

# 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**.

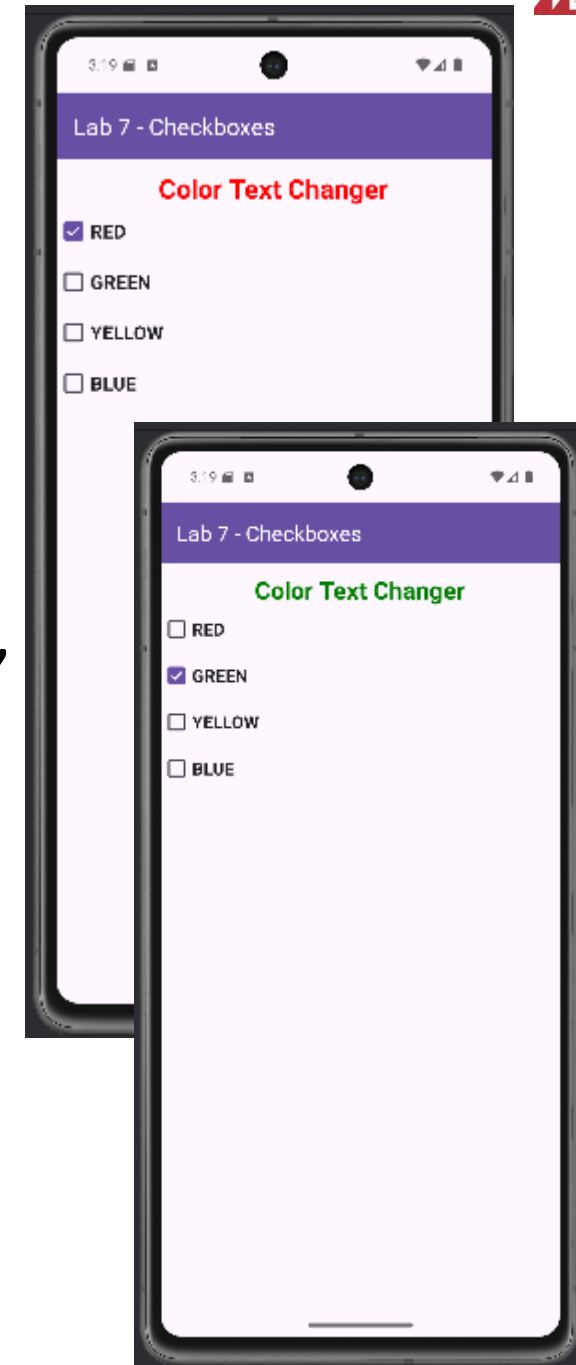
### Methods of CheckBox class

- ***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 x colors.xml x MainActivity.kt x

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 x colors.xml x MainActivity.kt x
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
```

### Variable declaration

```
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)
}
```

### Find the components from layout file

```
//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))
    }
}
```

### Add Check Box Listeners & methods

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

    if (chkblue.isChecked) {
```

### Repeat the same steps for chkgreen, chkyellow, chkblue