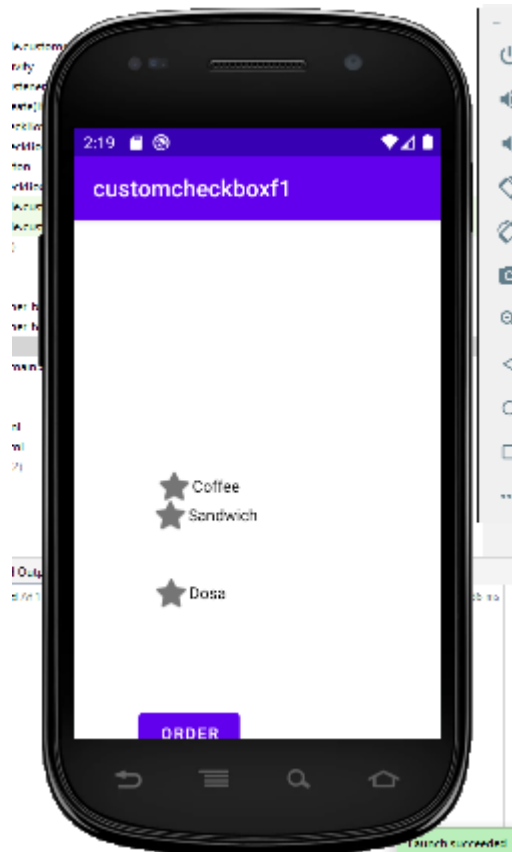


Android provides facility to customize the UI of view elements rather than default.



```
<?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">
```

```
<CheckBox
```

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

```
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginTop="208dp"
android:layout_marginEnd="176dp"
android:layout_marginRight="176dp"

android:button="@android:drawable/btn_star"
android:clickable="true"
android:focusable="true"

android:text="Coffee"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintTop_toTopOf="parent" />
```

<CheckBox

```
android:id="@+id/sandwich"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginEnd="160dp"
android:layout_marginRight="160dp"
android:button="@android:drawable/btn_star"
android:clickable="true"
android:focusable="true"
android:text="Sandwich"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintTop_toTopOf="@id/coffee"
```

```
app:layout_constraintVertical_bias="0.129" />
```

```
<CheckBox
```

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

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

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

```
    android:layout_marginTop="68dp"
```

```
    android:layout_marginEnd="188dp"
```

```
    android:layout_marginRight="188dp"
```

```
    android:button="@android:drawable/btn_star"
```

```
    android:clickable="true"
```

```
    android:focusable="true"
```

```
    android:text="Dosa"
```

```
    app:layout_constraintEnd_toEndOf="parent"
```

```
    app:layout_constraintTop_toTopOf="@id/sandwich" />
```

```
<Button
```

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

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

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

```
    android:layout_marginTop="424dp"
```

```
    android:layout_marginEnd="176dp"
```

```
    android:layout_marginRight="176dp"
```

```
    android:text="order"
```

```
    app:layout_constraintEnd_toEndOf="parent"
```

```
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

```
package com.example.customcheckboxf1;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.Toast;

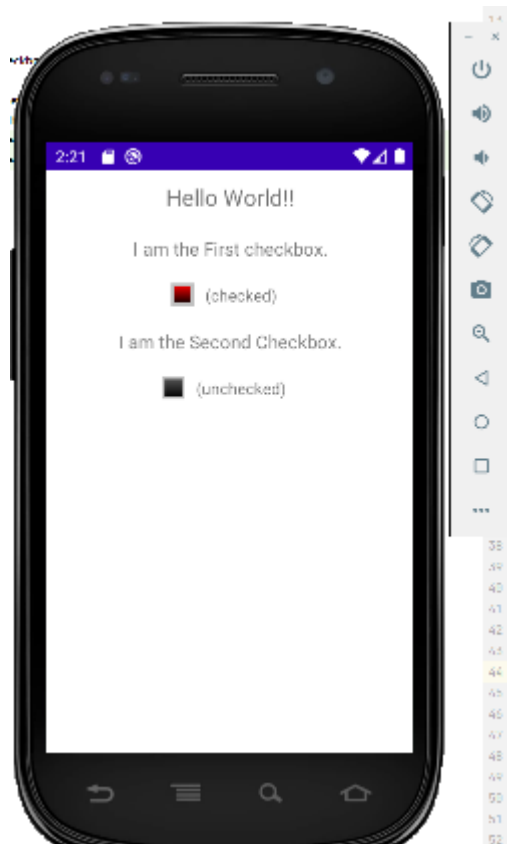
public class MainActivity extends AppCompatActivity {

