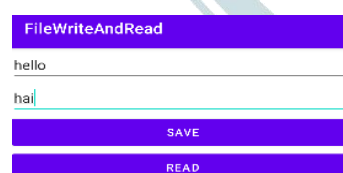
```
package com.example.filewriteandread;
import androidx.appcompat.app.AppCompatActivity;
```

```

import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import java.io.FileInputStream;
import java.io.FileNotFoundException;
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.InputStreamReader;
import java.io.OutputStreamWriter;
public class MainActivity extends AppCompatActivity {
    EditText ed1,ed2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        ed1=(EditText) findViewById(R.id.e1);
        ed2=(EditText) findViewById(R.id.e2);
    }
    public void onSave(View v) throws IOException {
        FileOutputStream fout;
        fout=openFileOutput(ed1.getText().toString(),0);
        OutputStreamWriter osw=new OutputStreamWriter(fout);
        osw.write(ed2.getText().toString());
        osw.flush();
        osw.close();
    }
    public void onRead(View v) throws IOException {
        FileInputStream fin;
        fin=openFileInput(ed1.getText().toString());
        InputStreamReader isw=new InputStreamReader(fin);
        char []b=new char[10];
        int n=isw.read(b,0,10);
        String str=new String(b,0,n);
        ed2.setText(str);
        isw.close();
    }
}

```

Output:



Source Code:

```
package com.example.threaddemo;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.os.Bundle;
import android.widget.Toast;
import java.util.concurrent.ExecutorService;
import java.util.concurrent.Executors;
public class MainActivity extends AppCompatActivity implements Runnable{
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        ExecutorService tasklist= Executors.newFixedThreadPool(50);
        tasklist.execute(this);
    }
    public void run()
    {
        try{
            for(int i=0;i<20;i++)
            {
                String threadName=Thread.currentThread().getName();
                System.out.println("Thread:" + threadName + i);
                try {
                    Thread.sleep(1000);
                }
                catch(Exception e)
                {
                    Toast.makeText(this,e.toString(),Toast.LENGTH_LONG).show();
                }
            }
        }
        catch(Exception x)
        {
            Toast.makeText(this,x.toString(),Toast.LENGTH_LONG).show();
        }
    }
}
```

Output:

Hello World!

Application to download a file using the given URL.**Source Code:****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">
<LinearLayout
    android:layout_width="409dp"
    android:layout_height="729dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">
    <EditText
        android:id="@+id/url"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter the url"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="" />
    <Button
        android:id="@+id/download"
        android:layout_width="match_parent"
        android:layout_height="99dp"
        android:text="Download"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/url"
        />
    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java

```

package com.example.download;
import androidx.appcompat.app.AppCompatActivity;
import android.app.DownloadManager;
import android.net.Uri;
import android.os.Bundle;
import android.os.Environment;
import android.view.View;
import android.webkit.CookieManager;
import android.webkit.URLUtil;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import java.util.Enumuration;
public class MainActivity extends AppCompatActivity {
    private EditText url;
    private Button download;

```

```

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    url = (EditText) findViewById(R.id.url);
    download = (Button) findViewById(R.id.download);
    download.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            String getUrl = url.getText().toString();
            DownloadManager.Request request = new DownloadManager.Request(Uri.parse(getUrl));
            String title = URLUtil.guessFileName(getUrl,null,null);
            request.setTitle(title);
            request.setDescription("Downloading File please wait.");
            String cookie = CookieManager.getInstance().getCookie(getUrl);
            request.addRequestHeader("cookie",cookie);

            request.setNotificationVisibility(DownloadManager.Request.VISIBILITY_VISIBLE_NOTIFY_COMPLETED);

            request.setDestinationInExternalPublicDir(Environment.DIRECTORY_DOWNLOADS,title);
            DownloadManager downloadManager =
            (DownloadManager) getSystemService(DOWNLOAD_SERVICE);
            downloadManager.enqueue(request);
            Toast.makeText(MainActivity.this,"Downloading
            Started",Toast.LENGTH_SHORT).show();

        }
    });
}

```

AndroidManifest.xml

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    package="com.example.download">
    <uses-permission android:name="android.permission.INTERNET"/>
    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportRtl="true"
        android:theme="@style/Theme.Download"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

```

</manifest>

Output:



The screenshot shows a mobile application interface. At the top, there is a status bar with the time 1:22, signal strength, and battery level. Below the status bar is a blue header with the word "download" in white. Under the header is a text input field with the placeholder text "Enter the url". Below the input field is a blue button with the word "DOWNLOAD" in white capital letters.



Source Code:**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">
<LinearLayout
    android:layout_width="414dp"
    android:layout_height="728dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">
    <Button
        android:id="@+id/button"
        android:onClick="onDownload"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="DOWNLOAD" />
    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.pbdemo;
import androidx.appcompat.app.AppCompatActivity;
import android.app.AlertDialog;
import android.os.Bundle;
import android.os.Handler;
import android.view.View;
public class MainActivity extends AppCompatActivity implements Runnable {
    ProgressDialog pbd;
    Handler h;
    int pv = 0;
    /** Called when the activity is first created. */
    @Overridepackage com.example.pbdemo;
import androidx.appcompat.app.AppCompatActivity;
import android.app.AlertDialog;
import android.os.Bundle;
import android.os.Handler;
import android.view.View;
public class MainActivity extends AppCompatActivity implements Runnable {
    ProgressDialog pbd;
    Handler h;
    int pv = 0;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}
```



```

public void run()
{
    try
    {
        while(pv<=100)
        {
            Thread.sleep(500);
            pv += 10;
            h.post(new Runnable()
            {
                public void run()
                {
                    pbd.setProgress(pv);
                }
            });
        }
        Thread.sleep(500);
        pbd.dismiss();
    }
    catch(Exception e)
    {
    }
}

public void onDownload(View v)
{
    pv = 0;
    h = new Handler();
    pbd = new ProgressDialog(v.getContext());
    pbd.setMax(100);
    pbd.setProgress(0);
    pbd.setCancelable(true);
    pbd.setMessage("File downloading ...");
    pbd.setProgressStyle(ProgressDialog.STYLE_HORIZONTAL);
    pbd.show();
    Thread t = new Thread((Runnable) this);
    t.start();
}

public void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
}

public void run()
{
    try
    {
        while(pv<=100)
        {
            Thread.sleep(500);
            pv += 10;
            h.post(new Runnable()
            {
                public void run()
                {
                    pbd.setProgress(pv);

```



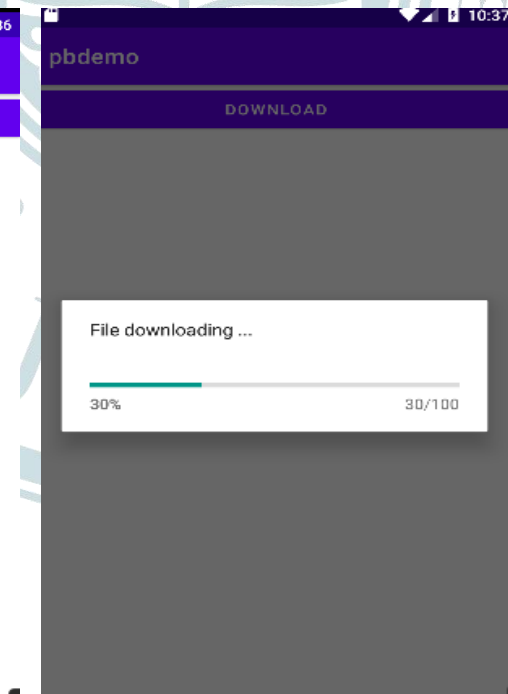
```

        }
    });
}
Thread.sleep(500);
pbd.dismiss();
}
catch(Exception e)
{

}
}
}
public void onDownload(View v)
{
    pv = 0;
    h = new Handler();
    pbd = new ProgressDialog(v.getContext());
    pbd.setMax(100);
    pbd.setProgress(0);
    pbd.setCancelable(true);
    pbd.setMessage("File downloading ...");
    pbd.setProgressStyle(ProgressDialog.STYLE_HORIZONTAL);
    pbd.show();
    Thread t = new Thread((Runnable) this);
    t.start();
}
}

```

Output:



Design a simple application to demonstrate Sqlite database operations (insert, delete, select, update).

