

**SCHOOL OF COMPUTER SCIENCE AND
ENGINEERING**

CSE4002 MOBILE APPLICATION DEVELOPMENT

***Assignment submitted in partial fulfillment of the course
CSE-4002:Mobile Application Development***

***Under Guidance of
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1. Design an android app for currency convertor.

MainActivity.java

```
package com.example.currencyconvert;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Spinner;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
    Spinner sp1, sp2;
    EditText ed1;
    Button b1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        ed1 = findViewById(R.id.txtamount);
        sp1 = findViewById(R.id.spfrom);
        sp2 = findViewById(R.id.spto);
        b1 = findViewById(R.id.btn1);
        from);
        String[] from = {"USD"};
        ArrayAdapter ad = new ArrayAdapter<String>(this,
            R.layout.support_simple_spinner_dropdown_item,
            sp1.setAdapter(ad);
        to);
        String[] to = {"Indian Rupees", "Sri Lankan Rupees"};
        ArrayAdapter ad1 = new ArrayAdapter<String>(this,
            R.layout.support_simple_spinner_dropdown_item,
            sp2.setAdapter(ad1);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Double tot;
                Double amount = Double.parseDouble(ed1.getText().toString());
```

```

if(sp1.getSelectedItem().toString() == "USD"&& sp1.getSelectedItem().toString()
=="Indian Rupees")
{
    tot = amount * 70.0;
    Toast.makeText(getApplicationContext(), tot.toString(),
    Toast.LENGTH_LONG).show();
}
else if(sp1.getSelectedItem().toString() == "USD"&&
sp1.getSelectedItem().toString() == "Sri Lankan
Rupees")
{
    tot = amount * 180.0;
    Toast.makeText(getApplicationContext(), tot.toString(),
    Toast.LENGTH_LONG).show();
}
}
});
}
}

```

activity_main.xml

```

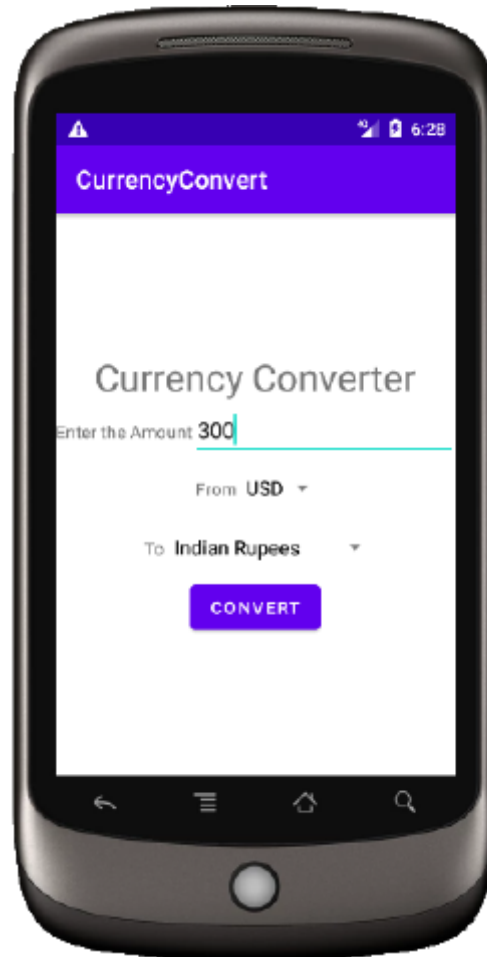
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:gravity="center"
android:orientation="vertical"
tools:context=".MainActivity">
<LinearLayout
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    >
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="30sp"
        android:text="Currency Converter"/>
    </LinearLayout>
    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        >
        <TextView

```

```
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Enter the Amount"/>
<EditText
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:ems="10"
android:id="@+id/txtamount"/>
</LinearLayout>
<LinearLayout
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:orientation="horizontal"
>
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="From"/>
<Spinner
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:ems="10"
android:id="@+id/spfrom"/>
</LinearLayout>
<LinearLayout
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:orientation="horizontal"
>
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="To"/>
<Spinner
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:ems="10"
android:id="@+id/spto"/>
</LinearLayout>
<LinearLayout
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:orientation="horizontal">
<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Convert"
android:id="@+id/btn1"
```

```
/>  
</LinearLayout>  
</LinearLayout>
```

OUTPUT:



-
2. Write an android program to read two numbers and send it to the second activity using intent. In the second activity find the sum and send the result back to display the result.

activity_main.xml

```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    xmlns:tools="http://schemas.android.com/tools"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    tools:context=".MainActivity" >  
    <EditText  
        android:id="@+id/editText1"  
        android:layout_width="wrap_content"
```

```

        android:layout_height="wrap_content"
        android:layout_alignBaseline="@+id/textView1"
        android:layout_alignBottom="@+id/textView1"
        android:layout_marginLeft="28dp"
        android:layout_toRightOf="@+id/textView1"
        android:ems="10"
        android:inputType="text"
    >
    <requestFocus />
</EditText>
<EditText
    android:id="@+id/editText2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/editText1"
    android:layout_alignTop="@+id/textView2"
    android:ems="10"
    android:inputType="text"
/>
<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/editText1"
    android:layout_marginTop="44dp"
    android:layout_toLeftOf="@+id/editText1"
    android:text="@string/value2" />
<Button
    android:id="@+id/button1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/editText2"
    android:layout_marginTop="54dp"
    android:layout_toRightOf="@+id/textView2"
    android:text="@string/Submit" />
<TextView
    android:id="@+id/textView1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentLeft="true"
    android:layout_alignParentTop="true"
    android:layout_marginLeft="20dp"
    android:layout_marginTop="34dp"
    android:text="@string/value1" />
</RelativeLayout>
Activity_main_act2.xml
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"

```

```

android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".MainActivity2" >
<TextView
android:id="@+id/textView1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentLeft="true"
android:layout_alignParentTop="true"
android:layout_marginLeft="17dp"
android:layout_marginTop="48dp"
android:text="@string/value1" />
<TextView
android:id="@+id/textView2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignLeft="@+id/textView1"
android:layout_below="@+id/textView1"
android:layout_marginTop="26dp"
android:text="@string/value2" />
<TextView
android:id="@+id/textView3"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignLeft="@+id/textView2"
android:layout_below="@+id/textView2"
android:layout_marginLeft="36dp"
android:layout_marginTop="77dp"
android:text="@string/add" />
</RelativeLayout>