    CheckBox c, s, d;
    Button o;

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

    public void addListenerOnButtonClick() {
        c = (CheckBox) findViewById(R.id.coffee);
        s = (CheckBox) findViewById(R.id.sandwich);
        d = (CheckBox) findViewById(R.id.dosa);
        o = (Button) findViewById(R.id.order);
        o.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                int total = 0;
                StringBuilder r = new StringBuilder();
                r.append("Selected Items");
                if (c.isChecked()) {
                    r.append("\ncoffee 50Rs");
                    total += 50;
                }
                if (s.isChecked()) {
                    r.append("\nsandwich 100Rs");
                    total += 100;
                }
                if (d.isChecked()) {
                    r.append("\ndosa 90Rs");
                    total += 90;
                }
                r.append("\nTotal:" + total + "Rs");
                //displaying the msg on the toast
                Toast.makeText(getApplicationContext(), r.toString(),
                    Toast.LENGTH_SHORT).show();
                Log.d("Revision1", "total:" +total);
            }
        });
    }
}
```

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



```

<?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:textSize="20dip"
        android:gravity="center"
        android:padding="10dip"
        android:text="Hello World!!" />
    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:textSize="16dip"
        android:gravity="center"
        android:padding="10dip"
        android:text="I am the First checkbox." />
    <LinearLayout
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:orientation="horizontal">
        <CheckBox
            android:id="@+id/checkbox1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center"
            android:button="@drawable/customcheck"/>
        <TextView
            android:id="@+id/textview1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:textSize="14dip"
            android:gravity="center"
            android:padding="10dip"
            android:text="(unchecked)" />
    </LinearLayout>

    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:textSize="16dip"
        android:gravity="center"
        android:padding="10dip"
        android:text="I am the Second Checkbox." />

    <LinearLayout
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:gravity="center"

```

```

        android:orientation="horizontal">

        <CheckBox

            android:id="@+id/checkbox2"

            android:layout_width="wrap_content"

            android:layout_height="wrap_content"

            android:layout_gravity="center"

            android:button="@drawable/customcheck"/>

        <TextView

            android:id="@+id/textview2"

            android:layout_width="wrap_content"

            android:layout_height="wrap_content"

            android:textSize="14dip"

            android:gravity="center"

            android:padding="10dip"

            android:text="(unchecked)" />

    </LinearLayout>

</LinearLayout>
Res/xml/checked.xml

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

    android:shape="rectangle">

    <gradient android:startColor="#ffff0000" android:endColor="#ff000000"
    android:angle="270"/>

    <stroke android:width="4px" android:color="#ffc0c0c0" />

    <size android:height="20dp" android:width="20dp"/>

</shape>

```

Res/xml/unchecked.xml

```

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

    android:shape="rectangle">

    <gradient android:startColor="#ff585858" android:endColor="#ff000000"

```

```

    android:angle="270"/>

    <stroke android:width="4px" android:color="#ffc0c0c0" />

    <size android:height="20dp" android:width="20dp"/>

</shape>

```

/drawablecustomcheck

```

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

    <item android:state_checked="true"

        android:drawable="@xml/checked" />

    <item android:state_pressed="true"

        android:drawable="@xml/checked" />

    <item android:drawable="@xml/unchecked" />

</selector>

```

Java file

```

package com.example.checkbox1_custom;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.CheckBox;
import android.widget.TextView;

public class MainActivity extends Activity implements OnClickListener {

    /** Called when the activity is first created. */

    @Override

    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        findViewById(R.id.checkbox1).setOnClickListener(this);
        findViewById(R.id.checkbox2).setOnClickListener(this);
    }