Source Code:

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">

<LinearLayout
    android:layout_width="409dp"
    android:layout_height="729dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">
    <EditText
        android:id="@+id/e1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="" />
    <EditText
        android:id="@+id/e2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="" />
    <EditText
        android:id="@+id/e3"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="" />
    <Button
        android:id="@+id/button"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="INSERT"
        android:onClick="onsave"/>
    <Button
        android:id="@+id/button2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="FIND"
        android:onClick="onselect"/>
    <Button
        android:id="@+id/button3">
```

```

        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="DELETE"
        android:onClick="ondelete"/>
<Button
    android:id="@+id/button4"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Update"
    android:onClick="onupdate"/>
<Button
    android:id="@+id/button5"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="LIST ALL"
    android:onClick="onlist"/>
<TextView
    android:id="@+id/tv"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="TextView" />
</LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java

```

package com.example.helloapp;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.util.Log;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ListView;
import android.widget.TextView;
import android.widget.Toast;
import java.util.List;
public class MainActivity extends AppCompatActivity {
    EditText e1,e2,e3;
    CDB db;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        e1=(EditText) findViewById(R.id.e1);
        e2=(EditText) findViewById(R.id.e2);
        e3=(EditText) findViewById(R.id.e3);
        db=new CDB(this);
    }
    public void onsave(View v)

```

```

{
    String dn,d1;
    dn=e2.getText().toString();
    d1=e3.getText().toString();
    Toast.makeText(this, dn + d1, Toast.LENGTH_SHORT).show();
    db.addDept(dn,d1);
    e2.setText("");
    e3.setText("");
}
public void ondelete(View v)
{
    String dno = e1.getText().toString();
    db.deleteDept(Integer.parseInt(dno));
    e2.setText("");
    e3.setText("");
}
public void onupdate(View v)
{
    String dno =e1.getText().toString();
    String dn ,d1;
    dn = e2.getText().toString();
    d1 = e3.getText().toString();
    db.update(Integer.parseInt(dno),dn,d1);
    e2.setText("");
    e3.setText("");
}
public void onlist(View v)
{
    List<CDept> rec=db.getAllvalues();
    String str="";
    for(CDept cr : rec){
        String log="DId: "+cr.id +" ,DNAME: "+cr.dname+",DLOC: "+cr.dloc;
        log=log+"\n";
        str=str+log;
    }
    TextView t=(TextView) findViewById(R.id.tv);
    t.setText(str);
}
public void onselect(View v)
{
    String a[];
    try{
        String dno=e1.getText().toString();
        a=db.getOneDepartment(Integer.parseInt(dno));
        if(a[0] != "")
        {
            e2.setText(a[0]);
            e3.setText(a[1]);
        }
        else
        {
            Toast.makeText(this,"NOT FOUND..", Toast.LENGTH_SHORT).show();
        }
    }catch(Exception e)
    {
        System.out.println(e);
    }
}

```



```

        Log.d("select123",e.toString());
    }
}
}
}
CDB.java
package com.example.helloapp;
import android.content.ContentValues;
import android.content.Context;
import android.content.Intent;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
import android.net.Uri;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;
import java.util.ArrayList;
import java.util.List;
public class CDB extends SQLiteOpenHelper {
    private static final int DATABASE_VERSION=1;
    private static final String DATABASE_NAME="DMS";
    public CDB(Context context) {
        super(context, DATABASE_NAME, null, DATABASE_VERSION);
    }
    @Override
    public void onCreate(SQLiteDatabase arg0) {
        arg0.execSQL("create table TbDept(dno integer primary key autoincrement,dname text,dloc text)");
    }
    @Override
    public void onUpgrade(SQLiteDatabase arg0, int arg1, int arg2) {
        arg0.execSQL("DROP TABLE IF EXISTS TbDept");
        onCreate(arg0);
    }
    public void addDept(String dn,String d1)
    {
        try
        {
            SQLiteDatabase db=this.getWritableDatabase();
            ContentValues cv=new ContentValues();//key value pair
            cv.put("dname",dn);
            cv.put("dloc",d1);
            db.insert("TbDept",null,cv);
            db.close();
        }catch (Exception e)
        {
            System.out.println(e);
            Log.d("INSERT",e.toString());
        }
    }
    public String[] getOneDepartment(int dno)
    {
        String a[]=new String[2];

```



```

try
{
    SQLiteDatabase db=this.getReadableDatabase();
    Cursor cursor=db.query("TbDept",new String[] { "dno","dname","dloc"},"dno"+"=?",new
String[] {String.valueOf(dno) },null,null,null,null);
    if(cursor !=null && cursor.getCount() !=0)
    {
        cursor.moveToFirst();
        a[0]= cursor.getString(1);
        a[1]= cursor.getString(2);
    }
    else{
        a[0]="";
        a[1]="";
    }
} catch(Exception e)
{
    System.out.println(e);
    Log.d("SELECT :",e.toString());
}
return a;
}
public int deleteDept(int dno)
{
    SQLiteDatabase db= this.getWritableDatabase();
    return db.delete("TbDept","dno=?", new String[] {String.valueOf(dno)});
}
public void update(int dno,String dn,String d1)
{
    SQLiteDatabase db= this.getWritableDatabase();
    ContentValues values= new ContentValues();
    values.put("dname",dn);
    values.put("dloc",d1);
    db.update("TbDept",values,"dno=?",new String[] {String.valueOf(dno)});
    db.close();
}
public List<CDept> getAllvalues()
{
    List<CDept> recList=new ArrayList<CDept>();
    String selectQuery ="select * from TbDept";
    SQLiteDatabase db=this.getReadableDatabase();
    Cursor cursor=db.rawQuery(selectQuery,null);
    if(cursor.moveToFirst()){
        do {
            CDept rec=new CDept();
            rec.id=Integer.parseInt(cursor.getString(0));
            rec.dname=cursor.getString(1);
            rec.dloc= cursor.getString(2);
            recList.add(rec);
        }while(cursor.moveToNext());
    }
    return recList;
}
}

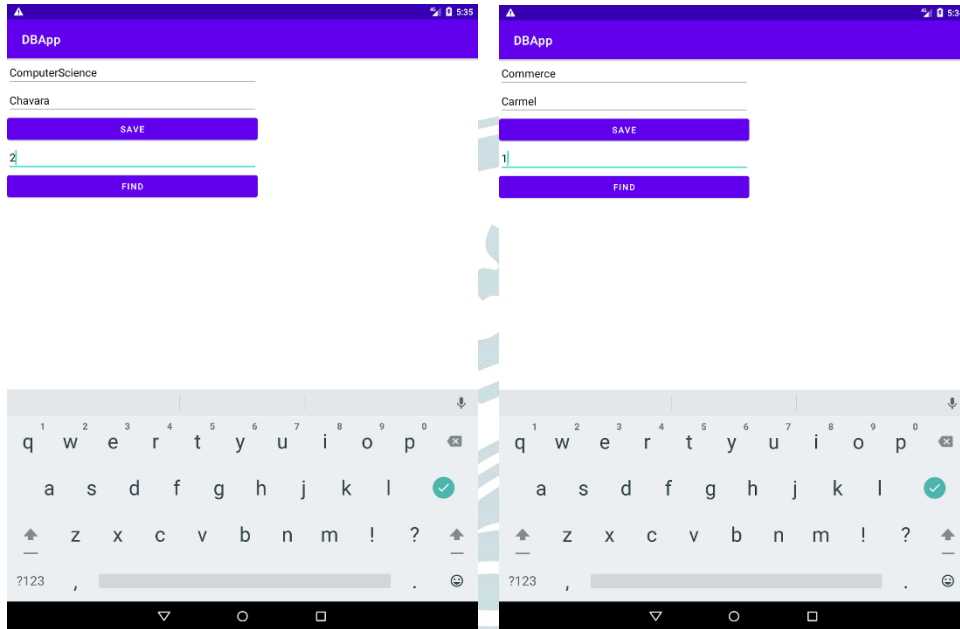
```