```

MainActivity.java

```

package com.example.p11;
import android.os.Bundle;
import android.app.Activity;
import android.content.Intent;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.EditText;
public class MainActivity extends Activity implements OnClickListener {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button btn=(Button)findViewById(R.id.button1);

```

```

btn.setOnClickListener(this);
}
}
@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;
}
@Override
public void onClick(View arg0) {
// TODO Auto-generated method stub
Intent i=new Intent(this,MainActivity2.class);
EditText t1=(EditText)findViewById(R.id.editText1);
EditText t2=(EditText)findViewById(R.id.editText2);
String s1=t1.getText().toString();
String s2=t2.getText().toString();
i.putExtra("value1", s1);
i.putExtra("value2", s2);
startActivity(i);
}

```

MainActivity2.java

```

package com.example.p11;
importimportimportimportimportandroid.os.Bundle;
importandroid.app.Activity;
importandroid.content.Intent;
importandroid.view.Menu;
importandroid.widget.TextView;
public class MainActivity2 extends Activity {
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main_act2);
TextViewIntent i=getIntent();
String s1=i.getStringExtra("value1");
value1=(TextView)findViewById(R.id.textView1);
value1.setText("Value 1: "+s1);
String s2=i.getStringExtra("value2");
TextView value2=(TextView)findViewById(R.id.textView2);
value2.setText("Value 2: "+s2);
final int val1=Integer.parseInt(s1);
final int val2=Integer.parseInt(s2);
int sum=val1+val2;
TextView add=(TextView)findViewById(R.id.textView3);
add.setText("Addition of two values is: "+Integer.toString(sum));
}

```

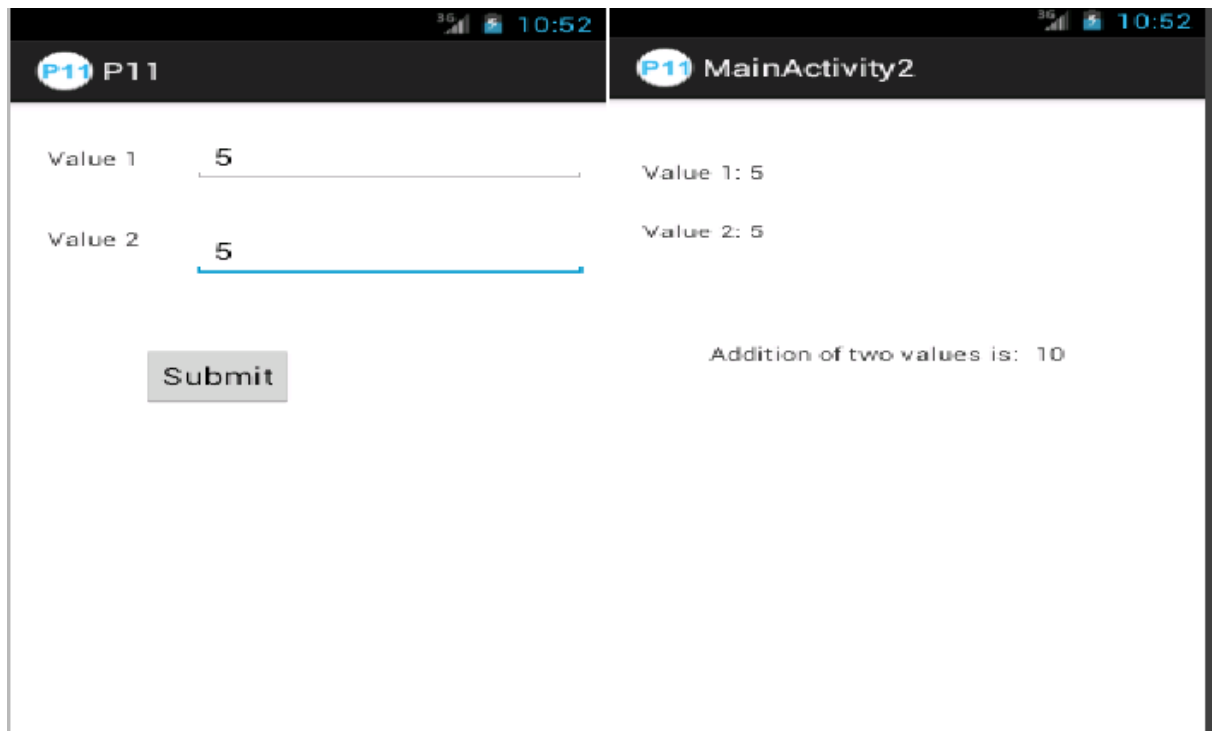


```

@Override
public boolean onCreateOptionsMenu(Menu menu)
{
    getMenuInflater().inflate(R.menu.activity_main_act2, menu);
    return true;
}
}

```

OUTPUT:



3. Write an android program to demonstrate Radiobutton and Checkbox function.

a. Radiobutton

activity_main.xml

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    tools:context="example.javatpoint.com.radiobutton.MainActivity">
    <TextView

```

```

android:id="@+id/textView1"
android:layout_width="fill_parent"
android:layout_height="wrap_content"
android:layout_marginTop="30dp"
android:gravity="center_horizontal"
android:textSize="22dp"
android:text="Single Radio Buttons" />
<!-- Default RadioButtons -->
<RadioButton
android:id="@+id/radioButton1"
android:layout_width="fill_parent"
android:layout_height="wrap_content"
android:layout_gravity="center_horizontal"
android:text="Radio Button 1"
android:layout_marginTop="20dp"
android:textSize="20dp" />
<RadioButton
android:id="@+id/radioButton2"
android:layout_width="fill_parent"
android:layout_height="wrap_content"
android:text="Radio Button 2"
android:layout_marginTop="10dp"
android:textSize="20dp" />
<View
android:layout_width="fill_parent"
android:layout_height="1dp"
android:layout_marginTop="20dp"
android:background="#B8B894" />
<TextView
android:id="@+id/textView2"
android:layout_width="fill_parent"
android:layout_height="wrap_content"
android:layout_marginTop="30dp"
android:gravity="center_horizontal"
android:textSize="22dp"
android:text="Radio button inside RadioGroup" />
<!-- Customized RadioButtons -->
<RadioGroup
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:id="@+id/radioGroup">
<RadioButton
android:id="@+id/radioMale"
android:layout_width="fill_parent"
android:layout_height="wrap_content"
android:text=" Male"
android:layout_marginTop="10dp"
android:checked="false"

```

