CSE224: Fundamentals of Android

CA-2

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Github Link: https://github.com/Sudeep-kr-1999/Android-Devlopment-CA-LPU.git

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Problem-1 Solution

XML Code:

```xml
<?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"
    android:id="@+id/backLayout"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@color/background"
    tools:context=".MainActivity">

    <RelativeLayout
        android:id="@+id/innerLayout"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:translationZ="100dp"
        android:background="@drawable/inner_layout"
        android:padding="20dp"
        android:layout_margin="20dp">
```

```xml
<ImageView
    android:id="@+id/imageAvatar"
    android:layout_width="100dp"
    android:layout_height="100dp"
    android:layout_alignParentTop="true"
    android:contentDescription="@string/android_description"
    android:src="@drawable/avatar_final"
    android:layout_marginTop="95dp"
    android:layout_centerHorizontal="true"
    android:translationZ="200dp"
    android:outlineAmbientShadowColor="@color/black"
    android:outlineSpotShadowColor="@color/inner_blur"/>

<com.addisonelliott.segmentedbutton.SegmentedButtonGroup
    android:id="@+id/Segmented_buttonGroup"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_gravity="center_horizontal"
    android:layout_margin="20dp"
    android:elevation="2dp"
    android:background="@color/white"
    app:dividerWidth="0dp"
    app:radius="100dp"
    android:showDividers="none"
    app:draggable="true"
    app:selectedButtonRadius="50dp"
    app:selectedBackground="@color/purple_700"
    android:outlineSpotShadowColor="@color/black"
    android:outlineAmbientShadowColor="@color/black"
```

```xml
        app:ripple="false"

        android:layout_below="@+id/imageAvatar">

        <com.addisonelliott.segmentedbutton.SegmentedButton
            android:layout_width="0dp"

            android:layout_height="match_parent"

            android:layout_weight="1"

            android:padding="10dp"

            app:selectionAnimationDuration="1000"

            app:drawableGravity="top"

            app:text="@string/login"

            app:selectedTextColor="@color/white"

            app:textColor="@color/black"/>
        <com.addisonelliott.segmentedbutton.SegmentedButton
            android:layout_width="0dp"

            android:layout_height="match_parent"

            android:layout_weight="1"

            android:padding="10dp"

            app:drawableGravity="top"

            app:text="@string/sign_up"

            app:selectedTextColor="@color/white"

            app:textColor="@color/black" />

    </com.addisonelliott.segmentedbutton.SegmentedButtonGroup>

    <ImageButton
        android:id="@+id/twitter_button"

        android:layout_marginStart="50dp"

        android:layout_marginTop="20dp"

        android:layout_width="50dp"
```

```xml
        android:layout_height="50dp"

        android:layout_below="@+id/Segmented_buttonGroup"

        android:translationZ="10dp"

        android:clickable="true"

        android:backgroundTint="@color/white"

        android:background="@drawable/twitter"

        android:backgroundTintMode="multiply"

        android:contentDescription="@string/twitter_description"/>


    <ImageButton

        android:id="@+id/facebook_button"

        android:layout_marginStart="50dp"

        android:layout_marginTop="20dp"

        android:layout_width="50dp"

        android:layout_height="50dp"

        android:layout_below="@+id/Segmented_buttonGroup"

        android:contentDescription="@string/facebook_description"

        android:backgroundTint="@color/white"

        android:backgroundTintMode="multiply"

        android:background="@drawable/facebook"

        android:translationZ="10dp"

        android:clickable="true"

        android:layout_toEndOf="@+id/twitter_button"/>


    <ImageButton

        android:id="@+id/google_button"

        android:layout_marginStart="50dp"

        android:layout_marginTop="20dp"

        android:layout_width="50dp"

        android:layout_height="50dp"
```

```xml
        android:layout_below="@+id/Segmented_buttonGroup"

        android:contentDescription="@string/google_description"