CDept.java

```
package com.example.helloapp;
```

```
public class CDept {  
    int id;  
    String dname;  
    String dloc;  
}
```

Output



Source Code:**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">
<LinearLayout
    android:layout_width="379dp"
    android:layout_height="680dp"
    android:orientation="vertical"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent">
<TextView
    android:id="@+id/tvHead"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="LOGIN" />
<EditText
    android:id="@+id/etUname"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPersonName"
    android:hint="Username" />
<EditText
    android:id="@+id/etPwr"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPassword"
    android:hint="Password"/>
<CheckBox
    android:id="@+id/cbRem"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Remember Me" />
<Button
    android:id="@+id/bLogin"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Login"
    android:onClick="onLogin"/>
<TextView
    android:id="@+id/tvRegisLink"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Register"
```

```

        android:onClick="onRegis"/>

<TextView
    android:id="@+id/tvExit"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Exit"
    android:onClick="onExit"
    android:textColor="#E91E63" />
</LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
MainActivity.java
package com.example.regform;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Context;
import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.CheckBox;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    CDB cdb;
    EditText un,pw;
    CheckBox rem;
    SharedPreferences sp;
    Intent obj;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        cdb = new CDB(this);
        un = findViewById(R.id.etUname);
        pw = findViewById(R.id.etPwr);
        rem = findViewById(R.id.cbRem);
    }
    public void onRegis(View view) {
        obj = new Intent(getApplicationContext(),RegisActivity.class);
        startActivity(obj);
    }
    public void onLogin(View view) {
        String a[];
        try{
            String uns = un.getText().toString();
            String pws = pw.getText().toString();
            if(uns.equals("admin") && pws.equals("admin"))
            {
                obj = new Intent(this, AdminActivity.class);
                startActivity(obj);
            }
            else
            {
                a = cdb.getOneUser(uns);

```



```

        if (a[0] != "" && a[1].equals(uns) && a[2].equals(pws))
        {
            sp = getSharedPreferences("SD", Context.MODE_PRIVATE);
            SharedPreferences.Editor ed = sp.edit();
            ed.putString("un", uns);
            ed.putString("pw", pws);
            ed.commit();
            obj = new Intent(this, ProfileActivity.class);
            startActivity(obj);
        }
        else
            Toast.makeText(this, "Invalid!", Toast.LENGTH_SHORT).show();
    }
} catch (Exception exception)
{
    Log.d("SELECT123", exception.toString());
}
}

public void onExit(View view) {
    finish();
}
}

```

activity_register.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=".RegisActivity">

<LinearLayout
    android:layout_width="373dp"
    android:layout_height="671dp"
    android:orientation="vertical"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent">
    <TextView
        android:id="@+id/tvHead"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="REGISTER" />
    <EditText
        android:id="@+id/etName"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:hint="Name" />
    <EditText
        android:id="@+id/etUname"

```



```

        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:hint="Username" />

<EditText
    android:id="@+id/etPwrd"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPassword"
    android:hint="Password"/>
<EditText
    android:id="@+id/etCpwr"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPassword"
    android:hint="Confirm Password"/>

<Button
    android:id="@+id/bRegis"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Register"
    android:onClick="onRegis"/>

<TextView
    android:id="@+id/tvBackLink"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Back"
    android:onClick="onBack"/>
</LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>

```

RegisActivity.java

```

package com.example.regform;
import android.content.Intent;
import android.database.sqlite.SQLiteException;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;
public class RegisActivity extends AppCompatActivity {
    CDB cdb;
    EditText nm,unm,pass,cpass;
    Intent obj;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_register);
        nm = findViewById(R.id.etName);
    }
}

```

```

unm = findViewById(R.id.etUname);
pass = findViewById(R.id.etPwr);
cpass = findViewById(R.id.etCpwr);
cdb = new CDB(this);
}

public void onRegis(View view) {
    if(unm.getText().toString()=="admin")
        throw new SQLiteException();
    try {
        if(pass.getText().toString().equals(cpass.getText().toString()))
        {
            cdb.addUser(nm.getText().toString(), unm.getText().toString(), pass.getText().toString());
            Toast.makeText(this, "Registered", Toast.LENGTH_SHORT).show();
            obj = new Intent(getApplicationContext(), MainActivity.class);
            startActivity(obj);
        }
        else
            Toast.makeText(this, "Password not Matching", Toast.LENGTH_SHORT).show();
    } catch (SQLiteException sqle)
    {
        Toast.makeText(this, "Cannot Be Blank/User Already
Exists", Toast.LENGTH_SHORT).show();
    }
}

public void onBack(View view) {
    obj = new Intent(getApplicationContext(), MainActivity.class);
    startActivity(obj);
}
}

```

activity_profile.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=".ProfileActivity">

```

```

<LinearLayout
    android:layout_width="362dp"
    android:layout_height="687dp"
    android:orientation="vertical"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent">

```

```

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

```

```

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal">

    <Button
        android:id="@+id/bChgpwr"
        android:layout_width="103dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="Change Password"
        android:onClick="onChangePw"/>

    <Button
        android:id="@+id/bLogout"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="Logout"
        android:onClick="onLogout"/>
</LinearLayout>
</LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>

```

ProfileActivity.java

```

package com.example.regform;
import android.content.Context;
import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;
public class ProfileActivity extends AppCompatActivity {
    TextView hello;
    SharedPreferences sp;
    SharedPreferences.Editor ed;
    Intent obj;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_profile);
        hello = findViewById(R.id.tvHello);
        sp = getSharedPreferences("SD", Context.MODE_PRIVATE);
        ed = sp.edit();
        hello.setText("Hello " + sp.getString("un",""));
    }
    public void onChangePw(View view) {
        obj = new Intent(getApplicationContext(),ChgPwrActivity.class);
        startActivity(obj);
    }
    public void onLogout(View view) {
        ed.clear();
        ed.commit();
        obj = new Intent(getApplicationContext(),MainActivity.class);
        startActivity(obj);
    }
}

```

```

    }
}
activity_chgpwr.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=".ChgPwrActivity">
<LinearLayout
    android:layout_width="409dp"
    android:layout_height="729dp"
    android:orientation="vertical"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent">
    <EditText
        android:id="@+id/etOld"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPassword"
        android:hint="Old Password"/>
    <EditText
        android:id="@+id/etNew"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPassword"
        android:hint="New Password"/>
    <EditText
        android:id="@+id/etCnew"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPassword"
        android:hint="Confirm New Password"/>
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal">

        <Button
            android:id="@+id/bUpdate"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="Update"
            android:onClick="onUpdate"/>

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

```



```

        android:layout_weight="1"
        android:text="Back"
        android:onClick="onBack"/>
    </LinearLayout>
</LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>

```

ChgPwrActivity.java

```

package com.example.regform;
import android.content.Context;
import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;

public class ChgPwrActivity extends AppCompatActivity {
    CDB cdb;
    SharedPreferences sp;
    String un,pw;
    EditText opw,npw,cpw;
    Intent obj;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_chgpwr);
        cdb = new CDB(this);
        sp = getSharedPreferences("SD", Context.MODE_PRIVATE);
        un = sp.getString("un","");
        pw = sp.getString("pw","");
        opw = findViewById(R.id.etOld);
        npw = findViewById(R.id.etNew);
        cpw = findViewById(R.id.etCnew);
    }
    public void onUpdate(View view) {
        String o,n,c;
        o = opw.getText().toString();
        n = npw.getText().toString();
        c = cpw.getText().toString();
        if(o.equals(pw) && n.equals(c))
        {
            cdb.update(un,n);
            Toast.makeText(this,"Password Changed!",Toast.LENGTH_SHORT).show();
            obj = new Intent(this,ProfileActivity.class);
            startActivity(obj);
        }
        else
            Toast.makeText(this,"Invalid!",Toast.LENGTH_SHORT).show();
    }
    public void onBack(View view) {
        obj = new Intent(this,ProfileActivity.class);
        startActivity(obj);
    }
}

```


activity_admin.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=".AdminActivity">
<LinearLayout
    android:layout_width="377dp"
    android:layout_height="691dp"
    android:orientation="vertical"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent">
    <TextView
        android:id="@+id/tvHead"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="ID\t\t\t\t\tName\t\t\t\t\tUserName\t\t\t\t\tPassword"/>
    <TextView
        android:id="@+id/tvList"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" />
    <Button
        android:id="@+id/bLogout"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Logout"
        android:onClick="onLogout"/>
    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