```

        android:textSize="20dp" />
        <RadioButton
            android:id="@+id/radioFemale"
            android:layout_width="fill_parent"
            android:layout_height="wrap_content"
            android:text="Female"
            android:layout_marginTop="20dp"
            android:checked="false"
            android:textSize="20dp"></RadioGroup>
    />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Show Selected"
        android:id="@+id/button"
        android:onClick="onclickbuttonMethod"
        android:layout_gravity="center_horizontal"/>
</LinearLayout>

```

MainActivity.java

```

package example.javatpoint.com.radiobutton;
import import import import import import import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
    Button button;
    RadioButton genderradioButton;
    RadioGroup radioGroup;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        radioGroup=(RadioGroup)findViewById(R.id.radioGroup);
    }
    public void onclickbuttonMethod(View v){
        int selectedId = radioGroup.getCheckedRadioButtonId();
        genderradioButton = (RadioButton) findViewById(selectedId);
        if(selectedId== -1){
            Toast.makeText(MainActivity.this,"Nothing selected",
            Toast.LENGTH_SHORT).show();
        }
        else{

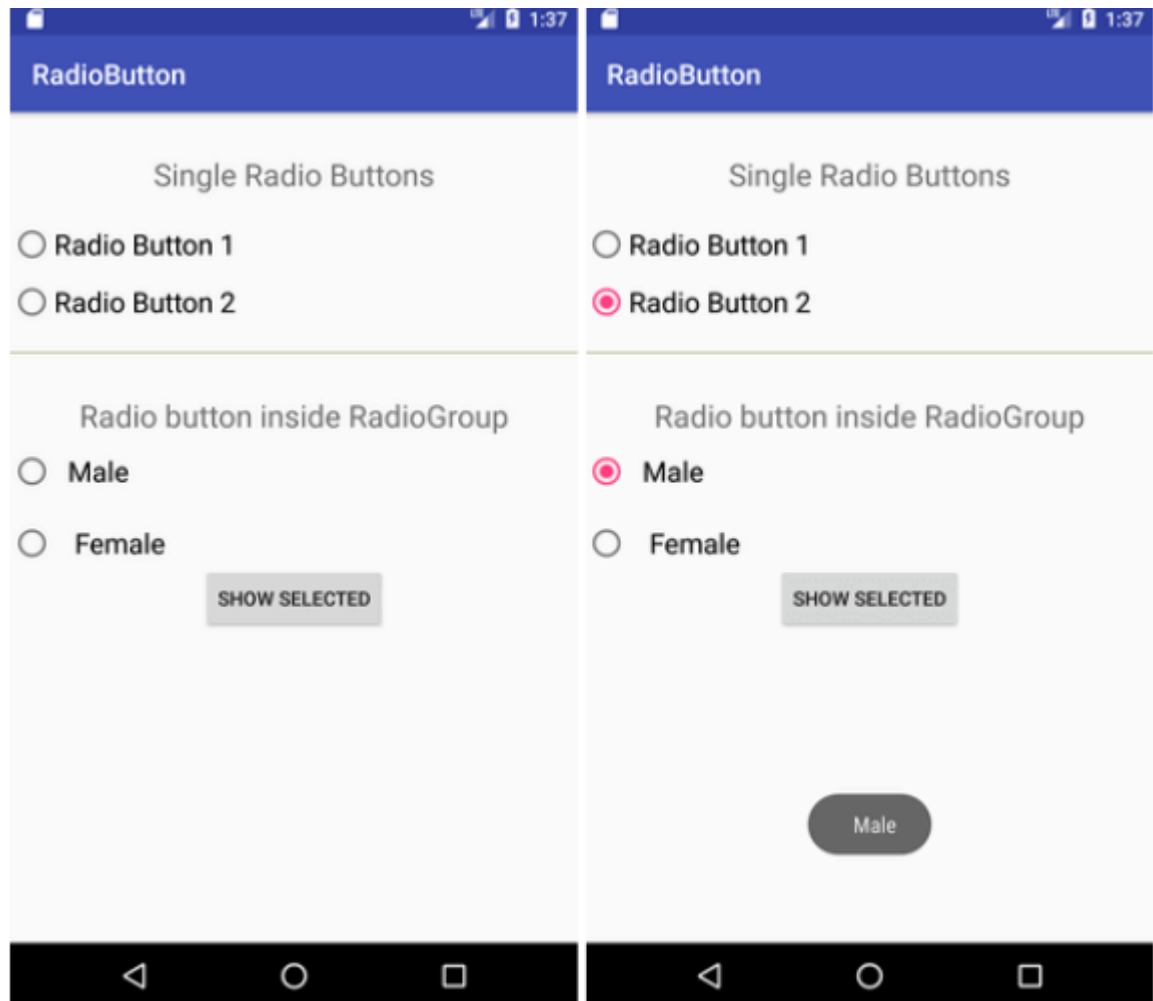
```

```

Toast.makeText(MainActivity.this,genderradioButton.getText(),
Toast.LENGTH_SHORT).show();
}
}
}

```

OUTPUT:



Check Box:

activity_main.xml

```

<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.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="example.javatpoint.com.checkbox.MainActivity">

```

```

<CheckBox
    android:id="@+id/checkBox"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginLeft="144dp"
    android:layout_marginTop="68dp"
    android:text="Pizza"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
<CheckBox
    android:id="@+id/checkBox2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginLeft="144dp"
    android:layout_marginTop="28dp"
    android:text="Coffee"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/checkBox"/>
<CheckBox
    android:id="@+id/checkBox3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginLeft="144dp"
    android:layout_marginTop="28dp"
    android:text="Burger"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/checkBox2"/>
<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginLeft="144dp"
    android:layout_marginTop="184dp"
    android:text="Order"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/checkBox3"/>
</android.support.constraint.ConstraintLayout>

```

MainActivity.java

```

package example.javatpoint.com.checkbox;
import import import import import import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.Toast;