        android:backgroundTint="@color/white"

        android:backgroundTintMode="multiply"

        android:background="@drawable/google_plus"

        android:translationZ="10dp"

        android:clickable="true"

        android:layout_toEndOf="@id/facebook_button"/>


    <TextView

        android:id="@+id/orText"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_centerHorizontal="true"

        android:text="@string/or_text_view"

        android:layout_below="@+id/google_button"

        android:layout_marginTop="30dp"

        android:textSize="15sp"

        android:textColor="@color/black"

        android:textStyle="normal"

        android:fontFamily="sans-serif-medium"/>


    <TextView

        android:id="@+id/username_email_view"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="@string/username_email"

        android:layout_below="@+id/orText"

        android:layout_centerHorizontal="true"

        android:textColor="@color/purple_700"
```

```xml
        android:layout_marginTop="15dp"/>

    <EditText
        android:hint="@string/username_hint"
        android:layout_marginTop="20dp"
        android:id="@+id/username_email_edit_text"
        android:layout_below="@+id/username_email_view"
        android:layout_centerHorizontal="true"
        android:layout_width="300dp"
        android:textAlignment="center"
        android:layout_height="wrap_content"
        android:textStyle="normal"
        android:fontFamily="sans-serif-condensed-medium"
        android:backgroundTint="@color/black"
        android:importantForAutofill="auto"
        android:textDirection="ltr"
        android:maxLength="40"
        android:nextFocusDown="@id/password_text"
        android:textColor="@color/white"/>

    <TextView
        android:id="@+id/password"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/PassWord"
        android:layout_below="@+id/username_email_edit_text"
        android:layout_centerHorizontal="true"
        android:textColor="@color/purple_700"
        android:layout_marginTop="10dp"/>
```

```xml
<EditText
    android:layout_marginTop="20dp"
    android:id="@+id/password_text"
    android:hint="@string/password_hint"
    android:textDirection="ltr"
    android:layout_below="@+id/password"
    android:layout_centerHorizontal="true"
    android:layout_width="300dp"
    android:textAlignment="center"
    android:layout_height="wrap_content"
    android:textStyle="normal"
    android:importantForAutofill="auto"
    android:backgroundTint="@color/black"
    android:fontFamily="sans-serif-condensed-medium"
    android:inputType="textPassword"
    android:maxLength="40"
    android:nextFocusDown="@id/done_button"
    android:textColor="@color/white"/>

<CheckBox
    android:id="@+id/remember_me_checkbox"
    android:layout_below="@+id/password_text"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="@string/remember_me_checkbox"
    android:textColor="@color/black"
    android:layout_marginStart="15dp"
    android:layout_marginTop="10dp"/>

<Button
```

```xml
            android:id="@+id/done_button"

            android:layout_marginTop="10dp"

            android:layout_width="300dp"

            android:layout_centerHorizontal="true"

            android:layout_height="40dp"

            android:background="@drawable/done_button"

            android:layout_below="@+id/remember_me_checkbox"

            android:drawableEnd="@drawable/arrow_icon"

            android:shadowColor="@color/black"

            android:text="@string/done_button"

            android:textColor="@color/white"

            android:textAlignment="center"

            android:textStyle="bold"/>

        <TextView

            android:id="@+id/forgotPassword"

            android:layout_width="wrap_content"

            android:layout_height="wrap_content"

            android:text="@string/forgot_password"

            android:layout_below="@+id/done_button"

            android:layout_marginTop="30dp"

            android:textColor="@color/white"

            android:layout_centerHorizontal="true"

            android:textSize="15sp"

            android:clickable="true"

            android:contextClickable="true"

            android:gravity="center"

            android:textStyle="bold"/>

    </RelativeLayout>
</RelativeLayout>
```