```
AdminActivity.java
package com.example.regform;
import android.content.Context;
import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;

import java.util.List;
public class AdminActivity extends AppCompatActivity {
    CDB cdb;
    TextView th,tl;
    String str;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_admin);
```



```

        db.insert("TbUser",null,cv);
        db.close();
    }
    catch(Exception exception)
    {
        System.out.println(exception);
        Log.d("INSERT",exception.toString());
    }
}

public String[] getOneUser(String uname)
{
    String[] a = new String[3];
    try{
        SQLiteDatabase db = this.getReadableDatabase();
        Cursor cursor = db.query("TbUser",new String[]{"id","name","uname","pass"},"uname" +
"=?", new String[]{uname},null,null,null,null);
        if(cursor != null && cursor.getCount() != 0)
        {
            cursor.moveToFirst();
            a[0] = cursor.getString(1);
            a[1] = cursor.getString(2);
            a[2] = cursor.getString(3);
        }
        else
        {
            a[0] = "";
            a[1] = "";
            a[2] = "";
        }
    }catch (Exception exception)
    {
        System.out.println(exception);
        Log.d("SELECT",exception.toString());
    }
    return a;
}

public int deleteUser(int id)
{
    SQLiteDatabase db = this.getWritableDatabase();
    return db.delete("TbUser","id=?",
        new String[]{String.valueOf(id)});
}

public void update(String un,String p)
{
    SQLiteDatabase db =this.getWritableDatabase();
    ContentValues values = new ContentValues();
    values.put("pass",p);
    db.update("TbUser",values,"uname = ?",new String[]{un});
    db.close();
}

public List<CUser> getAllvalues()
{
    List<CUser> recList = new ArrayList<CUser>();
    String selectquery = "SELECT * from TbUser";
    SQLiteDatabase db = this.getReadableDatabase();
    Cursor cursor = db.rawQuery(selectquery,null);

```

```

if(cursor.moveToFirst())
{
    do
    {
        CUser rec = new CUser();
        rec.id = Integer.parseInt(cursor.getString(0));
        rec.name = cursor.getString(1);
        rec.uname = cursor.getString(2);
        rec.pass = cursor.getString(3);
        recList.add(rec);
    }while(cursor.moveToNext());
}
return recList;
}
}

```

CUser.java

```

package com.example.regform;
public class CUser {
    int id;
    String name;
    String uname;
    String pass;
}

```

Output:

dbapp	dbapp
1	1
anu	
delhi	
INSERT	INSERT
FIND	FIND

dbapp	dbapp
1	8
anu	rajagiri
delhi	kochi kalamassery
INSERT	INSERT
FIND	FIND
	DELETE
	UPDATE

dbapp

8

INSERT

FIND

DELETE

UPDATE

Not found..

dbapp

INSERT

FIND

DELETE

UPDATE

LIST ALL

Did: 2 ,DNAME: abc,DLOC: delhi
 Did: 3 ,DNAME: abc,DLOC: kerala
 Did: 4 ,DNAME: abcd,DLOC: kerala
 Did: 5 ,DNAME: abc,DLOC: delhi
 Did: 6 ,DNAME: anu,DLOC: thrissur
 Did: 7 ,DNAME: manu,DLOC: kozhikode
 Did: 9 ,DNAME: rajagiri,DLOC: kochi
 Did: 10 ,DNAME: rajagiri,DLOC: kochi
 Did: 11 ,DNAME: rajagiri,DLOC: kochi



Source Code:**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">
<LinearLayout
    android:layout_width="409dp"
    android:layout_height="354dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">
    <TextView
        android:id="@+id/t1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="TextView" />
    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.jsonparse;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.TextView;
import org.json.JSONObject;
public class MainActivity extends AppCompatActivity {
    public static final String json_string="{\"employee\":{\"name\":\"sachin\",\"salary\":560000}}";
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        TextView textview1=(TextView) findViewById(R.id.t1);
        try{
            JSONObject emp=(new JSONObject(json_string)).getJSONObject("employee");
            String empname=emp.getString("name");
            int empsalary=emp.getInt("salary");
            String str="EMPLOYEE NAME:"+empname+"\n"+"EMPLOYEE Salary:"+empsalary;
            textview1.setText(str);
        }catch(Exception e)
        {
            System.out.println(e);
        }
    }
}
```

Output:

jsonparse

EMPLOYEE NAME:sachin
EMPLOYEE Salary:560000



Source Code:**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">
<LinearLayout
    android:layout_width="409dp"
    android:layout_height="729dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">
<TableLayout
    android:id="@+id/tableLayout1"
    android:layout_width="fill_parent"
    android:layout_height="317dp">
<TableRow
    android:id="@+id/tableRow1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content">
<TextView
    android:id="@+id/textView1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="URL : "
    android:textAppearance="?android:attr/textAppearanceMedium" />
<EditText
    android:id="@+id/etURL"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="https://www.w3schools.com/xml/note.xml">
    <requestFocus />
</EditText>
</TableRow>
<TableRow
    android:id="@+id/tableRow21"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content">
<Button
    android:id="@+id/bShow"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="onShow"
    android:text="Show" />
</TableRow>
<TableRow
    android:id="@+id/tableRow2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content">

```

```

<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="To : "
    android:textAppearance="?android:attr/textAppearanceMedium" />
<EditText
    android:id="@+id/etT"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content" />
</TableRow>
<TableRow
    android:id="@+id/tableRow3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content" >
    <TextView
        android:id="@+id/textView3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="From : "
        android:textAppearance="?android:attr/textAppearanceMedium" />
    <EditText
        android:id="@+id/etL"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" />
</TableRow>
<TableRow
    android:id="@+id/tableRow4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content" >
    <TextView
        android:id="@+id/textView4"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Heading : "
        android:textAppearance="?android:attr/textAppearanceMedium" />
    <EditText
        android:id="@+id/etD"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" />
</TableRow>
<TableRow
    android:id="@+id/tableRow5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content" >
    <TextView
        android:id="@+id/textView5"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Content : "
        android:textAppearance="?android:attr/textAppearanceMedium" />
    <EditText
        android:id="@+id/etC"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" />
</TableRow>

```



```

</TableLayout>

<WebView
    android:id="@+id/webView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content" />
</LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java

```

package com.example.rssfeeddemo;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.webkit.WebView;
import android.widget.EditText;
import android.widget.Toast;
import org.xmlpull.v1.XmlPullParser;
import org.xmlpull.v1.XmlPullParserFactory;
import java.io.InputStream;
import java.net.HttpURLConnection;
import java.net.URL;

public class MainActivity extends AppCompatActivity {
    EditText e1,e2,e3,e4,e5;
    String ur;
    String f,t,h,c;
    public volatile boolean parsingComplete = true;
    private XmlPullParserFactory xmlFactoryObject;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void onShow(View v)
    {
        Log.d("Here", "First");
        WebView w1=(WebView)findViewById(R.id.webView);
        e1 = (EditText)findViewById(R.id.etURL);
        e2 = (EditText)findViewById(R.id.etT);
        e3 = (EditText)findViewById(R.id.etL);
        e4 = (EditText)findViewById(R.id.etD);
        e5 = (EditText)findViewById(R.id.etC);
        ur = e1.getText().toString();
        //w1.loadUrl(ur);
        Log.d("Here1", "Second");
        Thread thread = new Thread(new Runnable(){
            public void run() {

                try {
                    URL url = new URL(ur);
                    HttpURLConnection conn = (HttpURLConnection) url.openConnection();
                    conn.setReadTimeout(10000);
                    conn.setConnectTimeout(15000);