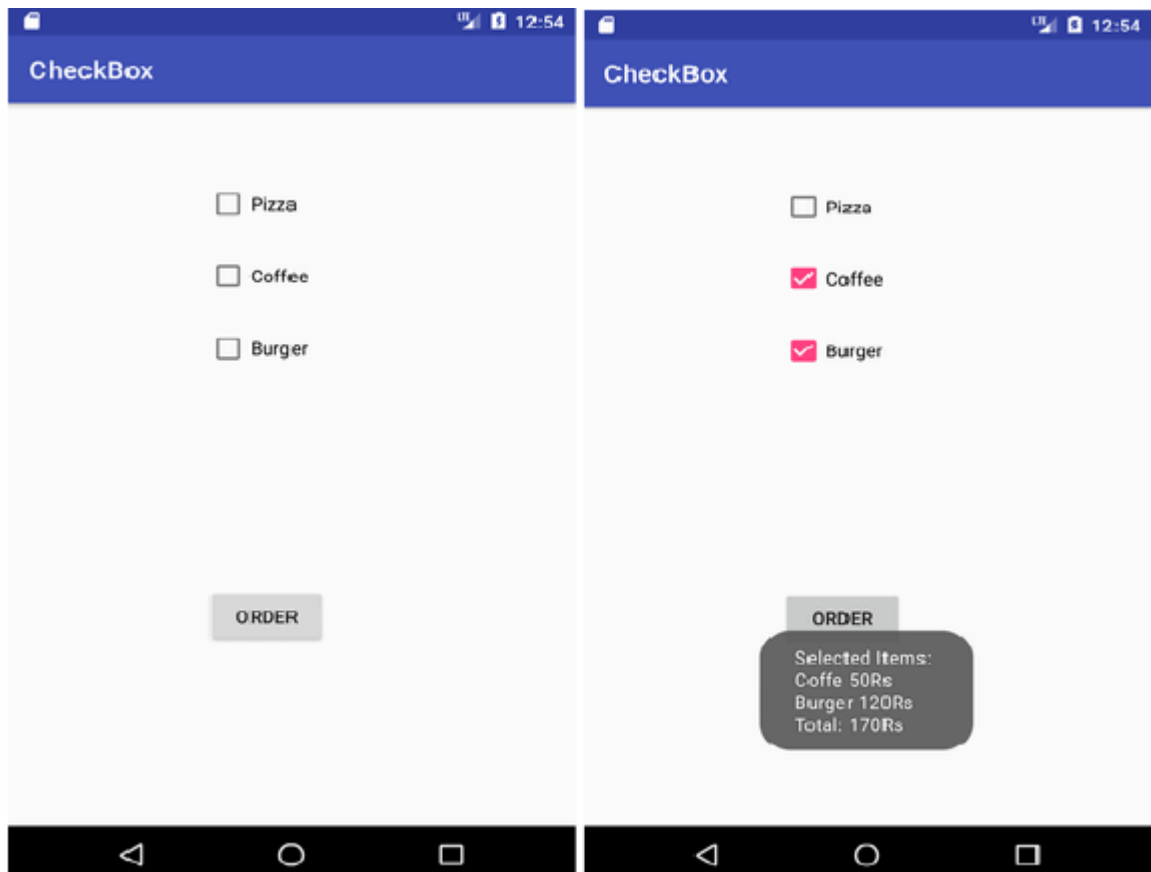
```

```

public class MainActivity extends AppCompatActivity {
    CheckBox pizza,coffe,burger;
    Button buttonOrder;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        addListenerOnButtonClick();
    }
    public void addListenerOnButtonClick(){
        //Getting instance of CheckBoxes and Button from the activty_main.xml file
        pizza=(CheckBox)findViewById(R.id.checkBox);
        coffe=(CheckBox)findViewById(R.id.checkBox2);
        burger=(CheckBox)findViewById(R.id.checkBox3);
        buttonOrder=(Button)findViewById(R.id.button);
        //Applying the Listener on the Button click
        buttonOrder.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View view) {
                int totalamount=0;
                StringBuilder result=new StringBuilder();
                result.append("Selected Items:");
                if(pizza.isChecked()){
                }
                result.append("\nPizza 100Rs");
                totalamount+=100;
            }
            if(coffe.isChecked()){
                result.append("\nCoffe 50Rs");
                totalamount+=50;
            }
            if(burger.isChecked()){
                result.append("\nBurger 120Rs");
                totalamount+=120;
            }
            result.append("\nTotal: "+totalamount+"Rs");
            //Displaying the message on the toast
            Toast.makeText(getApplicationContext(), result.toString(),
            Toast.LENGTH_LONG).show();
        }
    }
});

```

OUTPUT:



4. Write an android program to demonstrate Toggle Button.

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.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="example.javatpoint.com.togglebutton.MainActivity">
<ToggleButton
android:id="@+id/toggleButton"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginLeft="8dp"
android:layout_marginTop="80dp"
android:text="ToggleButton"
android:textOff="Off"
android:textOn="On"
app:layout_constraintEnd_toStartOf="@+id/toggleButton2"
app:layout_constraintStart_toStartOf="parent"
```

```

app:layout_constraintTop_toTopOf="parent" />
<ToggleButton
    android:id="@+id/toggleButton2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginRight="60dp"
    android:layout_marginTop="80dp"
    android:text="ToggleButton"
    android:textOff="Off"
    android:textOn="On"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toTopOf="parent"/>
<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginBottom="144dp"
    android:layout_marginLeft="148dp"
    android:text="Submit"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintStart_toStartOf="parent" />
</android.support.constraint.ConstraintLayout>

```

MainActivity.java

```

package example.javatpoint.com.togglebutton;
import import import import import import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;
import android.widget.ToggleButton;
public class MainActivity extends AppCompatActivity {
    private ToggleButton toggleButton1, toggleButton2;
    private Button buttonSubmit;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    addListenerOnButtonClick();
    public void addListenerOnButtonClick(){
        //Getting the ToggleButton and Button instance from the layout xml file
        toggleButton1=(ToggleButton)findViewById(R.id.toggleButton);
        toggleButton2=(ToggleButton)findViewById(R.id.toggleButton2);
        buttonSubmit=(Button)findViewById(R.id.button);
        //Performing action on button click
    }
}