Done button XML

```xml
<?xml version="1.0" encoding="utf-8"?>

<shape xmlns:android="http://schemas.android.com/apk/res/android"
android:shape="rectangle">

    <solid android:color="@color/dark_purple"/>

    <corners android:radius="1000dp"/>

    <stroke android:width="1dp" android:color="@color/black"/>

</shape>
```

Inner Layout XML

```xml
<?xml version="1.0" encoding="utf-8"?>

<shape xmlns:android="http://schemas.android.com/apk/res/android"

    android:shape="rectangle"

    android:innerRadius="50dp"

    android:useLevel="true">

    <gradient android:startColor="@color/inner_blur" android:gradientRadius="100dp" />

    <corners android:radius="30dp"/>

    <stroke android:color="@color/white" android:width="0.1dp"/>

</shape>
```

Color XML

```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="background">#FF0000</color>
```

```xml
<color name="inner_blur">#F6FBFA </color>

<color name="inner_blur1">#F1EBEF</color>

<color name="grey_500">#9E9E9E</color>

<color name="dark_purple">#000080</color>
```
</resources>

String XML

```xml
<resources>

    <string name="app_name">Ques1</string>

    <string name="android_description">This is an Avatar</string>

    <string name="login">Log in</string>

    <string name="sign_up">Sign Up</string>

    <string name="twitter_description">This is twitter button</string>

    <string name="facebook_description">This is facebook button</string>

    <string name="google_description">This is google button</string>

    <string name="or_text_view">or</string>

    <string name="username_email">User name / Email address</string>

    <string name="PassWord">Password</string>

    <string name="remember_me_checkbox">Remember me</string>

    <string name="done_button">DONE</string>

    <string name="forgot_password">Forgot Password ?</string>

    <string name="cannot_be_none">cannot be none</string>

    <string name="username_hint">Less than 40 characters</string>

    <string name="password_hint">Less than 40 characters</string>

</resources>
```

Kotlin

Kotlin in this case is just the default code . So no need to put it here

Screenshot:

Log in   Sign Up

or

User name / Email address

Less than 40 characters

Password

Less than 40 characters

☐ Remember me

DONE   >

Forgot Password ?

