Java

package com.example.lab6;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.CheckBox;  
import android.widget.EditText;  
import android.widget.ImageView;  
import android.widget.ProgressBar;  
import android.widget.RadioButton;  
import android.widget.RatingBar;  
import android.widget.SeekBar;  
import android.widget.Spinner;  
import android.widget.TextView;  
import android.widget.Toast;  
import android.widget.ToggleButton;  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
  
 private TextView textView;  
 private EditText editText;  
 private Button button;  
 private ImageView imageView;  
 private CheckBox checkBox;  
 private RadioButton radioButton;  
 private ToggleButton toggleButton;  
 private SeekBar seekBar;  
 private RatingBar ratingBar;  
 private ProgressBar progressBar;  
 private Spinner spinner;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 // Initialize UI components  
 textView = findViewById(R.id.*textView*);  
 editText = findViewById(R.id.*editText*);  
 button = findViewById(R.id.*button*);  
 imageView = findViewById(R.id.*imageView*);  
 checkBox = findViewById(R.id.*checkBox*);  
 radioButton = findViewById(R.id.*radioButton*);  
 toggleButton = findViewById(R.id.*toggleButton*);  
 seekBar = findViewById(R.id.*seekBar*);  
 ratingBar = findViewById(R.id.*ratingBar*);  
 progressBar = findViewById(R.id.*progressBar*);  
 spinner = findViewById(R.id.*spinner*);  
  
 // Set up button click listener  
 button.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 String editTextContent = editText.getText().toString();  
 Toast.*makeText*(MainActivity.this, "Button clicked! EditText content: " + editTextContent, Toast.*LENGTH\_SHORT*).show();  
 }  
 });  
  
 // Set up check box change listener  
 checkBox.setOnCheckedChangeListener((buttonView, isChecked) -> {  
 String message = isChecked ? "CheckBox checked!" : "CheckBox unchecked!";  
 Toast.*makeText*(MainActivity.this, message, Toast.*LENGTH\_SHORT*).show();  
 });  
  
 // Set up radio button change listener  
 radioButton.setOnCheckedChangeListener((buttonView, isChecked) -> {  
 if (isChecked) {  
 Toast.*makeText*(MainActivity.this, "RadioButton checked!", Toast.*LENGTH\_SHORT*).show();  
 }  
 });  
  
 // Set up toggle button change listener  
 toggleButton.setOnCheckedChangeListener((buttonView, isChecked) -> {  
 String message = isChecked ? "ToggleButton on!" : "ToggleButton off!";  
 Toast.*makeText*(MainActivity.this, message, Toast.*LENGTH\_SHORT*).show();  
 });  
  
 // Set up seek bar change listener  
 seekBar.setOnSeekBarChangeListener(new SeekBar.OnSeekBarChangeListener() {  
 @Override  
 public void onProgressChanged(SeekBar seekBar, int progress, boolean fromUser) {  
 textView.setText("SeekBar progress: " + progress);  
 }  
  
 @Override  
 public void onStartTrackingTouch(SeekBar seekBar) {  
 // Do something when the touch tracking starts  
 }  
  
 @Override  
 public void onStopTrackingTouch(SeekBar seekBar) {  
 // Do something when the touch tracking stops  
 }  
 });  
  
 // Set up rating bar change listener  
 ratingBar.setOnRatingBarChangeListener((ratingBar, rating, fromUser) -> {  
 Toast.*makeText*(MainActivity.this, "Rating: " + rating, Toast.*LENGTH\_SHORT*).show();  
 });  
  
 // ProgressBar example usage  
 progressBar.setProgress(50); // Set initial progress to 50%  
  
 // Spinner setup can be added here (e.g., using an ArrayAdapter)  
 }  
}

xml

<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 android:padding="16dp">  
  
 <TextView  
 android:id="@+id/textView"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="TextView"  
 android:textSize="18sp"  
 android:textStyle="bold"  
 android:layout\_gravity="center\_horizontal"  
 android:layout\_marginBottom="16dp"/>  
  
 <EditText  
 android:id="@+id/editText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="EditText"  
 android:layout\_marginBottom="16dp"/>  
  
 <Button  
 android:id="@+id/button"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Button"  
 android:layout\_gravity="center\_horizontal"  
 android:layout\_marginBottom="16dp"/>  
  
 <ImageView  
 android:id="@+id/imageView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:src="@drawable/ic\_launcher\_foreground"  
 android:layout\_marginBottom="16dp"/>  
  
 <CheckBox  
 android:id="@+id/checkBox"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="CheckBox"  
 android:layout\_marginBottom="16dp"/>  
  
 <RadioButton  
 android:id="@+id/radioButton"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="RadioButton"  
 android:layout\_marginBottom="16dp"/>  
  
 <ToggleButton  
 android:id="@+id/toggleButton"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="ToggleButton"  
 android:layout\_gravity="center\_horizontal"  
 android:layout\_marginBottom="16dp"/>  
  
 <SeekBar  
 android:id="@+id/seekBar"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="16dp"/>  
  
 <RatingBar  
 android:id="@+id/ratingBar"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center\_horizontal"  
 android:layout\_marginBottom="16dp"/>  
  
 <ProgressBar  
 android:id="@+id/progressBar"  
 style="?android:attr/progressBarStyleHorizontal"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="16dp"/>  
  
  
 <Spinner  
 android:id="@+id/spinner"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="16dp"/>  
</LinearLayout>