```

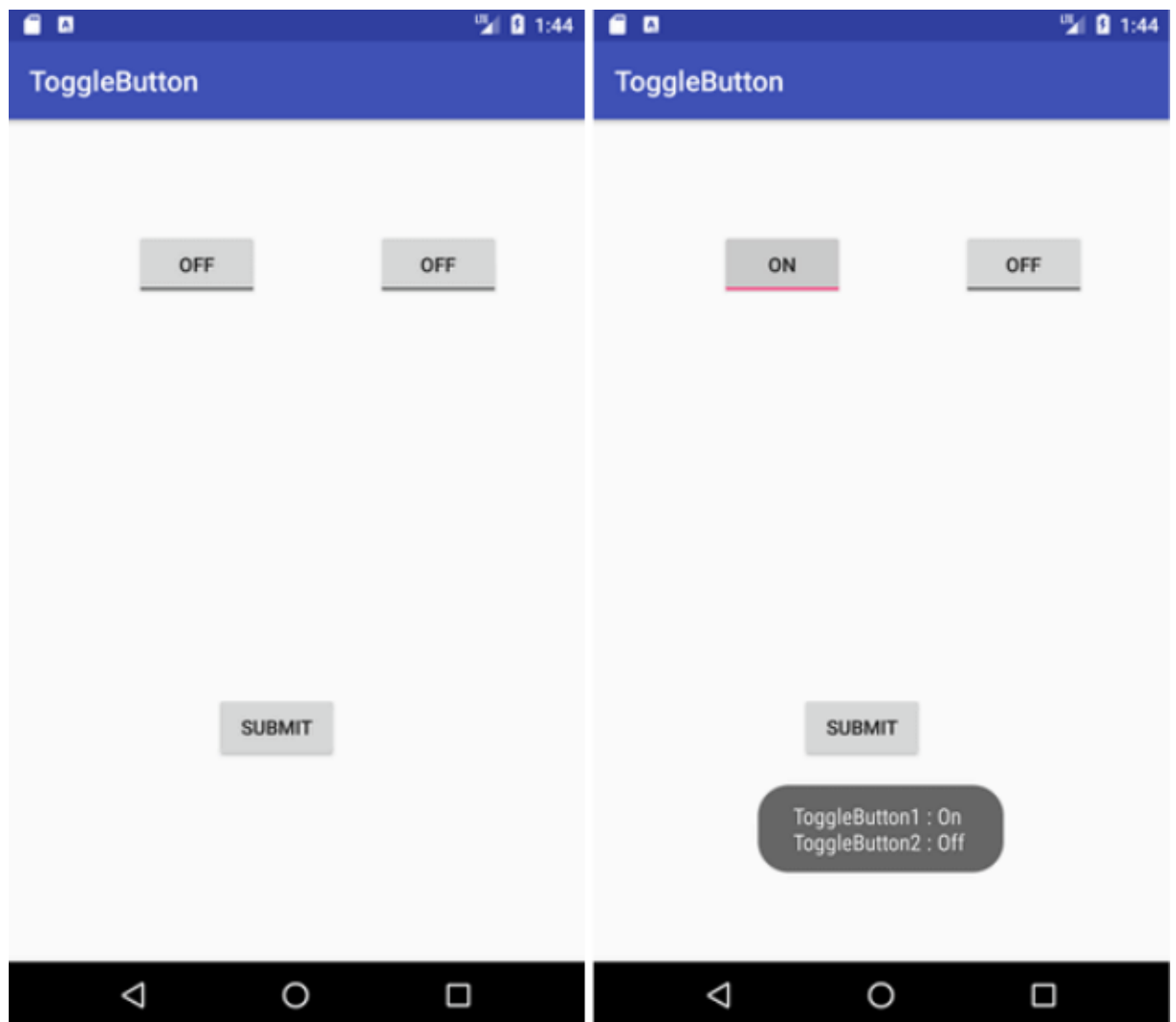


```

buttonSubmit.setOnClickListener(new View.OnClickListener(){
@Override
public void onClick(View view) {
StringBuilder result = new StringBuilder();
result.append("ToggleButton1 : ").append(toggleButton1.getText());
result.append("\nToggleButton2 : ").append(toggleButton2.getText());
//Displaying the message in toast
Toast.makeText(getApplicationContext(),
result.toString(),Toast.LENGTH_LONG).show();
}
});
}
}

```

OUTPUT:



5. Write an android program using FAB. When the first button is clicked it should display the next level FAB and again if I click each FAB it should display 2 or more FAB.

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"
tools:ignore="HardcodedText">
<!--This will be the parent Floating Action Button-->
<!--After the implementation the Floating Action Button
at the bottom right corner-->
<!--After clicking the above button the following two buttons
will pop up. So this button is considered as parent FAB-->
<com.google.android.material.floatingactionbutton.FloatingActionButton
android:id="@+id/add_fab"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_gravity="end"
android:layout_marginEnd="16dp"
android:layout_marginBottom="16dp"
android:src="@drawable/ic_add_black_24dp"
app:fabSize="normal"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent" />
<!--Floating action button for add alarm-->
<!--Make sure that you are constraining this
button to the parent button-->
<com.google.android.material.floatingactionbutton.FloatingActionButton
android:id="@+id/add_alarm_fab"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginBottom="24dp"
app:fabSize="normal"
app:layout_constraintBottom_toTopOf="@+id/add_fab"
app:layout_constraintEnd_toEndOf="@+id/add_fab"
app:layout_constraintStart_toStartOf="@+id/add_fab"
app:srcCompat="@drawable/ic_add_alarm_black_24dp" />
<!--Action name text for the add alarm button-->
<!--Make sure that you are constraining this Text to
```

the add Alarm FAB button-->

