**Mobile Application Development**

* **Practical 9: Seek bar, drawable**

**CODE:**

**Andriod\_manifest.xml**

*<?***xml version="1.0" encoding="utf-8"***?>*<**manifest xmlns:android="http://schemas.android.com/apk/res/android"  
 package="com.example.drawables"**>  
  
 <**application  
 android:allowBackup="true"  
 android:icon="@mipmap/ic\_launcher"  
 android:label="@string/app\_name"  
 android:roundIcon="@mipmap/ic\_launcher\_round"  
 android:supportsRtl="true"  
 android:theme="@style/Theme.Drawables"**>  
 <**activity android:name=".MainActivity"  
 android:exported="true"**>  
 <**intent-filter**>  
 <**action android:name="android.intent.action.MAIN"** />  
  
 <**category android:name="android.intent.category.LAUNCHER"** />  
 </**intent-filter**>  
 </**activity**>  
 </**application**>  
  
</**manifest**>

**Activity\_main.xml**

*<?***xml version="1.0" encoding="utf-8"***?>*<**LinearLayout 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"  
 android:orientation="vertical"**>  
 <**RelativeLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="0dp"  
 android:layout\_weight="1"**>  
 <**TextView  
 android:id="@+id/team1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_centerHorizontal="true"  
 android:text="Team 1"  
 android:textAppearance="@style/TextAppearance.AppCompat.Headline"  
 android:layout\_marginTop="10dp"**>  
  
 </**TextView**>  
 <**RelativeLayout  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/team1"  
 android:layout\_marginTop="20dp"**>  
 <**ImageButton  
 android:id="@+id/minus1"  
 android:layout\_width="70dp"  
 android:layout\_height="70dp"  
 android:layout\_marginLeft="20dp"  
 android:contentDescription="Minus Button"  
 android:src="@drawable/ic\_minus"  
 android:background="@drawable/buttonbackground"  
 android:onClick="decreaseScore"**>  
  
 </**ImageButton**>  
 <**TextView  
 android:id="@+id/score1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_centerVertical="true"  
 android:layout\_gravity="center"  
 android:layout\_marginLeft="105dp"  
 android:layout\_toRightOf="@+id/minus1"  
 android:text="0"  
 android:textAppearance="@style/TextAppearance.AppCompat.Headline"**>  
  
 </**TextView**>  
 <**ImageButton  
 android:id="@+id/plus1"  
 android:layout\_width="70dp"  
 android:layout\_height="70dp"  
 android:layout\_marginLeft="105dp"  
 android:layout\_marginRight="20dp"  
 android:layout\_toRightOf="@+id/score1"  
 android:contentDescription="Plus Button"  
 android:src="@drawable/ic\_plus"  
 android:background="@drawable/buttonbackground"  
 android:onClick="increaseScore"**>  
  
 </**ImageButton**>  
 </**RelativeLayout**>  
 </**RelativeLayout**>  
 <**RelativeLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="0dp"  
 android:layout\_weight="1"**>  
 <**TextView  
 android:id="@+id/team2"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_centerHorizontal="true"  
 android:text="Team 2"  
 android:textAppearance="@style/TextAppearance.AppCompat.Headline"**>  
  
 </**TextView**>  
 <**RelativeLayout  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/team2"  
 android:layout\_marginTop="20dp"**>  
 <**ImageButton  
 android:id="@+id/minus2"  
 android:layout\_width="70dp"  
 android:layout\_height="70dp"  
 android:layout\_marginLeft="20dp"  
 android:contentDescription="Minus Button"  
 android:src="@drawable/ic\_minus"  
 android:background="@drawable/buttonbackground"  
 android:onClick="decreaseScore"**>  
  
 </**ImageButton**>  
 <**TextView  
 android:id="@+id/score2"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_centerVertical="true"  
 android:layout\_gravity="center"  
 android:layout\_marginLeft="105dp"  
 android:layout\_toRightOf="@+id/minus2"  
 android:text="0"  
 android:textAppearance="@style/TextAppearance.AppCompat.Headline"**>  
  
 </**TextView**>  
 <**ImageButton  
 android:id="@+id/plus2"  
 android:layout\_width="70dp"  
 android:layout\_height="70dp"  
 android:layout\_marginLeft="105dp"  
 android:layout\_marginRight="20dp"  
 android:layout\_toRightOf="@+id/score2"  
 android:contentDescription="Plus Button"  
 android:src="@drawable/ic\_plus"  
 android:background="@drawable/buttonbackground"  
 android:onClick="increaseScore"**>  
  
 </**ImageButton**>  
 </**RelativeLayout**>  
 </**RelativeLayout**>  
</**LinearLayout**>

**Buttonbackground.xml**

*<?***xml version="1.0" encoding="utf-8"***?>*<**shape  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 android:shape="oval"**>  
 <**stroke  
 android:width="2dp"  
 android:color="@color/design\_default\_color\_primary"**/>  
</**shape**>