```



```

        conn.setRequestMethod("GET");
        conn.setDoInput(true);
        conn.connect();
        InputStream stream = conn.getInputStream();
        xmlFactoryObject = XmlPullParserFactory.newInstance();
        XmlPullParser myparser = xmlFactoryObject.newPullParser();
        myparser.setFeature(XmlPullParser.FEATURE_PROCESS_NAMESPACES, false);
        myparser.setInput(stream, null);
        Log.d("Count", "" + stream.available());
        parseXMLAndExtract(myparser);

        stream.close();
    }
    catch (Exception e) {
        Log.d("Error",e.toString());
    }
}
});
Log.d("Here2", "Third");
thread.start();
Log.d("Here3", "Fourth");
while(this.parsingComplete)
;
Log.d("Here4", "Fifth");
e2.setText(t);
e3.setText(f);
e4.setText(h);
e5.setText(c);
}
public void parseXMLAndExtract(XmlPullParser myParser)
{
    int event;
    String text=null;
    String test = "";
    try
    {
        event = myParser.getEventType();
        while (event != XmlPullParser.END_DOCUMENT)
        {
            String name=myParser.getName();
            test = test + name + "\n";
            Log.d("TEST", test,null);
            switch (event)
            {
                case XmlPullParser.START_TAG:
                    break;
                case XmlPullParser.TEXT:
                    text = myParser.getText();
                    test = test + text + "\n";
                    break;
                case XmlPullParser.END_TAG:
                    if(name.equals("to"))
                    {
                        t = text;
                    }
                    else if(name.equals("from"))

```

```

        {
            f = text;
        }
        else if(name.equals("heading"))
        {
            h = text;
        }
        else if(name.equals("body"))
        {
            c = text;
        }
        else
        {
        }
        break;
    }
    event = myParser.next();
}
this.parsingComplete = false;
//Toast.makeText(this, test, 3).show();
System.out.println("DONEDONE");
}
catch (Exception e)
{
    Toast.makeText(this,e.getMessage(), Toast.LENGTH_SHORT).show();
}
}
}

```

Strings.xml

```

<resources>
    <string name="app_name">crfeed</string>
    <string name="hello">Hello</string>
</resources>

```

AndroidManifest.xml

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    package="com.example.rssfeeddemo">
<uses-permission android:name="android.permission.INTERNET"/>
<application
    android:allowBackup="true"
    android:dataExtractionRules="@xml/data_extraction_rules"
    android:fullBackupContent="@xml/backup_rules"
    android:icon="@mipmap/ic_launcher"
    android:label="@string/app_name"
    android:roundIcon="@mipmap/ic_launcher_round"
    android:supportRtl="true"
    android:theme="@style/Theme.Rssfeeddemo"
    tools:targetApi="31">
<activity
    android:name=".MainActivity"
    android:exported="true">
<intent-filter>
    <action android:name="android.intent.action.MAIN" />

```

```
<category android:name="android.intent.category.LAUNCHER" />
</intent-filter>
</activity>
</application>
</manifest>
```

Output:

rssfeeddemo

URL : <https://www.w3schools.com/xml/note.x>

SHOW

To : Tove

From : Jani

Heading : Reminder

Content : Don't forget me this weekend!

Source Code:**activity_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:orientation="vertical" >
    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Sending Mail Example"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:textSize="30dp" />
    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Rajagiri Email "
        android:textColor="#ff87ff09"
        android:textSize="30dp"
        android:layout_alignRight="@+id/imageButton" />
    <Button
        android:id="@+id/sendEmail"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:onClick="onCompose"
        android:text="Compose"/>
</LinearLayout>
```

Mainactivity.java

```
package com.example.email;
import android.app.Activity;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.Toast;
public class MainActivity extends Activity {
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void onCompose(View v)
    {
        sendEmail();
    }
    protected void sendEmail() {
        Log.i("Send email", "");
    }
}
```

```

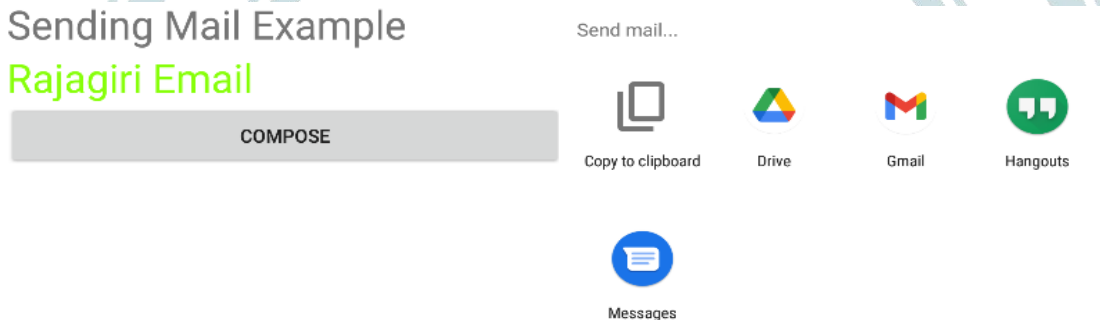
String[] TO = {" "};
String[] CC = {" "};
Intent emailIntent = new Intent(Intent.ACTION_SEND);
emailIntent.setData(Uri.parse("mailto:"));
emailIntent.setType("text/plain");
emailIntent.putExtra(Intent.EXTRA_EMAIL, TO);
emailIntent.putExtra(Intent.EXTRA_CC, CC);
emailIntent.putExtra(Intent.EXTRA_SUBJECT, "Your subject");
emailIntent.putExtra(Intent.EXTRA_TEXT, "Email message goes here");
try {
    startActivity(Intent.createChooser(emailIntent, "Send mail..."));
    finish();
    Log.i("Finished sending email", "");
} catch (android.content.ActivityNotFoundException ex) {
    Toast.makeText(MainActivity.this, "There is no email client installed.",
Toast.LENGTH_SHORT).show();
}
}
}

```

Output:

Sending Mail Example

Rajagiri Email



Source Code:**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">
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Hello World!"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
<LinearLayout
    android:layout_width="409dp"
    android:layout_height="354dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">
    <Button
        android:id="@+id/b1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:onClick="ontextspeech"
        android:text="Button" />
    <EditText
        android:id="@+id/editTextTextPersonName"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="Name" />
    </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>

```

Mainactivity.java

```

package com.example.speechdemo;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.speech.tts.TextToSpeech;
import android.view.View;
import android.widget.EditText;
import java.util.Locale;
public class MainActivity extends AppCompatActivity {
    TextToSpeech t1;
    EditText ed1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {

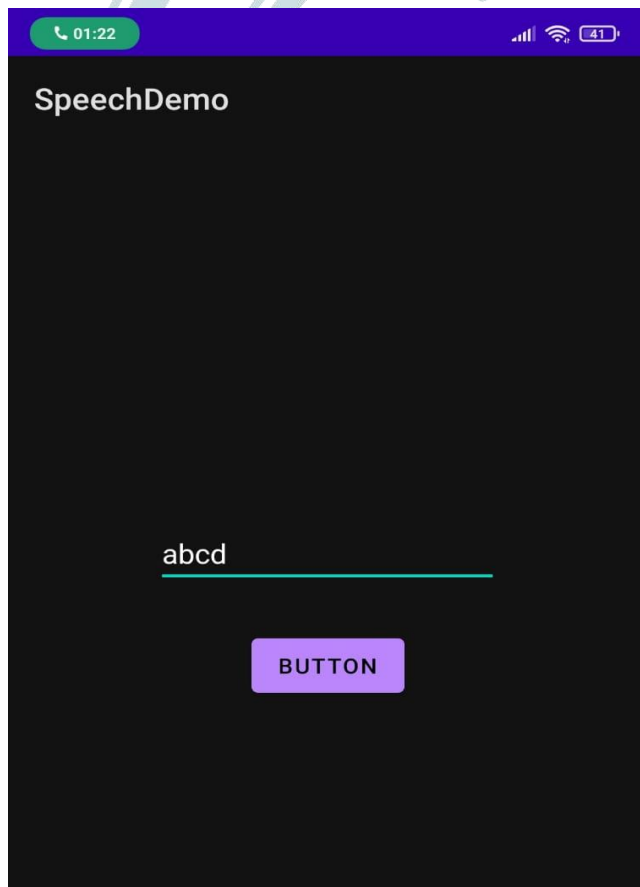
```

```

super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
t1=new TextToSpeech(getApplicationContext(), new TextToSpeech.OnInitListener() {
    @Override
    public void onInit(int status) {
        if(status !=TextToSpeech.ERROR)
        {
            t1.setLanguage(Locale.UK);
        }
    }
});
}
public void ontextspeech(View v)
{
    ed1=(EditText) findViewById(R.id.editTextTextPersonName);
    String str=ed1.getText().toString();
    t1.speak(str,TextToSpeech.QUEUE_FLUSH,null);
}
}

```

Output:



Source Code:**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">
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Hello World!"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
<LinearLayout
    android:layout_width="409dp"
    android:layout_height="354dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">
<Button
    android:id="@+id/button1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentBottom="true"
    android:layout_centerHorizontal="true"
    android:text="Take a Photo" >
</Button>
<ImageView
    android:id="@+id/imageView1"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:layout_above="@+id/button1"
    android:layout_alignParentTop="true"
    android:src="@drawable/ic_launcher_background" >
</ImageView>
</LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>

