

Ahsanullah University of Science and Technology



Department of Computer Science and Engineering
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Course Title: The Software Development III

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Submitted to

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Questions:

1. Write necessary codes for the following:

You have to work with one activity. There will be a question and three options of answer to that. You have to use checkbox. There must be only one correct answer to that question. If someone chooses the correct answer, you have to display in a textview "Correct answer". If someone chooses a wrong answer, you have to show "Wrong answer". If a user chooses more than one option or, does not choose any option, you have to tell them that they can only choose one option and they have to choose any option as selecting none is not acceptable using another textview.

A scenario is given below:

Suppose the question is "Who is the most honorable person in Seven kingdoms?" The options to that question are Ned Stark, Jon Arryn and Jaehaerys I Targaryen.

Solution:

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@color/bg"
    android:padding="15dp">
    <TextView
        android:id="@+id/qsn"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/question"
        android:textSize="35sp"
        android:textColor="@color/black"
        android:textStyle="bold"/>
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical"
        android:layout_below="@id/qsn">
        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="horizontal">
            <CheckBox
```

```

        android:id="@+id/option1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:buttonTint="@color/check"
        android:checked="false"/>
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/option1"
        android:textSize="25sp"
        android:textColor="@color/black"/>
</LinearLayout>
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal">
    <CheckBox
        android:id="@+id/option2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:buttonTint="@color/check"
        android:checked="false"/>
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/option2"
        android:textSize="25sp"
        android:textColor="@color/black"/>
</LinearLayout>
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal">
    <CheckBox
        android:id="@+id/option3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:buttonTint="@color/check"
        android:checked="false"/>
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/option3"
        android:textSize="25sp"
        android:textColor="@color/black"/>
</LinearLayout>
</LinearLayout>

<TextView

```

```

        android:id="@+id/error"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_above="@id/button"
        android:gravity="center"
        android:textSize="30sp" />
    <Button
        android:id="@+id/button"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_above="@id/ans"
        android:layout_marginStart="4dp"
        android:layout_marginTop="4dp"
        android:layout_marginEnd="4dp"
        android:layout_marginBottom="4dp"
        android:backgroundTint="@color/button_bg"
        android:text="click"
        android:textColor="@color/button_text"
        android:textSize="30sp"
        android:textStyle="bold" />
    <TextView
        android:id="@+id/ans"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
        android:background="@color/ans_bg"
        android:gravity="center"
        android:textSize="40sp" />
</RelativeLayout>

```

strings.xml

```

<resources>
    <string name="app_name">AssignmentTwo</string>
    <string name="question">Who is the most honorable person in
Seven kingdoms?</string>
    <string name="option1">Ned Stark</string>
    <string name="option2">Jon Arryn</string>
    <string name="option3">Jaehaerys I Targaryen</string>
</resources>

```

colors.xml

```

<?xml version="1.0" encoding="utf-8"?>
<resources>
    <color name="purple_200">#FFBB86FC</color>

```

```

<color name="purple_500">#FF6200EE</color>
<color name="purple_700">#FF3700B3</color>
<color name="teal_200">#FF03DAC5</color>
<color name="teal_700">#FF018786</color>
<color name="black">#FF000000</color>
<color name="white">#FFFFFFFF</color>
<color name="bg">#EEC6F0</color>
<color name="check">#FF0095</color>
<color name="ans_bg">#37FA72</color>
<color name="button_bg">#D9B036</color>
<color name="button_text">#BF045B</color>
</resources>

```

MainActivity.kt

```

package com.example.ass
import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import android.view.View
import android.widget.TextView
import android.widget.Button
import android.widget.CheckBox
import com.example.ass.R as R1

class MainActivity : AppCompatActivity() {
    lateinit var button : Button
    lateinit var answerText : TextView
    lateinit var errorText : TextView
    lateinit var option1 : CheckBox
    lateinit var option2 : CheckBox
    lateinit var option3 : CheckBox
    val correct : String = "Correct answer"

    val wrong : String = "Wrong answer"
    val zeroSelection : String = "You have to select any option"
    val multiSelection : String = "You can select only one option"
    var counter : Int = 0
    override fun onCreate(savedInstanceState: Bundle?)
    {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        button = findViewById(R1.id.button)
        button.setOnClickListener(listener)
        answerText = findViewById(R1.id.ans)
        errorText = findViewById(R1.id.error)
        option1 = findViewById(R1.id.option1)
        option1.setOnClickListener(listener)
    }
}

```

```

        option2 = findViewById(R1.id.option2)
        option2.setOnClickListener(listener)
        option3 = findViewById(R1.id.option3)
        option3.setOnClickListener(listener)
    }

    val listener= View.OnClickListener { view ->
        when (view.getId()) {
            R1.id.button -> {
                val parameterName: String =

                    if (counter > 1) multiSelection
                    else if (counter == 0) zeroSelection
                    else if (option1.isChecked()) correct
                    else wrong
                if (counter == 1) {

                    answerText.setText(parameterName)
                    errorText.setText(null)
                }
                else {
                    answerText.setText(null)
                    errorText.setText(parameterName)
                }
            }

            R1.id.option1 -> if(option1.isChecked()) counter++
            else counter--

            R1.id.option2 -> if(option2.isChecked()) counter++
            else counter--

            R1.id.option3 -> if(option3.isChecked()) counter++
            else counter--
        }
    }
}

```