Problem-2 Solution
XML Code:

```xml
<?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"
    android:background="@color/yellow"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/heading"
        android:layout_width="300dp"
        android:layout_height="wrap_content"
        android:text="@string/heading"
        android:layout_centerHorizontal="true"
        android:textAlignment="center"
        android:layout_marginTop="50dp"
        android:textSize="20sp"
        android:textColor="@color/red"
        android:textStyle="bold"/>
    <RadioGroup
        android:layout_width="500dp"
        android:layout_height="wrap_content"
        android:id="@+id/radio_group"
        android:layout_marginTop="20dp"
        android:layout_below="@id/heading"
        android:layout_marginStart="50dp"
```

```xml
android:layout_centerHorizontal="true"
android:orientation="horizontal">

<RadioButton
    android:id="@+id/excellent_button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="@string/excellent"
    android:textStyle="bold"
    android:textColor="@color/red"/>

<RadioButton
    android:id="@+id/good_button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="@string/good"
    android:textStyle="bold"
    android:layout_marginStart="10dp"
    android:textColor="@color/red"/>
<RadioButton
    android:id="@+id/okay_button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="@string/okay"
    android:textStyle="bold"
    android:layout_marginStart="10dp"
    android:textColor="@color/red"/>
<RadioButton
    android:id="@+id/poor_button"
    android:layout_width="wrap_content"
```

```xml
            android:layout_height="wrap_content"

            android:layout_marginStart="10dp"

            android:text="@string/poor"

            android:textStyle="bold"

            android:textColor="@color/red"/>

    </RadioGroup>

    <CheckBox

        android:id="@+id/checkbox_1"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_below="@+id/radio_group"

        android:layout_marginStart="30dp"

        android:text="@string/checkbox1"

        android:textColor="@color/black"

        android:textSize="15sp"

        android:textStyle="bold"/>

    <CheckBox

        android:id="@+id/checkbox_2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_below="@+id/checkbox_1"

        android:layout_marginStart="30dp"

        android:text="@string/checkbox2"

        android:textColor="@color/black"

        android:textSize="15sp"

        android:textStyle="bold"/>


    <CheckBox

        android:id="@+id/checkbox_3"

        android:layout_width="wrap_content"
```

```xml
        android:layout_height="wrap_content"

        android:layout_below="@+id/checkbox_2"

        android:layout_marginStart="30dp"

        android:text="@string/checkbox3"

        android:textColor="@color/black"

        android:textSize="15sp"

        android:textStyle="bold"/>

<CheckBox

        android:id="@+id/checkbox_4"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_below="@+id/checkbox_3"

        android:layout_marginStart="30dp"

        android:text="@string/checkbox4"

        android:textColor="@color/black"

        android:textSize="15sp"

        android:textStyle="bold"/>


<TextView

        android:id="@+id/suggestion_view"

        android:layout_width="300dp"

        android:layout_height="wrap_content"

        android:text="@string/suggestion_label"

        android:layout_centerHorizontal="true"

        android:textAlignment="center"

        android:layout_below="@+id/checkbox_4"

        android:layout_marginTop="30dp"

        android:textSize="20sp"

        android:textColor="@color/red"

        android:textStyle="bold"/>
```

```xml
<EditText
    android:layout_width="match_parent"
    android:layout_margin="10dp"
    android:layout_height="wrap_content"
    android:id="@+id/suggestion_text"
    android:layout_below="@+id/suggestion_view"
    android:layout_centerHorizontal="true"
    android:textColor="@color/black"
    android:hint="@string/suggestion_request"
    android:textAlignment="center"
    android:maxLength="40"
    android:textColorHint="@color/black"
    android:inputType="text"
    android:backgroundTint="@color/black"
    android:autofillHints="@string/suggestion_label" />


<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/submit_btn"
    android:text="@string/submit_btn"
    android:layout_below="@+id/suggestion_text"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="20dp"/>


<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:id="@+id/result_view"
    android:layout_below="@+id/submit_btn"
```

```
            android:layout_centerHorizontal="true"

            android:textAlignment="textStart"

            android:textColor="@color/red"

            android:textStyle="bold"

            android:layout_marginTop="10dp"

            android:textSize="20sp"/>

</RelativeLayout>
```

COLOR XML

```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="yellow">#FFFF00</color>

    <color name="red">#FF0000</color>

</resources>
```

String XML

```xml
<resources>

    <string name="app_name">Ques2</string>

    <string name="heading">Rate This Application</string>

    <string name="excellent">EXCELLENT</string>

    <string name="good">GOOD</string>

    <string name="okay">OKAY</string>

    <string name="poor">POOR</string>
```

```xml
    <string name="checkbox1">I really Enjoy the lesson</string>
    <string name="checkbox2">I would like to hear more from you</string>
    <string name="checkbox3">I am satisfied with the content and full Description</string>
    <string name="checkbox4">I will prefer this lesson to else also</string>
    <string name="submit_btn">Submit</string>
    <string name="suggestion_request">Some suggestion here</string>
    <string name="suggestion_label">Any Suggestion</string>
</resources>
```

Kotlin file

```kotlin
package sudeep.example.ques2

import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import android.widget.*

class MainActivity : AppCompatActivity() {
    var resultString=StringBuilder()
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        val radioGroup=findViewById<RadioGroup>(R.id.radio_group)
        val checkbox1=findViewById<CheckBox>(R.id.checkbox_1)
        val checkbox2=findViewById<CheckBox>(R.id.checkbox_2)
        val checkbox3=findViewById<CheckBox>(R.id.checkbox_3)
        val checkbox4=findViewById<CheckBox>(R.id.checkbox_4)
        val suggestionText=findViewById<EditText>(R.id.suggestion_text)
        val submitBtn=findViewById<Button>(R.id.submit_btn)
        val resultView=findViewById<TextView>(R.id.result_view)

        radioGroup.setOnCheckedChangeListener { group, checkedId ->
```

```kotlin
        val radioButton=findViewById<RadioButton>(checkedId)
        val output:String=radioButton.text.toString()
        Toast.makeText(applicationContext,output,Toast.LENGTH_LONG).show()
    }


    checkbox1.setOnCheckedChangeListener { buttonView, isChecked ->
      if (isChecked){
         val checkBoxText:String=checkbox1.text.toString()

Toast.makeText(applicationContext,checkBoxText,Toast.LENGTH_LONG).show()
      }
    }


    checkbox2.setOnCheckedChangeListener { buttonView, isChecked ->
      if(isChecked){
         val checkBoxText:String=checkbox2.text.toString()

Toast.makeText(applicationContext,checkBoxText,Toast.LENGTH_LONG).show()
      }
    }


    checkbox3.setOnCheckedChangeListener { buttonView, isChecked ->
      if(isChecked){
         val checkBoxText:String=checkbox3.text.toString()

Toast.makeText(applicationContext,checkBoxText,Toast.LENGTH_LONG).show()
      }
    }


    checkbox4.setOnCheckedChangeListener { buttonView, isChecked ->
      if(isChecked){
```

```kotlin
            val checkBoxText:String=checkbox4.text.toString()

Toast.makeText(applicationContext,checkBoxText,Toast.LENGTH_LONG).show()
        }
    }


    submitBtn.setOnClickListener {
        val selectID:Int=radioGroup.checkedRadioButtonId
        val radioButton=findViewById<RadioButton>(selectID)
        val output:String=radioButton.text.toString()
        resultString.append("Selected Radio Button : $output")
        if(checkbox1.isChecked){
            val checkBoxText:String=checkbox1.text.toString()
            resultString.append("\nCheckbox 1 Selected : $checkBoxText")
        }
        if(checkbox2.isChecked){
            val checkBoxText:String=checkbox2.text.toString()
            resultString.append("\nCheckbox 2 Selected : $checkBoxText")
        }
        if(checkbox3.isChecked){
            val checkBoxText:String=checkbox3.text.toString()
            resultString.append("\nCheckbox 3 Selected : $checkBoxText")
        }
        if(checkbox4.isChecked){
            val checkBoxText:String=checkbox4.text.toString()
            resultString.append("\nCheckbox 4 Selected : $checkBoxText")
        }
        if(suggestionText.text.toString().isEmpty()){
            resultString.append("\n")
        }else{
            val suggestionTextString:String=suggestionText.text.toString()
```

```
            resultString.append("\nSuggestion Text : $suggestionTextString")

      }
      resultView.text=resultString.toString()

      resultString.clear()
    }


  }
}
```

Screenshots

Rate This Application

◉ EXCELLENT ◯ GOOD ◯ OKAY ◯ POOR

☐ I really Enjoy the lesson

☐ I would like to hear more from you

☐ I am satisfied with the content and full Description

☐ I will prefer this lesson to else also

Any Suggestion

Some suggestion here

SUBMIT

EXCELLENT

Ques2

Rate This Application

○ EXCELLENT   ○ GOOD   ○ OKAY   ○ POOR

☑ I really Enjoy the lesson

☐ I would like to hear more from you

☐ I am satisfied with the content and full Description

☐ I will prefer this lesson to else also

Any Suggestion

Some suggestion here

SUBMIT

I really Enjoy the lesson

Ques2

Rate This Application

◉ EXCELLENT　　◯ GOOD　　◯ OKAY　　◯ POOR

☐ I really Enjoy the lesson

☑ I would like to hear more from you

☑ I am satisfied with the content and full Description

☐ I will prefer this lesson to else also

Any Suggestion

Great Try😊

[SUBMIT]

Selected Radio Button : EXCELLENT
Checkbox 2 Selected : I would like to hear more from you
Checkbox 3 Selected : I am satisfied with the content and full Description
Suggestion Text : Great Try😊