```
<TextView
    android:id="@+id/add_alarm_action_text"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginEnd="8dp"
    android:text="Add Alarm"
    app:layout_constraintBottom_toBottomOf="@+id/add_alarm_fab"
    app:layout_constraintEnd_toStartOf="@+id/add_alarm_fab"
    app:layout_constraintTop_toTopOf="@+id/add_alarm_fab" />
<!--Floating action button for add person-->
<!--Make sure that you are constraining this
button to the add Alarm FAB button-->
<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/add_person_fab"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginBottom="24dp"
    app:fabSize="normal"
    app:layout_constraintBottom_toTopOf="@+id/add_alarm_fab"
    app:layout_constraintEnd_toEndOf="@+id/add_alarm_fab"
    app:layout_constraintStart_toStartOf="@+id/add_alarm_fab"
    app:srcCompat="@drawable/ic_person_add_black_24dp" />
<!--Action name text for the add person button-->
<!--Make sure that you are constraining this Text
to the add Person FAB button-->
<TextView
    android:id="@+id/add_person_action_text"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginEnd="8dp"
    android:text="Add Person"
    app:layout_constraintBottom_toBottomOf="@+id/add_person_fab"
    app:layout_constraintEnd_toStartOf="@+id/add_person_fab"
    app:layout_constraintTop_toTopOf="@+id/add_person_fab" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
import android.os.Bundle;
import android.view.View;
import android.widget.TextView;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;
import com.google.android.material.floatingactionbutton.FloatingActionButton;
public class MainActivity extends AppCompatActivity {
    // Make sure to use the FloatingActionButton
    // for all the FABs
```

```

FloatingActionButton mAddFab, mAddAlarmFab, mAddPersonFab;
// These are taken to make visible and invisible along
// with FABs
TextView addAlarmActionText, addPersonActionText;
// to check whether sub FAB buttons are visible or not.
Boolean isAllFabsVisible;
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    // Register all the FABs with their IDs
    // This FAB button is the Parent
    mAddFab = findViewById(R.id.add_fab);
    // FAB button
    mAddAlarmFab = findViewById(R.id.add_alarm_fab);
    mAddPersonFab = findViewById(R.id.add_person_fab);
    // Also register the action name text, of all the FABs.
    addAlarmActionText = findViewById(R.id.add_alarm_action_text);
    addPersonActionText = findViewById(R.id.add_person_action_text);
    // Now set all the FABs and all the action name
    // texts as GONE
    mAddAlarmFab.setVisibility(View.GONE);
    mAddPersonFab.setVisibility(View.GONE);
    addAlarmActionText.setVisibility(View.GONE);
    addPersonActionText.setVisibility(View.GONE);
    // make the boolean variable as false, as all the
    // action name texts and all the sub FABs are invisible
    isAllFabsVisible = false;
    // We will make all the FABs and action name texts
    // visible only when Parent FAB button is clicked So
    // we have to handle the Parent FAB button first, by
    // using setOnClickListener you can see below
    mAddFab.setOnClickListener(
        new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                if (!isAllFabsVisible) {
                    addPersonActionText.setVisibility(View.VISIBLE);
                    // when isAllFabsVisible becomes
                    // true make all the action name
                    // texts and FABs VISIBLE.
                    mAddAlarmFab.show();
                    mAddPersonFab.show();
                    addAlarmActionText.setVisibility(View.VISIBLE);
                } else {
                    // make the boolean variable true as
                    // we have set the sub FABs
                    // visibility to GONE

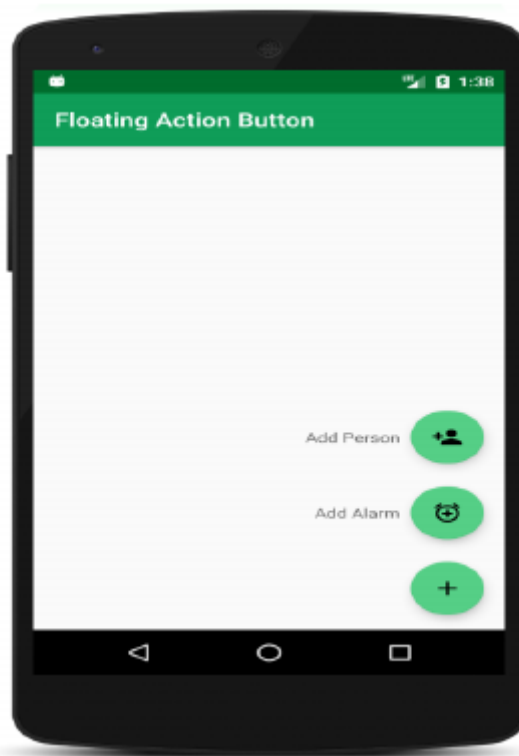
```

```

isAllFabsVisible = true;
// when isAllFabsVisible becomes
// true make all the action name
// texts and FABs GONE.
mAddAlarmFab.hide();
mAddPersonFab.hide();
addAlarmActionText.setVisibility(View.GONE);
addPersonActionText.setVisibility(View.GONE);
});
}
}
// make the boolean variable false
// as we have set the sub FABs
// visibility to GONE
isAllFabsVisible = false;
// below is the sample action to handle add person
// FAB. Here it shows simple Toast msg. The Toast
// will be shown only when they are visible and only
// when user clicks on them
mAddPersonFab.setOnClickListener(
new View.OnClickListener() {
@Override
public void onClick(View view) {
Toast.makeText(MainActivity.this, "Person Added",
Toast.LENGTH_SHORT).show();
}
});
// below is the sample action to handle add alarm
// FAB. Here it shows simple Toast msg The Toast
// will be shown only when they are visible and only
// when user clicks on them
mAddAlarmFab.setOnClickListener(
new View.OnClickListener() {
@Override
public void onClick(View view) {
Toast.makeText(MainActivity.this, "Alarm Added",
Toast.LENGTH_SHORT).show();
}
});
}
}

```

OUTPUT:



-
6. **Write an android program to demonstrate Date and Time Picker. display the event plan. Write Java and XML Code for both the activities.**

MainActivity.java

```
package com.example.datetime;
importimportimportimportimportimportimportimportimportimportimportimport
importimportandroid.app.DatePickerDialog;
importandroid.app.TimePickerDialog;
importandroid.icu.text.SimpleDateFormat;
importandroid.os.SystemClock;
importandroid.provider.Settings;
importandroid.support.v7.app.AppCompatActivity;
importandroid.os.Bundle;
importandroid.text.format.DateFormat;
importandroid.util.Log;
importandroid.view.View;
importandroid.widget.Button;
importandroid.widget.DatePicker;
importandroid.widget.TextView;
importandroid.widget.TimePicker;
importimportimportjava.util.Calendar;
importjava.util.Date;
importjava.util.Locale;
public class MainActivity extends AppCompatActivity {
    private static final String TAG = "MainActivity";
```