```

Mainactivity.java

```

package com.example.camerademo;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.graphics.Bitmap;
import android.os.Bundle;
import android.view.Menu;
import android.view.View;
import android.widget.Button;
import android.widget.ImageView;

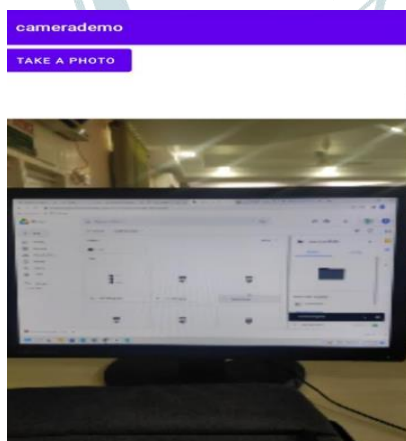
```

```

public class MainActivity extends AppCompatActivity {
    private static final int CAMERA_REQUEST = 1888;
    ImageView imageView;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        imageView = (ImageView) this.findViewById(R.id.imageView1);
        Button photoButton = (Button) this.findViewById(R.id.button1);
        photoButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent cameraIntent = new
                Intent(android.provider.MediaStore.ACTION_IMAGE_CAPTURE);
                startActivityForResult(cameraIntent, CAMERA_REQUEST);
            }
        });
    }
    protected void onActivityResult(int requestCode, int resultCode, Intent data) {
        if (requestCode == CAMERA_REQUEST) {
            Bitmap photo = (Bitmap) data.getExtras().get("data");
            imageView.setImageBitmap(photo);
        }
    }
    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the action bar if it is present.
        //getMenuInflater().inflate(R.menu.activity_main, menu);
        return true;
    }
}

```

Output:



Source Code:**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">
<LinearLayout
    android:layout_width="409dp"
    android:layout_height="354dp"
    android:orientation="vertical"
    tools:layout_editor_absoluteX="1dp"
    tools:layout_editor_absoluteY="1dp">
<TextView
    android:id="@+id/textview"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Hello World!"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
</LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

Mainactivity.java

```
package com.example.shakedemo;
import androidx.appcompat.app.AppCompatActivity;
import android.graphics.Color;
import android.hardware.Sensor;
import android.hardware.SensorEvent;
import android.hardware.SensorEventListener;
import android.hardware.SensorManager;
import android.os.Bundle;
import android.view.View;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity implements SensorEventListener {
    private SensorManager sensorManager;
    private boolean isColor = false;
    private View view;
    private long lastUpdate;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        view = findViewById(R.id.textview);
        view.setBackgroundColor(Color.GREEN);
    }
}
```



```

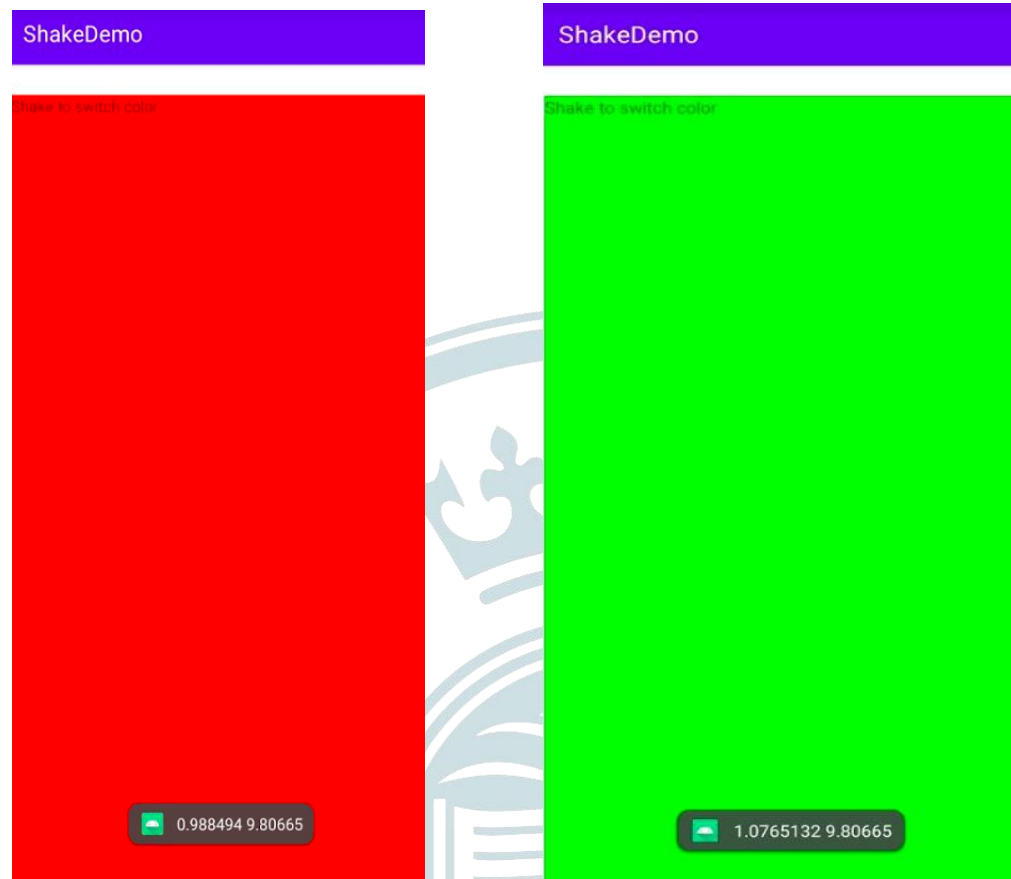
        sensorManager = (SensorManager) getSystemService(SENSOR_SERVICE);
        lastUpdate = System.currentTimeMillis();
    }
    //overriding two methods of SensorEventListener
    @Override
    public void onAccuracyChanged(Sensor sensor, int accuracy) {}
    @Override
    public void onSensorChanged(SensorEvent event) {
        if (event.sensor.getType() == Sensor.TYPE_ACCELEROMETER) {
            getAccelerometer(event);
        }
    }
    private void getAccelerometer(SensorEvent event) {
        float[] values = event.values;
        // Movement
        float x = values[0];
        float y = values[1];
        float z = values[2];
        float accelerationSquareRoot = (x * x + y * y + z * z)
            / (SensorManager.GRAVITY_EARTH * SensorManager.GRAVITY_EARTH);
        long actualTime = System.currentTimeMillis();
        Toast.makeText(getApplicationContext(),String.valueOf(accelationSquareRoot)+" "+
            SensorManager.GRAVITY_EARTH, Toast.LENGTH_SHORT).show();

        if (accelationSquareRoot >= 2) //it will be executed if you shuffle
        {
            if (actualTime - lastUpdate < 200) {
                return;
            }
            lastUpdate = actualTime;//updating lastUpdate for next shuffle
            if (isColor) {
                view.setBackgroundColor(Color.GREEN);
            } else {
                view.setBackgroundColor(Color.RED);
            }
            isColor = !isColor;
        }
    }
    @Override
    protected void onResume() {
        super.onResume();
        // register this class as a listener for the orientation and
        // accelerometer sensors

        sensorManager.registerListener(this,sensorManager.getDefaultSensor(Sensor.TYPE_ACCELEROMETER),
            SensorManager.SENSOR_DELAY_NORMAL);
    }
    @Override
    protected void onPause() {
        // unregister listener
        super.onPause();
        sensorManager.unregisterListener(this);
    }