    @Override
    public void onClick(View v) {

        TextView tv;

        if (v.getId()==R.id.checkbox1) {

            tv = (TextView)findViewById(R.id.textview1);

```



```

    } else {

        tv = (TextView) findViewById(R.id.textview2);

    }

    if (((CheckBox)v).isChecked()) {

        tv.setText(" (checked) ");

    } else {

        tv.setText(" (unchecked) ");

    }

}

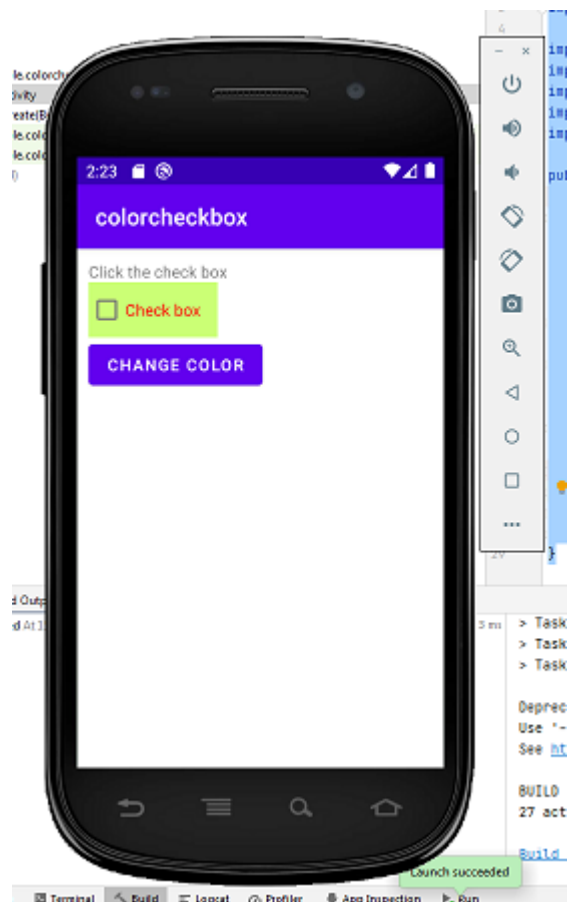
}

```

What is the difference between android drawable XML selector and shape tags?

- Shape - tags are useful if you want to make a static design only like a rounded corner or a circle with a stroke
- Selector - tag is to control make state-based android drawable like in our checkbox, one drawable for the checked state, and another drawable for the unchecked state.

So now let's make our checkbox a custom one, before that you have to move the two images that for your checkbox's state you have to move it to the drawable folder since I have only one resolution of the image I will be putting those images in drawable-xxxhdpi, if you have multiple resolution images you can put it in all the drawable-* directories.



```
<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"
```

```
>
```

```
<CheckBox android:id="@+id/checkBox1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentTop="true"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="171dp"
    android:text="ONE" />
```

```
<CheckBox android:id="@+id/checkBox2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/checkBox1"
    android:layout_below="@+id/checkBox1"
    android:text="TWO" />
```

```
<CheckBox android:id="@+id/checkBox3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/checkBox2"
    android:layout_below="@+id/checkBox2"
    android:text="THREE" /> </RelativeLayout>
```

```

package com.example.myapplication;

import android.app.Activity;
import android.graphics.Color;
import android.os.Bundle;
import android.widget.CheckBox;
public class MainActivity extends Activity
{
    CheckBox one,two,three;
    @Override protected void onCreate(Bundle savedInstanceState)
    { super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);
      one = (CheckBox)findViewById(R.id.checkBox1);
      two = (CheckBox)findViewById(R.id.checkBox2);
      three = (CheckBox)findViewById(R.id.checkBox3);
      //Adding color to checkbox text.
      one.setTextColor(Color.parseColor("#e80173"));
      two.setTextColor(Color.parseColor("#96039f"));
      three.setTextColor(Color.parseColor("#039f83"));
    }
}

```

