

CO2

1. Design a registration activity and store registration details in local memory of phone using Intents and SharedPreferences

XML 1

```
<?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">

    <EditText
        android:id="@+id/etname"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="18sp"
        android:textColor="#F44336"
        android:inputType="textPersonName"
        android:hint="Enter Your Name "
        android:text="" />

    <EditText
        android:id="@+id/etage"
        android:layout_width="wrap_content"
```

```
android:layout_height="wrap_content"
```

```
android:ems="10"
```

```
android:layout_marginTop="50dp"
```

```
android:textSize="18sp"
```

```
android:textColor="#F44336"
```

```
android:inputType="number"
```

```
android:hint="Enter Your Age"
```

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

```
<RadioGroup
```

```
    android:layout_width="match_parent"
```

```
    android:layout_height="wrap_content"
```

```
    android:layout_marginTop="50dp"
```

```
    android:orientation="horizontal">
```

```
<RadioButton
```

```
    android:id="@+id/rdmale"
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

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

```
<RadioButton
```

```
    android:id="@+id/rdfemale"
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

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

```
</RadioGroup>
```

```
<Spinner
```

```
    android:id="@+id/list"
```

```
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:entries="@array/list" />
```

```
<Button
    android:id="@+id/btnnext"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="NEXT" />
```

```
</LinearLayout>
```

XML 1

```
<?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:orientation="vertical"
    android:layout_height="match_parent"
    tools:context=".MainActivity2">
```

```
<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="" />
</LinearLayout>
```

JAVA 1

```
package com.example.shared;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.Spinner;

public class MainActivity extends AppCompatActivity {

    EditText name,age;
    RadioButton male,female;
    Spinner list;
    Button next;
    SharedPreferences sp;

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

```

super.onCreate(savedInstanceState);

setContentView(R.layout.activity_main);

sp = getSharedPreferences("Register", MODE_PRIVATE);

next = (Button) findViewById(R.id.btnnext);

list = (Spinner) findViewById(R.id.list);

male = (RadioButton) findViewById(R.id.rdmale);

female = (RadioButton) findViewById(R.id.rdfemale);

name = (EditText) findViewById(R.id.etname);

age = (EditText) findViewById(R.id.etable);


next.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View v) {

        SharedPreferences.Editor ed = sp.edit();

        String sname=name.getText().toString();

        ed.putString("name",sname);

        int x=Integer.parseInt(age.getText().toString());

        ed.putInt("age",x );

        String scntry=list.getSelectedItem().toString();

        ed.putString("country",scntry);

        boolean b=male.isChecked();

        ed.putBoolean("gender",b);

        ed.commit();

        Intent in=new Intent(MainActivity.this,MainActivity2.class);

        Bundle bd=new Bundle();

        bd.putString("name",sname);

        bd.putInt("age",x);

        bd.putBoolean("gender",b);

        bd.putString("country",scntry);

        in.putExtra("all",bd);

```

```
        startActivity(in);

    }

});

}

}
```

JAVA 2

```
package com.example.shared;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity2 extends AppCompatActivity {

    TextView t1;
    TextView t2;
    SharedPreferences sp;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main2);
        t1=(TextView)findViewById(R.id.t1);
        sp=getSharedPreferences("Register",MODE_PRIVATE);
        String sname=sp.getString("name","");
    }
}
```

```

int age=sp.getInt("age",0);

boolean b=sp.getBoolean("gender",false);

String cntry=sp.getString("country","");

t1.setText(""+b+"\n"+sname+"\n"+age+"\n"+cntry);

Intent in=getIntent();

Bundle bd=in.getBundleExtra("all");

sname=bd.getString("name","");

age=bd.getInt("age",0);

cntry=bd.getString("country","");

b=bd.getBoolean("gender",true);

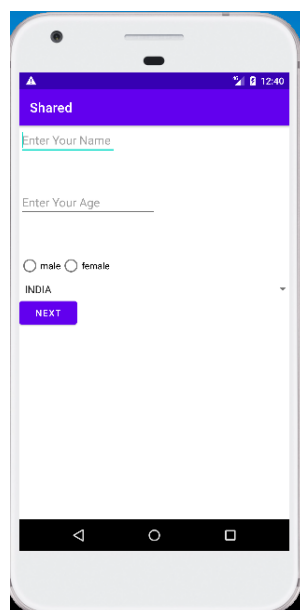
t2.setText(""+b+"\n"+sname+"\n"+age+"\n"+cntry);