```

}
Output:



Source Code:**activity_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:orientation="vertical" >
    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="@string/hello" />
    <Button
        android:id="@+id/button1"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Start" />
    <Button
        android:id="@+id/button2"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Stop" />
</LinearLayout>
```

MyService.java

```
package com.pg101.cpg101;
import android.app.Service;
import android.content.Intent;
import android.os.IBinder;
import android.widget.Toast;
public class MyService extends Service {
    @Override
    public IBinder onBind(Intent arg0) {
        return null;
    }
    @Override
    public int onStartCommand(Intent intent, int flags, int startId) {
        // We want this service to continue running until it is explicitly
        // stopped, so return sticky.
        Toast.makeText(this, "Service Started", Toast.LENGTH_LONG).show();
        return START_STICKY;
        /*
        In this method, you returned the constant START_STICKY so that
        the service will continue to run until it is explicitly stopped.
        */
    }

    @Override
    public void onDestroy() {
        super.onDestroy();
        Toast.makeText(this, "Service Destroyed", Toast.LENGTH_LONG).show();
    }
}
```

Mainactivity.java

```

package com.pg101.cpg101;
import android.app.Activity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

public class PG101Activity extends Activity {
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        Button bs = (Button)findViewById(R.id.button1);
        Button be = (Button)findViewById(R.id.button2);
        bs.setOnClickListener(new View.OnClickListener() {

            public void onClick(View v) {
                startService(new Intent("my.service2"));
            }

        });

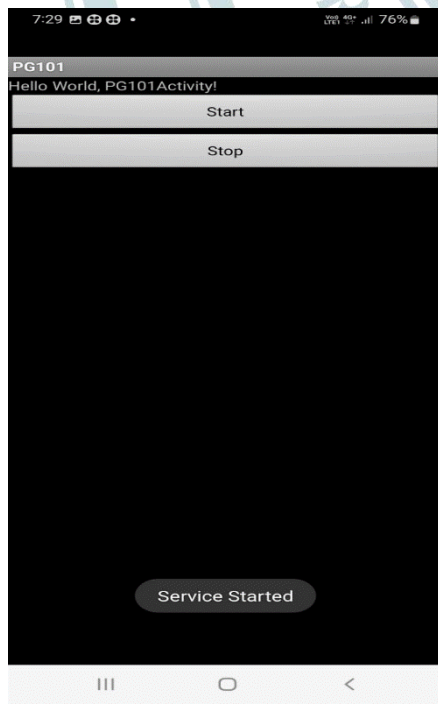
        be.setOnClickListener(new View.OnClickListener() {

            public void onClick(View v)
                stopService(new Intent("my.service2"));
            }

        });
    }
}

```

Output



Source Code:**activity_main.xml**

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:orientation="vertical" >
    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="@string/hello" />
    <Button
        android:id="@+id/b1"
        android:layout_width="136dp"
        android:layout_height="wrap_content"
        android:text="Start"
        android:onClick="onstarts"/>
    <Button
        android:id="@+id/b2"
        android:layout_width="134dp"
        android:layout_height="wrap_content"
        android:text="Stop"
        android:onClick="onstops" />
    <Button
        android:id="@+id/b3"
        android:layout_width="128dp"
        android:layout_height="wrap_content"
        android:text="Next"
        android:onClick="onsnext" />
</LinearLayout>

```

next.xml

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:orientation="vertical" >
    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Next Page" />
</LinearLayout>

```

MyService.java

```

package com.se;
import android.app.Service;
import android.content.Intent;
import android.media.MediaPlayer;
import android.os.IBinder;
import android.widget.Toast;

public class MyService extends Service {
    MediaPlayer myPlayer;
    @Override

```



```

public IBinder onBind(Intent intent) {
    return null;
}
@Override
public void onCreate() {
    Toast.makeText(this, "Service Created", Toast.LENGTH_LONG).show();
    myPlayer = MediaPlayer.create(this,R.raw.song);
    myPlayer.setLooping(false); // Set looping
}
@Override
public void onStart(Intent intent, int startid) {
    Toast.makeText(this, "Service Started", Toast.LENGTH_LONG).show();
    myPlayer.start();
}
@Override
public void onDestroy() {
    Toast.makeText(this, "Service Stopped", Toast.LENGTH_LONG).show();
    myPlayer.stop();
}
}

```

Nextpage.java

```

package com.se;
import android.os.Bundle;
import android.app.Activity;
public class NextPage extends Activity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.next);
    }
}

```

Ser_Exactivity.java

```

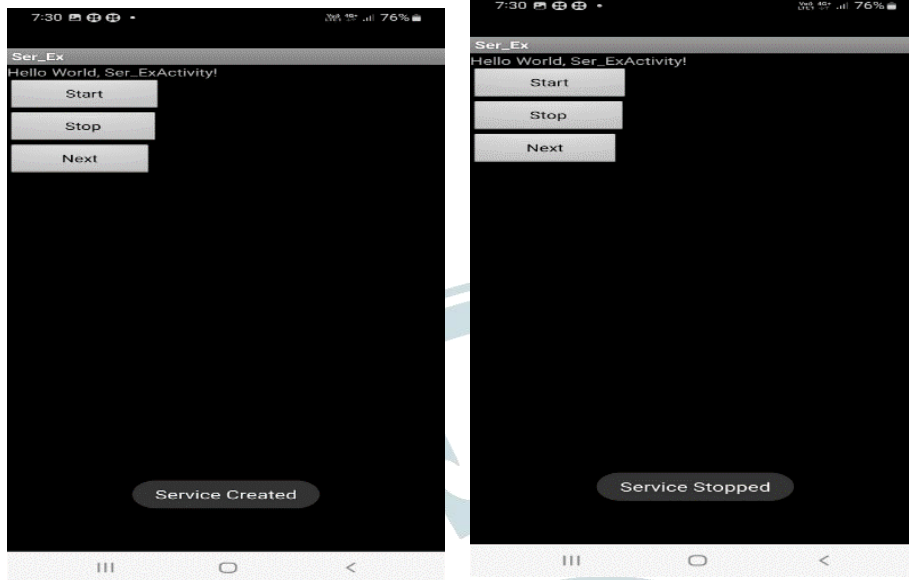
package com.se;
import android.app.Activity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;

public class Ser_ExActivity extends Activity {
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
    }
    public void onstarts(View v)
    {
        startService(new Intent(this, MyService.class));
    }
    public void onstops(View v)
    {
        stopService(new Intent(this, MyService.class));
    }
    public void onsnnext(View v)
    {
        Intent intent=new Intent(this,NextPage.class);
    }
}

```

```
        startActivity(intent);  
    }  
}
```

Output



Source Code:**activity_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:orientation="vertical" >
    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="@string/hello" />
    <Button
        android:id="@+id/bshow"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:onClick="onshow"
        android:text="Show" />
    <Button
        android:id="@+id/bcancel"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:onClick="oncancel"
        android:text="Cancel" />
</LinearLayout>
```

nh.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:orientation="vertical" >
    <TextView
        android:id="@+id/t1"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="@string/hello" />
</LinearLayout>
```

NM_messageactivity.java

```
package com.nmm;
import android.app.Activity;
import android.app.Notification;
import android.app.NotificationManager;
import android.app.PendingIntent;
import android.content.Context;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
public class NM_MessageActivity extends Activity {
    /** Called when the activity is first created. */
    int nid=1;
    NotificationManager nm;
    @Override
    public void onCreate(Bundle savedInstanceState) {
```