```

<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/rl"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:padding="10dp"
    tools:context=".MainActivity">
    <TextView
        android:id="@+id/tv"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Click the check box" />
    <CheckBox
        android:id="@+id/checkbox"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Check box"
        android:layout_below="@id/tv"
        android:paddingRight="15dp"/>
    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"

```

```

        android:layout_height="wrap_content"
        android:text="Change Color"
        android:layout_below="@id/checkbox" />
</RelativeLayout>

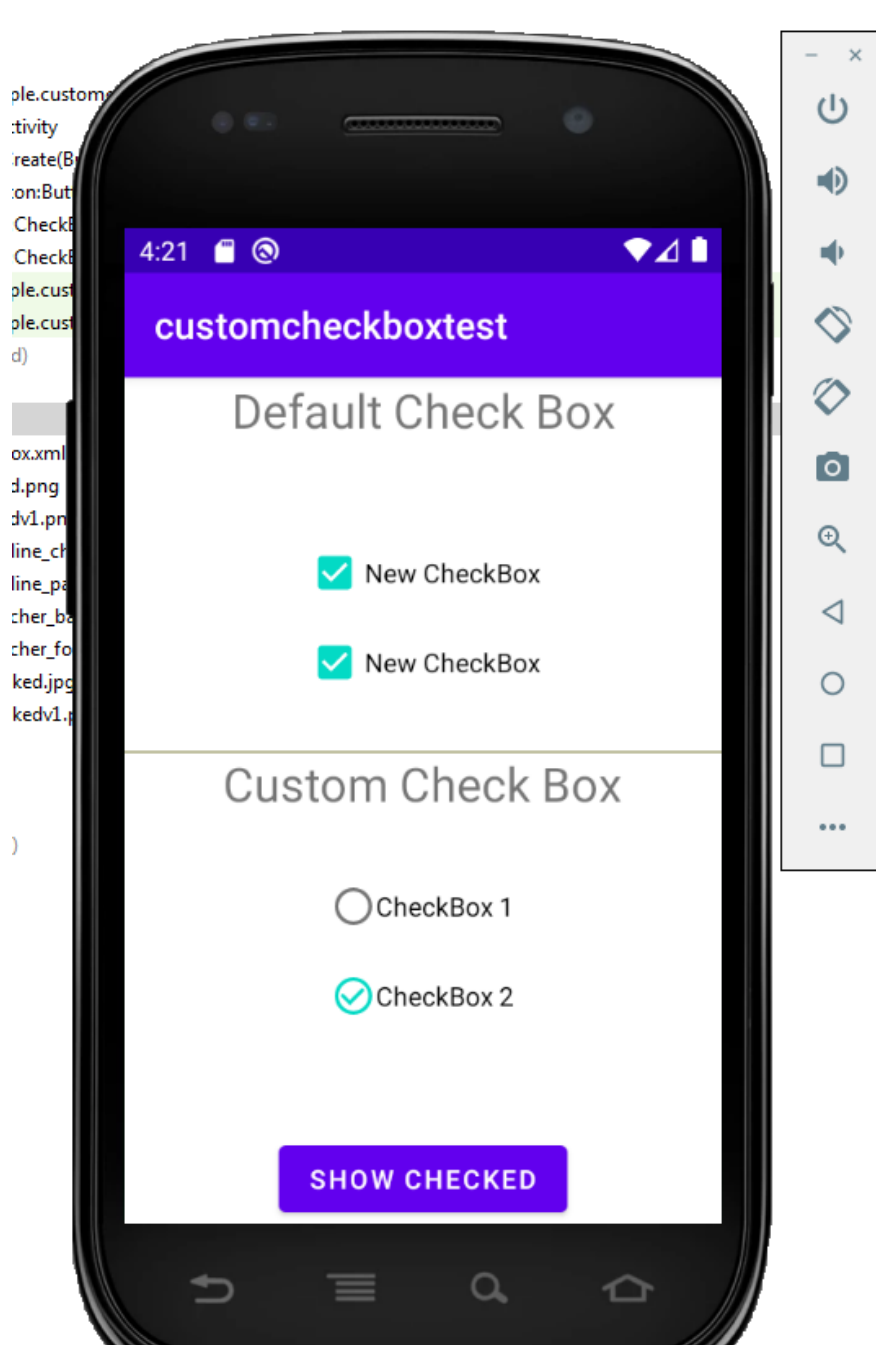
```

```
package com.example.colorcheckbox;
```

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