}

}

```

OUTPUT



2. Design a simple Calculator using GridLayout and Cascaded LinearLayout

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"
    tools:context=".MainActivity"
    android:orientation="vertical"
    android:layout_margin="5dp"
    android:background="#FF00FB">

    <EditText
        android:id="@+id/etresult"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="number"
        android:layout_marginTop="100dp"
        android:textSize="20sp"
        android:textStyle="bold"
        android:textColor="@android:color/black"
        android:enabled="false"
        android:text="" />

    <GridLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:columnCount="4"
```



```
android:rowCount="4">
```

```
<Button
```

```
    android:id="@+id/btplus"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="5dp"
    android:textSize="20sp"
    android:textColor="#000000"
    android:textStyle="bold"
    android:text="+" />
```

```
<Button
```

```
    android:id="@+id/btminus"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="5dp"
    android:textSize="20sp"
    android:textColor="#000000"
    android:textStyle="bold"
    android:text="-" />
```

```
<Button
```

```
    android:id="@+id/btmult"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="5dp"
    android:textSize="20sp"
    android:textColor="#000000"
    android:textStyle="bold"
    android:text="*" />
```

<Button

```
    android:id="@+id/btdiv"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="5dp"
    android:textSize="20sp"
    android:textColor="#000000"
    android:textStyle="bold"
    android:text="/" />
```

<Button

```
    android:id="@+id/bt1"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="5dp"
    android:textSize="20sp"
    android:textColor="#000000"
    android:textStyle="bold"
    android:text="1" />
```

<Button

```
    android:id="@+id/bt2"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="5dp"
    android:textSize="20sp"
    android:textColor="#000000"
    android:textStyle="bold"
    android:text="2" />
```

```
<Button
    android:id="@+id/bt3"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="5dp"
    android:textSize="20sp"
    android:textColor="#000000"
    android:textStyle="bold"
    android:text="3" />
```

```
<Button
    android:id="@+id/bt4"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="5dp"
    android:textSize="20sp"
    android:textColor="#000000"
    android:textStyle="bold"
    android:text="4" />
```

```
<Button
    android:id="@+id/bt5"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="5dp"
    android:textSize="20sp"
    android:textColor="#000000"
    android:textStyle="bold"

    android:text="5" />
```

```
<Button
    android:id="@+id/bt6"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="5dp"
    android:textSize="20sp"
    android:textColor="#000000"
    android:textStyle="bold"
    android:text="6" />
```

```
<Button
    android:id="@+id/bt7"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="5dp"
    android:textSize="20sp"
    android:textColor="#000000"
    android:textStyle="bold"
    android:text="7" />
```

```
<Button
    android:id="@+id/bt8"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="5dp"
    android:textSize="20sp"
    android:textColor="#000000"
    android:textStyle="bold"
    android:text="8" />
```

<Button

```
    android:id="@+id/bt9"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:layout_margin="5dp"  
    android:textSize="20sp"  
    android:textColor="#000000"  
    android:textStyle="bold"  
    android:text="9" />
```

<Button

```
    android:id="@+id/bt0"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:layout_margin="5dp"  
    android:textSize="20sp"  
    android:textColor="#000000"  
    android:textStyle="bold"  
    android:text="0" />
```

<Button

```
    android:id="@+id/bteq"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:layout_margin="5dp"  
    android:textSize="20sp"  
    android:textColor="#000000"  
    android:textStyle="bold"  
    android:text="=" />
```

```
<Button
    android:id="@+id/btcan"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="5dp"
    android:textSize="20sp"
    android:textColor="#000000"
    android:textStyle="bold"
    android:text="cancel" />
</GridLayout>
</LinearLayout>
```

JAVA

```
package com.example.calculator;
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 implements View.OnClickListener {
    EditText et;
    float temp1,temp2;
    String op="";
    Button plus,minus,mult,div,b1,b2,b3,b4,b5,b6,b7,b8,b9,b0,beq,bcan;
```