```

        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
    }
    public void onshow(View v)
    {
        nm = (NotificationManager) getSystemService(Context.NOTIFICATION_SERVICE);
        String ntext = "1. My Notification Text";
        long time = System.currentTimeMillis();
        Notification nf = new Notification(R.drawable.ic_launcher, ntext, time);
        String etit = "2. My Extended Title";
        String etxt = "3. My Extended Text";
        Intent i = new Intent(this, NotifyHelper.class);
        i.putExtra("etit", etit);
        i.putExtra("etxt", etxt);
        PendingIntent pi = PendingIntent.getActivity(this, 0, i, 0);
        nf.setLatestEventInfo(this, etit, etxt, pi);
        nid = 1;
        nm.notify(nid, nf);
    }
    public void oncancel(View v)
    {
        nid = 1;
        nm.cancel(nid);
    }
}

```

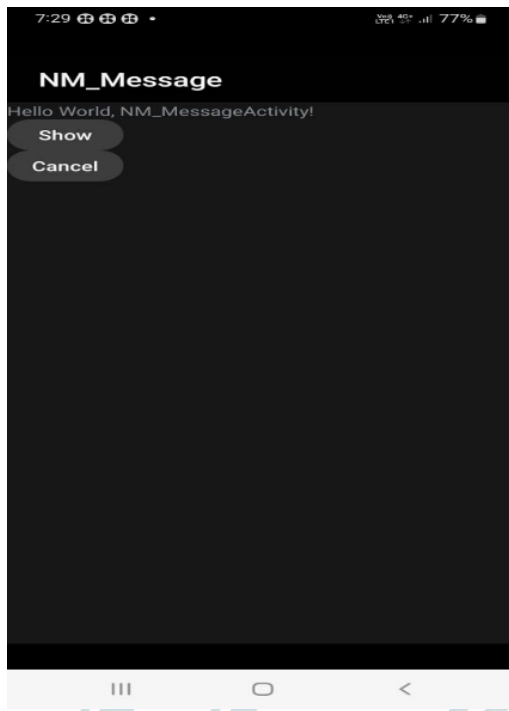
Notifyhelper.java

```

package com.nmm;
import android.app.Activity;
import android.content.Intent;
import android.os.Bundle;
import android.widget.TextView;
import android.widget.Toast;
public class NotifyHelper extends Activity {
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.nh);
        Intent data = getIntent();
        String str = " " + data.getStringExtra("etit") + ":" + data.getStringExtra("etxt");
        Toast.makeText(this, str, 2).show();
        TextView t;
        t = (TextView) findViewById(R.id.t1);
        t.setText(str);
    }
}

```

Output



Source Code:**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">
<TextView
    android:id="@+id/tv1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text=""
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.293" />
<TextView
    android:id="@+id/tv"
    android:layout_width="342dp"
    android:layout_height="112dp"
    android:text=""
    android:textSize="35dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.497"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.091" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package test.proximityapp;
import androidx.appcompat.app.AppCompatActivity;
import android.graphics.Color;
import android.hardware.Sensor;
import android.hardware.SensorEvent;
import android.hardware.SensorEventListener;
import android.hardware.SensorManager;
import android.os.Bundle;
import android.speech.tts.TextToSpeech;
import android.widget.TextView;
import android.widget.Toast;
import java.util.Locale;
public class MainActivity extends AppCompatActivity {
```

```

TextToSpeech t2;
private SensorManager sensorManager;
private Sensor proximitySensor;
private SensorEventListener proximitySensorListner;
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    t2=new TextToSpeech(getApplicationContext(), new TextToSpeech.OnInitListener() {
        public void onInit(int status) {
            if(status != TextToSpeech.ERROR) {
                t2.setLanguage(Locale.UK);
            }
        }
    });
    sensorManager= (SensorManager) getSystemService(SENSOR_SERVICE);
    proximitySensor=sensorManager.getDefaultSensor(Sensor.TYPE_PROXIMITY);
    if(proximitySensor==null)
    {
        Toast.makeText(this, "Sensor is not available", Toast.LENGTH_SHORT).show();
        finish();
    }
    proximitySensorListner=new SensorEventListener() {
        @Override
        public void onSensorChanged(SensorEvent sensorEvent) {
            TextView t1;
            String str;
            t1=(TextView) findViewById(R.id.tv1);
            if(sensorEvent.values[0]< proximitySensor.getMaximumRange())
            {
                str = "You are too close";
                t1.setText("You are too close");
                getWindow().getDecorView().setBackgroundColor(Color.RED);
                t2.speak(str, TextToSpeech.QUEUE_FLUSH, null);
            }
            else
            {
                str = "Bring your hands Closer";
                t1.setText("Bring your hands Closer");
                getWindow().getDecorView().setBackgroundColor(Color.GREEN);
                t2.speak(str, TextToSpeech.QUEUE_FLUSH, null);
            }
        }
    }
    @Override
    public void onAccuracyChanged(Sensor sensor, int i) {
    }
};
sensorManager.registerListener(proximitySensorListner,proximitySensor,2*1000*1000);
}
@Override
protected void onPause()
{
    super.onPause();
}

```

```

        sensorManager.unregisterListener(proximitySensorListner);
    }
}

```

Mainactivity.java

```

package test.proximityapp;
import androidx.appcompat.app.AppCompatActivity;
import android.graphics.Color;
import android.hardware.Sensor;
import android.hardware.SensorEvent;
import android.hardware.SensorEventListener;
import android.hardware.SensorManager;
import android.os.Bundle;
import android.speech.tts.TextToSpeech;
import android.widget.TextView;
import android.widget.Toast;
import java.util.Locale;
public class MainActivity extends AppCompatActivity {
    TextToSpeech t2;
    private SensorManager sensorManager;
    private Sensor proximitySensor;
    private SensorEventListener proximitySensorListner;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        t2=new TextToSpeech(getApplicationContext(), new TextToSpeech.OnInitListener() {
            public void onInit(int status) {
                if(status != TextToSpeech.ERROR) {
                    t2.setLanguage(Locale.UK);
                }
            }
        });
        sensorManager= (SensorManager) getSystemService(SENSOR_SERVICE);
        proximitySensor=sensorManager.getDefaultSensor(Sensor.TYPE_PROXIMITY);
        Sensor sensorShake=sensorManager.getDefaultSensor(Sensor.TYPE_ACCELEROMETER);
        if(proximitySensor==null)
        {
            Toast.makeText(this, "Sensor is not available", Toast.LENGTH_SHORT).show();
            finish();
        }
        SensorEventListener sensorEventListener=new SensorEventListener() {
            @Override
            public void onSensorChanged(SensorEvent sensorEvent) {
                TextView tShake;
                tShake=(TextView) findViewById(R.id.tv);
                if(sensorEvent!=null)
                {
                    float x_accl=sensorEvent.values[0];
                    float y_accl=sensorEvent.values[1];
                    float z_accl=sensorEvent.values[2];
                    float floatSum=Math.abs(x_accl)+Math.abs(y_accl)+Math.abs(z_accl);
                    // if(x_accl>2 || x_accl<-2 || y_accl>12 || y_accl<-12 || z_accl>2 || z_accl<-2)
                    if(floatSum>15)

```

```

        {
            tShake.setText("Please stop shaking!");
        }
        else
        {
            tShake.setText("");
        }
    }
}
@Override
public void onAccuracyChanged(Sensor sensor, int i) {
}
};

sensorManager.registerListener(sensorEventListener,sensorShake,SensorManager.SENSOR_DELAY_
NORMAL);
proximitySensorListner=new SensorEventListener() {
    @Override
    public void onSensorChanged(SensorEvent sensorEvent) {
        TextView t1;
        String str;
        t1=(TextView) findViewById(R.id.tv1);
        if(sensorEvent.values[0]< proximitySensor.getMaximumRange())
        {
            str = "You are too close";
            t1.setText("You are too close");
            getWindow().getDecorView().setBackgroundColor(Color.RED);
            t2.speak(str, TextToSpeech.QUEUE_FLUSH, null);
        }
        else
        {
            str = "Bring your hands Closer";
            t1.setText("Bring your hands Closer");
            getWindow().getDecorView().setBackgroundColor(Color.GREEN);
            t2.speak(str, TextToSpeech.QUEUE_FLUSH, null);
        }
    }
    @Override
    public void onAccuracyChanged(Sensor sensor, int i) {
    }
};

sensorManager.registerListener(proximitySensorListner,proximitySensor,2*1000*1000);
}
@Override
protected void onPause()
{
    super.onPause();
    sensorManager.unregisterListener(proximitySensorListner);
}
}

```


Output