```
import android.graphics.Color;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.CheckBox;
```

```
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        final CheckBox checkBox = (CheckBox) findViewById(R.id.checkbox);
        Button button = (Button) findViewById(R.id.button);
        button.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                checkBox.setTextColor(Color.RED);
                checkBox.setBackgroundColor(Color.parseColor("#cbff75"));
                // checkBox.setScaleX(100);
                // checkBox.setScaleY(100);
                // checkBox.setTextColor(Color.parseColor("#cbff76"));
            }
        });
    }
}
```



Instructions: for custom check box click drwable new ->vector assest-> click on clipart select images which is required

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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/textView1"
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:gravity="center_horizontal"
    android:textSize="25dp"
    android:text="Default Check Box"
    android:layout_alignParentTop="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true" />

<CheckBox
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="New CheckBox"
    android:id="@+id/checkBox"
    android:layout_below="@+id/textView1"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="46dp" />

<CheckBox
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="New CheckBox"
    android:id="@+id/checkBox2"
    android:layout_below="@+id/checkBox"
    android:layout_alignLeft="@+id/checkBox"
    android:layout_alignStart="@+id/checkBox" />

<View
    android:layout_width="fill_parent"
    android:layout_height="1dp"
    android:layout_marginTop="200dp"
    android:background="#B8B894"
    android:id="@+id/viewStub" />

<CheckBox
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="CheckBox 1"
    android:id="@+id/checkBox3"
    android:button="@drawable/checkbox"
    android:layout_below="@+id/viewStub"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="58dp" />

<CheckBox
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="CheckBox 2"
    android:id="@+id/checkBox4"
    android:button="@drawable/checkbox"
    android:layout_below="@+id/checkBox3"
    android:layout_alignLeft="@+id/checkBox3"
    android:layout_alignStart="@+id/checkBox3" />

<TextView

```

```

        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textAppearance="?android:attr/textAppearanceSmall"
        android:textSize="25dp"
        android:text="Custom Check Box"
        android:id="@+id/textView"
        android:layout_alignTop="@+id/viewStub"
        android:layout_centerHorizontal="true" />

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Show Checked"
    android:id="@+id/button"
    android:layout_alignParentBottom="true"
    android:layout_centerHorizontal="true" />

</RelativeLayout>

```

/drawable/Checkbox.xml

```

<?xml version="1.0" encoding="utf-8"?>
<selector xmlns:android="http://schemas.android.com/apk/res/android">
    <item android:state_checked="true"
        android:drawable="@drawable/ic_baseline_check_circle_outline_24" />
    <item android:state_checked="false"
        android:drawable="@drawable/ic_baseline_panorama_fish_eye_24"/>
</selector>

```

.java file

```

public class MainActivity extends AppCompatActivity {

    CheckBox cb1,cb2;
    Button button;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        cb1=(CheckBox) findViewById(R.id.checkBox3);
        cb2=(CheckBox) findViewById(R.id.checkBox4);
        button=(Button) findViewById(R.id.button);

        button.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                StringBuilder sb=new StringBuilder("");

                if(cb1.isChecked()){
                    String s1=cb1.getText().toString();
                    sb.append(s1);
                }

                if(cb2.isChecked()){
                    String s2=cb2.getText().toString();
                    sb.append("\n"+s2);
                }
                if(sb!=null && !sb.toString().equals("")){
                    Toast.makeText(getApplicationContext(), sb,

```

```
Toast.LENGTH_LONG).show();

        }
        else{
            Toast.makeText(getApplicationContext(),"Nothing
Selected", Toast.LENGTH_LONG).show();
        }
    }
}));
}
```