@Override

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

```
    super.onCreate(savedInstanceState);  
    setContentView(R.layout.activity_main);  
    et=(EditText)findViewById(R.id.etresult);  
    plus=(Button)findViewById(R.id.btplus);  
    minus=(Button)findViewById(R.id.btminus);  
    mult=(Button)findViewById(R.id.btmult);  
    div=(Button)findViewById(R.id.btdiv);  
    b1=(Button)findViewById(R.id.bt1);  
    b2=(Button)findViewById(R.id.bt2);  
    b3=(Button)findViewById(R.id.bt3);  
    b4=(Button)findViewById(R.id.bt4);  
    b5=(Button)findViewById(R.id.bt5);  
    b6=(Button)findViewById(R.id.bt6);  
    b7=(Button)findViewById(R.id.bt7);  
    b8=(Button)findViewById(R.id.bt8);  
    b9=(Button)findViewById(R.id.bt9);  
    b0=(Button)findViewById(R.id.bt0);  
    beq=(Button)findViewById(R.id.bteq);  
    bcan=(Button)findViewById(R.id.btcn);
```

```
    plus.setOnClickListener(this);  
    minus.setOnClickListener(this);  
    mult.setOnClickListener(this);  
    div.setOnClickListener(this);  
    b1.setOnClickListener(this);  
    b2.setOnClickListener(this);  
    b3.setOnClickListener(this);  
    b4.setOnClickListener(this);  
    b5.setOnClickListener(this);
```

```
b6.setOnClickListener(this);
b7.setOnClickListener(this);
b8.setOnClickListener(this);
b9.setOnClickListener(this);
b0.setOnClickListener(this);
beq.setOnClickListener(this);
bcan.setOnClickListener(this);

}
```

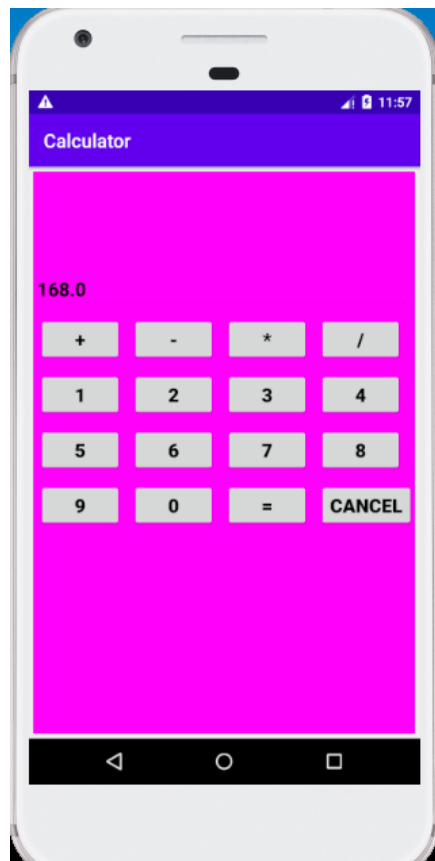
@Override

```
public void onClick(View v) {
    Button b=(Button) v;
    if(v==bcan)
    {
        et.setText("");
    }
    else if (v==plus || v==minus || v==mult || v==div)
    {
        temp1=Float.parseFloat(et.getText().toString());
        op=b.getText().toString();
        et.setText("");
    }
    else if (v==beq) {
        temp2=Float.parseFloat(et.getText().toString());
        if (op.equals("+")) {
            et.setText(temp1 + temp2 + "");
        } else if (op.equals("-")) {
            et.setText(temp1 - temp2 + "");
        } else if (op.equals("*")) {
            et.setText(temp1 * temp2 + "");
        }
    }
}
```



```
    } else if (op.equals("/")) {  
        et.setText(temp1 / temp2 + "");  
    }  
}  
else  
{  
    String s=et.getText().toString();  
    et.setText(s+b.getText().toString());  
}  
}  
}
```

OUTPUT



3. Develop an application that toggles image using FrameLayout

XML

```
<?xml version="1.0" encoding="utf-8"?>

<FrameLayout 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:id="@+id/frm"
    tools:context=".MainActivity">

    <ImageView
        android:id="@+id/img"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:src="@drawable/n2">

    </ImageView>

    <ImageView
        android:id="@+id/img2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:src="@drawable/nature"
        android:visibility="gone">

    </ImageView>

</FrameLayout>
```

JAVA

```
package com.example.toggleimage;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.FrameLayout;
import android.widget.ImageView;

import com.example.toggleimage.R;

public class MainActivity extends AppCompatActivity implements View.OnClickListener {

    ImageView img,img2;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        img = (ImageView) findViewById(R.id.img);
        img2 = (ImageView) findViewById(R.id.img2);
        img.setOnClickListener(this);
        img2.setOnClickListener(this);
    }

    public void onClick(View v){
        if (v==img){
            img.setVisibility(View.GONE);
            img2.setVisibility(View.VISIBLE);
        }
    }
}
```

```
else{  
    img2.setVisibility(View.GONE);  
    img.setVisibility(View.VISIBLE);  
  
}  
}  
}
```

OUTPUT