```

Button dateButton, timeButton;
TextView dateTextView, timeTextView;
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    dateButton = findViewById(R.id.dateButton);
    timeButton = findViewById(R.id.timeButton);
    dateTextView = findViewById(R.id.dateTextView);
    timeTextView = findViewById(R.id.timeTextView);
    dateButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            handleDateButton();
        }
    });
    timeButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            handleTimeButton();
        }
    });
}

private void handleDateButton() {
    Calendar calendar = Calendar.getInstance();
    int YEAR = calendar.get(Calendar.YEAR);
    int MONTH = calendar.get(Calendar.MONTH);
    int DATE = calendar.get(Calendar.DATE);
    DatePickerDialog datePickerDialog = new DatePickerDialog(this, new
    DatePickerDialog.OnDateSetListener() {
        @Override
        public void onDateSet(DatePicker datePicker, int year, int month, int date) {
            Calendar calendar1 = Calendar.getInstance();
            calendar1.set(Calendar.YEAR, year);
            calendar1.set(Calendar.MONTH, month);
            calendar1.set(Calendar.DATE, date);
            String dateText = DateFormat.format("EEEE, MMM d, yyyy", calendar1).toString();
            dateTextView.setText(dateText);
        }
    }, YEAR, MONTH, DATE);
    datePickerDialog.show();
}

private void handleTimeButton() {
    Calendar calendar = Calendar.getInstance();
    int HOUR = calendar.get(Calendar.HOUR);
    int MINUTE = calendar.get(Calendar.MINUTE);
    boolean is24HourFormat = DateFormat.is24HourFormat(this);
    TimePickerDialog timePickerDialog = new TimePickerDialog(this, new

```

```

TimePickerDialog.OnTimeSetListener() {
    @Override
    public void onTimeSet(TimePicker timePicker, int hour, int minute) {
        Log.i(TAG, "onTimeSet: " + hour + minute);
        Calendar calendar1 = Calendar.getInstance();
        calendar1.set(Calendar.HOUR, hour);
        calendar1.set(Calendar.MINUTE, minute);
        String dateText = DateFormat.format("h:mm a", calendar1).toString();
        timeTextView.setText(dateText);
    }
}, HOUR, MINUTE, is24HourFormat);
timePickerDialog.show();
}
}

```

activity_main.xml

```

<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.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/dateTextView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="16dp"
        android:layout_marginBottom="64dp"
        android:text="dateTextView"
        android:textAppearance="@style/TextAppearance.AppCompat.Display1"
        app:layout_constraintBottom_toTopOf="@+id/timeButton"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/dateButton" />
    <Button
        android:id="@+id/dateButton"
        style="@style/Widget.AppCompat.Button.Colored"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="get date"
        app:layout_constraintBottom_toTopOf="@+id/dateTextView"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"

```

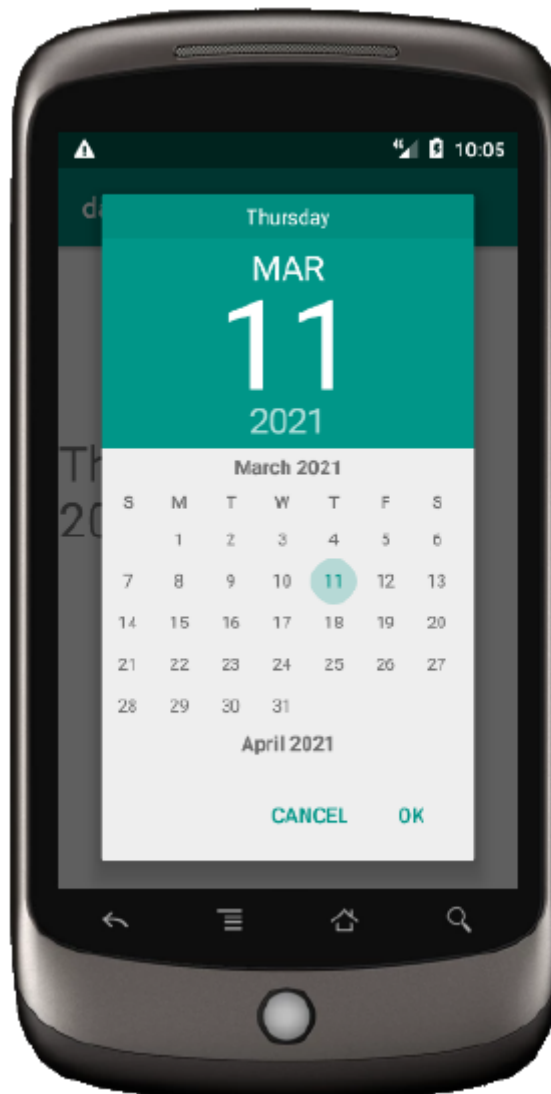


```

app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_chainStyle="packed" />
<Button
    android:id="@+id/timeButton"
    style="@style/Widget.AppCompat.Button.Colored"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="get time"
    app:layout_constraintBottom_toTopOf="@+id/timeTextView"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/dateTextView"/>
<TextView
    android:id="@+id/timeTextView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="16dp"
    android:text="timeTextView"
    android:textAppearance="@style/TextAppearance.AppCompat.Display1"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/timeButton" />
</android.support.constraint.ConstraintLayout>

```

OUTPUT:





7. Write an android program to perform an animation of an image.

activity_main.xml

```
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:paddingLeft="@dimen/activity_horizontal_margin"
android:paddingRight="@dimen/activity_horizontal_margin"
android:paddingTop="@dimen/activity_vertical_margin"
android:paddingBottom="@dimen/activity_vertical_margin"
tools:context=".MainActivity">
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Alert Dialog"
```

