

LABSHEET 7 (2hrs)

Title: Create an Android App that uses Check Boxes.

Objective(s):

- Create an Android App that uses Check Boxes.

Tools, Equipment and Materials:

- Personal Computer.
- Internet Connection.
- Android Studio.

2. Check Box

CheckBox belongs to android.widget.CheckBox class. Android CheckBox class is the subclass of CompoundButton class.

- It has two states – **checked** or **unchecked**.

Methods of CheckBox class

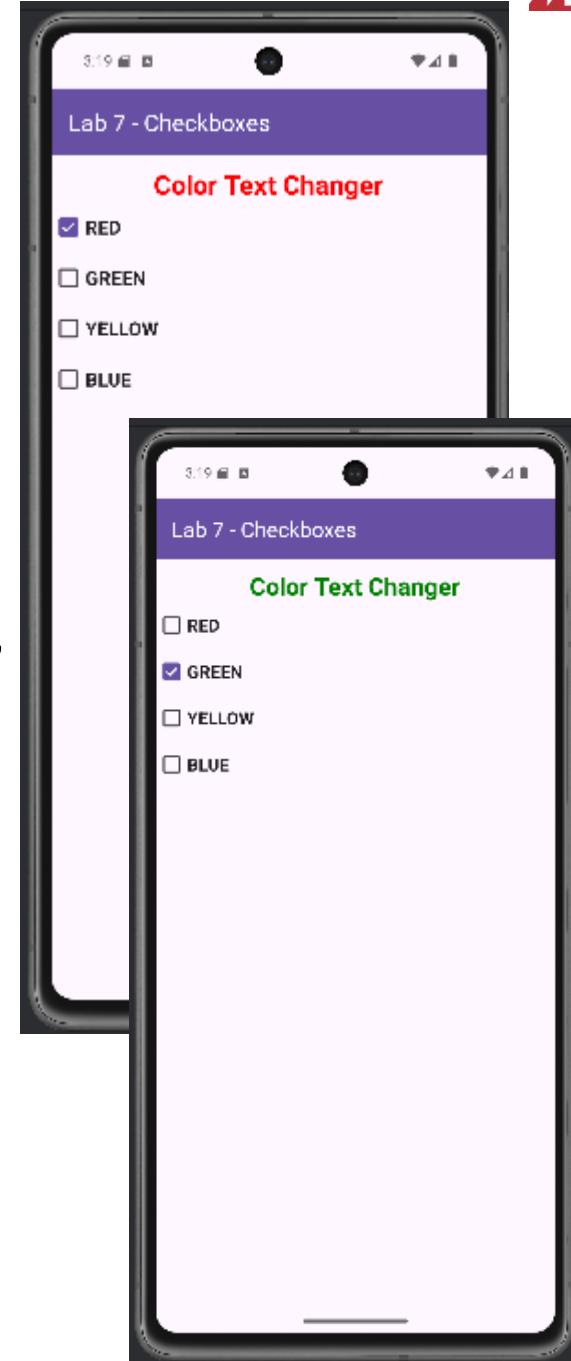
- ***public boolean isChecked():*** If CheckBox is in checked state then return true otherwise false.
- ***public void setChecked(boolean status):*** It changes the state of the CheckBox.

Lab7: Check Boxes (3hrs)

Create an Android App where users choose the color from the given list and the title **must change color accordingly.** (Use Linear Layout, Vertical Orientation)

1. Create new android application.
2. Include the following widgets in “activity_main.xml” in Linear Layout.
 - Text View to display ‘Colour Text Changer’.
 - 4 Check Boxes as shown in the output.

(Refer to next two slides for more details)



```
activity_main.xml colors.xml MainActivity.kt
```

```
11 <TextView  
12     android:id="@+id/title"  
13     android:layout_width="match_parent"  
14     android:layout_height="wrap_content"  
15     android:text="Colour Text Changer"  
16     android:textAlignment="center"  
17     android:textStyle="bold"  
18     android:textSize="30sp"/>  
19  
20 <CheckBox  
21     android:id="@+id/chkred"  
22     android:layout_width="wrap_content"  
23     android:layout_height="wrap_content"  
24     android:text="RED"  
25     android:textStyle="bold"  
26     android:textSize="20sp"/>  
27  
28 <CheckBox  
29     android:id="@+id/chkgreen"  
30     android:layout_width="wrap_content"  
31     android:layout_height="wrap_content"  
32     android:text="GREEN"  
33     android:textStyle="bold"  
34     android:textSize="20sp"/>  
35
```

LinearLayout TextView

Check Box – Red

Repeat the same code to include other Check Boxes (set the id to chkred, chkgreen, chkyellow, chkblue).

```
activity_main.xml colors.xml MainActivity.kt
```

```
1 <?xml version="1.0" encoding="utf-8"?>  
2 <resources>  
3     <color name="purple_200">#FFBB86FC</color>  
4     <color name="purple_500">#FF6200EE</color>  
5     <color name="purple_700">#FF3700B3</color>  
6     <color name="teal_200">#FF03DAC5</color>  
7     <color name="teal_700">#FF018786</color>  
8     <color name="black">#FF000000</color>  
9     <color name="white">#FFFFFFFF</color>  
10    <!-- colors to add -->  
11    <color name="red">#ff0000</color>  
12    <color name="green">#008000</color>  
13    <color name="yellow">#ffff00</color>  
14    <color name="blue">#0000ff </color>  
15  
16 </resources>
```

Add colours to colors.xml

```
import androidx.core.content.ContextCompat
```

```
class MainActivity : AppCompatActivity() {
```

//variables

```
lateinit var title: TextView
lateinit var chkred: CheckBox
lateinit var chkgreen: CheckBox
lateinit var chkyellow: CheckBox
lateinit var chkblue: CheckBox
```

```
override fun onCreate(savedInstanceState: Bundle?) {
    super.onCreate(savedInstanceState)
    setContentView(R.layout.activity_main)
    //reference to UI
    chkred = findViewById(R.id.chkred)
    chkgreen = findViewById(R.id.chkgreen)
    chkyellow = findViewById(R.id.chkyellow)
    chkblue = findViewById(R.id.chkblue)
    title = findViewById(R.id.title)
```

Variable declaration

//Event Handlers

```
chkred.setOnCheckedChangeListener { buttonView: CompoundButton,
                                         isChecked: Boolean->
    if (chkred.isChecked) {
        //set other checkboxes to false
        chkblue.isChecked = false
        chkgreen.isChecked = false
        chkyellow.isChecked = false
        //change title color to Red
        title.setTextColor(ContextCompat.getColor(context: this@MainActivity, R.color.red))
    } else {
        //default title color
        title.setTextColor(ContextCompat.getColor(context: this@MainActivity, R.color.black))
    }
}
```

Find the components from layout file

Add Check Box Listeners & methods

```
chkblue.setOnCheckedChangeListener { buttonView: CompoundButton,
                                         isChecked: Boolean->
    if (chkblue.isChecked) {
```

Repeat the same steps for chkgreen, chkyellow, chkblue