**Ic\_minus.xml**

<**vector android:height="40dp" android:tint="?attr/colorControlNormal"  
 android:viewportHeight="24" android:viewportWidth="24"  
 android:width="40dp"  
 xmlns:android="http://schemas.android.com/apk/res/android"**>  
<**path android:fillColor="@android:color/white"  
 android:fillType="evenOdd" android:pathData="M4,11h16v2h-16z"**/>  
</**vector**>

**Ic\_Plus.xml**

<**vector android:height="40dp" android:tint="?attr/colorControlNormal"  
 android:viewportHeight="24" android:viewportWidth="24"  
 android:width="40dp"  
 xmlns:android="http://schemas.android.com/apk/res/android"**>  
<**path android:fillColor="@android:color/white"  
 android:pathData="M19,13h-6v6h-2v-6H5v-2h6V5h2v6h6v2z"**/>  
</**vector**>

**Menu.xml**

*<?***xml version="1.0" encoding="utf-8"***?>*<**menu xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"**>  
 <**item  
 android:id="@+id/night\_mode"  
 android:title="@string/night\_mode"  
 app:showAsAction="ifRoom"** />  
</**menu**>

**Main\_activity.java**

**package** com.example.drawables;  
  
**import** androidx.annotation.NonNull;  
**import** androidx.appcompat.app.AppCompatActivity;  
**import** androidx.appcompat.app.AppCompatDelegate;  
  
**import** android.os.Bundle;  
**import** android.view.Menu;  
**import** android.view.MenuItem;  
**import** android.view.View;  
**import** android.widget.ImageButton;  
**import** android.widget.TextView;  
  
**public class** MainActivity **extends** AppCompatActivity {  
  
 TextView **score1**,**score2**;  
 **int mscore1**,**mscore2**;  
 ImageButton **minus1**,**minus2**,**add1**,**add2**;  
 @Override  
 **public boolean** onOptionsItemSelected(@NonNull MenuItem item) {  
 **int** nightMode= AppCompatDelegate.*getDefaultNightMode*();  
 **if**(nightMode==AppCompatDelegate.***MODE\_NIGHT\_YES***){  
  
 AppCompatDelegate.*setDefaultNightMode*(AppCompatDelegate.***MODE\_NIGHT\_NO***);  
 }  
 **else** {  
  
 AppCompatDelegate.*setDefaultNightMode*(AppCompatDelegate.***MODE\_NIGHT\_YES***);  
 }  
 **return true**;  
 }  
 @Override  
 **public boolean** onCreateOptionsMenu(Menu menu) {  
 getMenuInflater().inflate(R.menu.***menu***, menu);  
 **int** nightMode= AppCompatDelegate.*getDefaultNightMode*();  
 **if**(nightMode==AppCompatDelegate.***MODE\_NIGHT\_YES***){  
 menu.findItem(R.id.***night\_mode***).setTitle(R.string.***day\_mode***);  
 }  
 **else** {  
 menu.findItem(R.id.***night\_mode***).setTitle(R.string.***night\_mode***);  
 }  
 **return true**;  
 }  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
 **score1**=findViewById(R.id.***score1***);  
 **score2**=findViewById(R.id.***score2***);  
 **minus1**=findViewById(R.id.***minus1***);  
 **minus2**=findViewById(R.id.***minus2***);  
 **add1**=findViewById(R.id.***plus1***);  
 **add2**=findViewById(R.id.***plus2***);  
 **mscore1**= Integer.*parseInt*(**score1**.getText().toString());  
 **mscore2**=Integer.*parseInt*(**score2**.getText().toString());  
 }  
 **public void** decreaseScore(View view) {  
 **int** viewID=view.getId();  
 **switch** (viewID){  
 **case** R.id.***minus1***:  
 **mscore1**--;  
 **score1**.setText(String.*valueOf*(**mscore1**));  
 **break**;  
 **case** R.id.***minus2***:  
 **mscore2**--;  
 **score2**.setText(String.*valueOf*(**mscore2**));  
 }  
 }  
 **public void** increaseScore(View view) {  
 **int** viewID=view.getId();  
 **switch** (viewID){  
 **case** R.id.***plus1***:  
 **mscore1**++;  
 **score1**.setText(String.*valueOf*(**mscore1**));  
 **break**;  
 **case** R.id.***plus2***:  
 **mscore2**++;  
 **score2**.setText(String.*valueOf*(**mscore2**));  
 }  
 }  
 @Override  
 **protected void** onSaveInstanceState(Bundle outState) {  
 **super**.onSaveInstanceState(outState);  
 outState.putInt(**"STATE\_SCORE\_1"**, **mscore1**);  
 outState.putInt(**"STATE\_SCORE\_2"**,**mscore2**);  
 }  
 @Override  
 **protected void** onRestoreInstanceState(@NonNull Bundle  
 savedInstanceState) {  
 **super**.onRestoreInstanceState(savedInstanceState);  
 **mscore1**=savedInstanceState.getInt(**"STATE\_SCORE\_1"**);  
 **mscore2**=savedInstanceState.getInt(**"STATE\_SCORE\_2"**);  
 **score1**.setText(String.*valueOf*(**mscore1**));  
 **score2**.setText(String.*valueOf*(**mscore2**));  
  
}  
}

**Output**

 