```
android:id="@+id/textView"
android:textSize="35dp"
android:layout_alignParentTop="true"
android:layout_centerHorizontal="true"/>
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Tutorialspoint"
android:id="@+id/textView2"
android:textColor="#ff3eff0f"
android:textSize="35dp"
android:layout_below="@+id/textView"
android:layout_centerHorizontal="true"/>
<ImageView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:id="@+id/imageView"
android:src="@drawable/abc"
android:layout_below="@+id/textView2"
android:layout_alignRight="@+id/textView2"
android:layout_alignEnd="@+id/textView2"
android:layout_alignLeft="@+id/textView"
android:layout_alignStart="@+id/textView"/>
<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="zoom"
android:id="@+id/button"
android:layout_below="@+id/imageView"
android:layout_alignParentLeft="true"
android:layout_alignParentStart="true"
android:layout_marginTop="40dp"
android:onClick="clockwise"/>
<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="clockwise"
android:id="@+id/button2"
android:layout_alignTop="@+id/button"
android:layout_centerHorizontal="true"
android:onClick="zoom"/>
<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="fade"
android:id="@+id/button3"
android:layout_alignTop="@+id/button2"
android:layout_alignParentRight="true"
```

```

        android:layout_alignParentEnd="true"
        android:onClick="fade"/>
        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="blink"
            android:onClick="blink"
            android:id="@+id/button4"
            android:layout_below="@+id/button"
            android:layout_alignParentLeft="true"
            android:layout_alignParentStart="true"/>
        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="move"
            android:onClick="move"
            android:id="@+id/button5"
            android:layout_below="@+id/button2"
            android:layout_alignRight="@+id/button2"
            android:layout_alignEnd="@+id/button2"
            android:layout_alignLeft="@+id/button2"
            android:layout_alignStart="@+id/button2" />
        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="slide"
            android:onClick="slide"
            android:id="@+id/button6"
            android:layout_below="@+id/button3"
            android:layout_toRightOf="@+id/textView"
            android:layout_toEndOf="@+id/textView" />
    </RelativeLayout>

```

MainActivity.java

```

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.animation.Animation;
import android.view.animation.AnimationUtils;
import android.widget.ImageView;
import android.widget.Toast;
public class MainActivity extends Activity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}

```

```

public void clockwise(View view){
    ImageView image = (ImageView)findViewById(R.id.imageView);
    Animation animation = AnimationUtils.loadAnimation(getApplicationContext(),
    R.anim.myanimation);
    image.startAnimation(animation);
}
public void zoom(View view){
    ImageView image = (ImageView)findViewById(R.id.imageView);
    Animation animation1 = AnimationUtils.loadAnimation(getApplicationContext(),
    R.anim.clockwise);
    image.startAnimation(animation1);
}
public void fade(View view){
    ImageView image = (ImageView)findViewById(R.id.imageView);
    Animation animation1 =
    AnimationUtils.loadAnimation(getApplicationContext(),
    R.anim.fade);
    image.startAnimation(animation1);
}
public void blink(View view){
    ImageView image = (ImageView)findViewById(R.id.imageView);
    Animation animation1 =
    AnimationUtils.loadAnimation(getApplicationContext(),
    R.anim.blink);
    image.startAnimation(animation1);
}
public void move(View view){
    ImageView image = (ImageView)findViewById(R.id.imageView);
    Animation animation1 =
    AnimationUtils.loadAnimation(getApplicationContext(), R.anim.move);
    image.startAnimation(animation1);
}
public void slide(View view){
    ImageView image = (ImageView)findViewById(R.id.imageView);
    Animation animation1 =
    AnimationUtils.loadAnimation(getApplicationContext(), R.anim.slide);
    image.startAnimation(animation1);
}
}

```

res/anim/myanimation.xml

```

<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
<scale xmlns:android="http://schemas.android.com/apk/res/android"
    android:fromXScale="0.5"
    android:toXScale="3.0"
    android:fromYScale="0.5"

```

```

android:toYScale="3.0"
android:duration="5000"
android:pivotX="50%"
android:pivotY="50%" >
</scale>
<scale xmlns:android="http://schemas.android.com/apk/res/android"
android:startOffset="5000"
android:fromXScale="3.0"
android:toXScale="0.5"
android:fromYScale="3.0"
android:toYScale="0.5"
android:duration="5000"
android:pivotX="50%"
android:pivotY="50%" >
</scale>
</set>

```

res/anim/clockwise.xml.

```

<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
<rotate xmlns:android="http://schemas.android.com/apk/res/android"
android:fromDegrees="0"
android:toDegrees="360"
android:pivotX="50%"
android:pivotY="50%"
android:duration="5000" >
</rotate>
<rotate xmlns:android="http://schemas.android.com/apk/res/android"
android:startOffset="5000"
android:fromDegrees="360"
android:toDegrees="0"
android:pivotX="50%"
android:pivotY="50%"
android:duration="5000" >
</rotate>
</set>

```

res/anim/fade.xml.

```

<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android"
android:interpolator="@android:anim/accelerate_interpolator" >
<alpha
android:fromAlpha="0"
android:toAlpha="1"
android:duration="2000">
</alpha>
>

```

```
<alpha
android:startOffset="2000"
android:fromAlpha="1"
android:toAlpha="0"
android:duration="2000" >
</alpha>
</set>
```

res/anim/blink.xml.

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
<alpha android:fromAlpha="0.0"
android:toAlpha="1.0"
android:interpolator="@android:anim/accelerate_interpolator"
android:duration="600"
android:repeatMode="reverse"
android:repeatCount="infinite"/>
</set>
```

res/anim/move.xml.

```
<?xml version="1.0" encoding="utf-8"?>
<set
xmlns:android="http://schemas.android.com/apk/res/android"
android:interpolator="@android:anim/linear_interpolator"
android:fillAfter="true">
<translate
android:fromXDelta="0%p"
android:toXDelta="75%p"
android:duration="800" />
</set>
```

res/anim/slide.xml

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android"
android:fillAfter="true" >
<scale
android:duration="500"
android:fromXScale="1.0"
android:fromYScale="1.0"
android:interpolator="@android:anim/linear_interpolator"
android:toXScale="1.0"
android:toYScale="0.0" />
</set>
```

res/values/string.xml


```
<resources>
<string name="app_name">My Application</string>
</resources>
```

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
package="com.example.sairamkrishna.myapplication" >
<application
android:allowBackup="true"
android:icon="@drawable/ic_launcher"
android:label="@string/app_name"
android:theme="@style/AppTheme" >
<activity
android:name="com.example.animation.MainActivity"
android:label="@string/app_name" >
<intent-filter>
<action android:name="android.intent.action.MAIN" />
<category android:name="android.intent.category.LAUNCHER" />
</intent-filter>
</activity>
</application>
</manifest>
```

OUTPUT:

