Spinner

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
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="com.myapp.spinner.MainActivity">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Choose your subject"
        android:textStyle="bold"
        android:textSize="20sp"
        tools:ignore="MissingConstraints" />

    <Spinner
        android:id="@+id/spinner"
        android:layout_height="50dp"
        android:layout_width="160dp"
        android:layout_marginEnd="10dp"
        android:layout_marginStart="10dp"
        android:layout_marginBottom="10dp"
        android:layout_marginTop="30dp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"/>
```
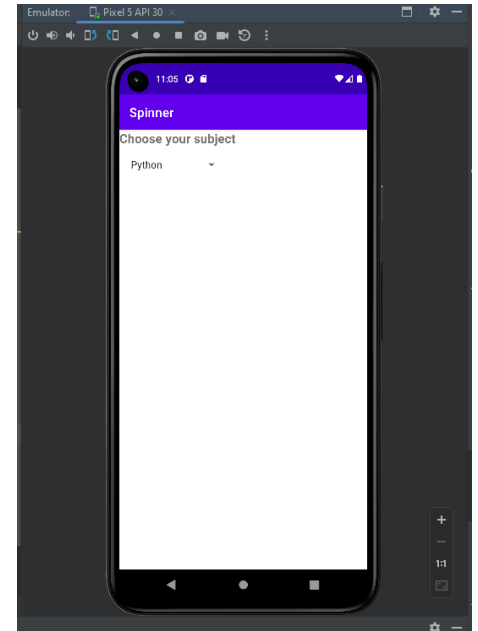
```java
package com.myapp.spinner;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Spinner;
import android.widget.Toast;
// Main Activity implements Adapter view

public class MainActivity extends AppCompatActivity implements
    AdapterView.OnItemSelectedListener {
    String[] country = { "DBMS", "Javascript", "C", "Python", "Android Development"};

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        //Getting the instance of Spinner and applying OnItemSelectedListener on it
        Spinner spin = (Spinner) findViewById(R.id.spinner);
        spin.setOnItemSelectedListener(this);
```

```java
        //Creating the ArrayAdapter instance having the country list
        ArrayAdapter aa = new ArrayAdapter(this,android.R.layout.simple_spinner_item,country);
        aa.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
        //Setting the ArrayAdapter data on the Spinner
        spin.setAdapter(aa);

    }
    @Override
    public void onItemSelected(AdapterView<?> arg0, View arg1, int position, long id) {
        Toast.makeText(getApplicationContext(),country[position] , Toast.LENGTH_LONG).show();
    }
    @Override
    public void onNothingSelected(AdapterView<?> arg0) {
        // TODO Auto-generated method stub
    }
}
```

RADIO BUTTON

JAVA

```java
package com.myapplication.radiobuttonapp;


import androidx.appcompat.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.Toast;
import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

    private RadioGroup radioGroup;
    Button submit, clear;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        submit = (Button)findViewById(R.id.submit);
        clear = (Button)findViewById(R.id.clear);
        radioGroup = (RadioGroup)findViewById(R.id.groupradio);

        radioGroup.clearCheck();

        // Add the Listener to the RadioGroup
        radioGroup.setOnCheckedChangeListener(
                new RadioGroup
                    .OnCheckedChangeListener() {
                @Override

                // The flow will come here when
                // any of the radio buttons in the radioGroup
```
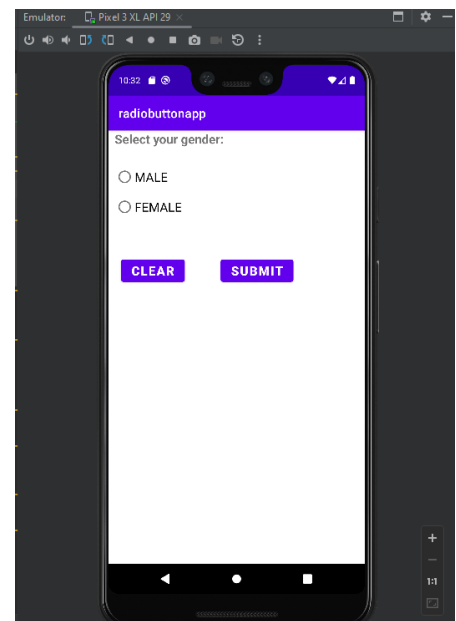
```java
            // has been clicked

            // Check which radio button has been clicked
            public void onCheckedChanged(RadioGroup group,
                            int checkedId)
        {

            // Get the selected Radio Button
            RadioButton
                radioButton
                = (RadioButton)group
                .findViewById(checkedId);
        }
    });

submit.setOnClickListener(new View.OnClickListener() {

    @Override
    public void onClick(View v)
    {

        // When submit button is clicked,
        // Ge the Radio Button which is set
        // If no Radio Button is set, -1 will be returned
        int selectedId = radioGroup.getCheckedRadioButtonId();
        if (selectedId == -1) {
            Toast.makeText(MainActivity.this,
                    "No answer has been selected",
                    Toast.LENGTH_SHORT)
                .show();
        }
        else {

            RadioButton radioButton
                = (RadioButton)radioGroup
                .findViewById(selectedId);

            // Now display the value of selected item
            // by the Toast message
            Toast.makeText(MainActivity.this,
                    radioButton.getText(),
                    Toast.LENGTH_SHORT)
                .show();
        }
    }
});

clear.setOnClickListener(new View.OnClickListener() {

    @Override
    public void onClick(View v)
    {

        // Clear RadioGroup
        // i.e. reset all the Radio Buttons
        radioGroup.clearCheck();
    }
```

```
        });


    }
}
```

XML

```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"
    tools:context="com.myapplication.radiobuttonapp.MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Select your gender:"
        android:textStyle="bold"
        android:layout_marginLeft="10dp"
        android:textSize="20sp"/>

    <!-- add RadioGroup which contain the many RadioButton-->
    <RadioGroup
        android:layout_marginTop="50dp"
        android:id="@+id/groupradio"
        android:layout_marginLeft="10dp"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content">

        <!-- In RadioGroup create the 1 Radio Button-->
        <!-- like this we will add some more Radio Button-->
        <RadioButton
            android:layout_width="fill_parent"
            android:layout_height="wrap_content"
            android:id="@+id/radia_id1"
            android:text="MALE"
            android:textSize="20sp"/>

        <RadioButton
            android:layout_width="fill_parent"
            android:layout_height="wrap_content"
            android:id="@+id/radia_id2"
            android:text="FEMALE"
            android:textSize="20sp"/>


    </RadioGroup>

    <!-- add button For Submit the Selected item-->
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Submit"
```

```xml
        android:id="@+id/submit"
        android:textStyle="bold"
        android:textSize="20sp"
        android:layout_marginTop="200dp"
        android:layout_marginLeft="180dp"
        />

    <!-- add clear button for clear the selected item-->
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Clear"
        android:id="@+id/clear"
        android:textSize="20sp"
        android:textStyle="bold"
        android:layout_marginTop="200dp"
        android:layout_marginLeft="20dp"
        />
</RelativeLayout>
```

CHECKBOX

JAVA

```java
package com.myapplication.checkbox;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.CheckBox;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    CheckBox ch, ch1, ch2, ch3;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        // Binding MainActivity.java with activity_main.xml file
        setContentView(R.layout.activity_main);

        // Finding CheckBox by its unique ID
        ch=(CheckBox)findViewById(R.id.checkBox);
        ch1=(CheckBox)findViewById(R.id.checkBox2);
        ch2=(CheckBox)findViewById(R.id.checkBox3);
        ch3=(CheckBox)findViewById(R.id.checkBox4);
    }

    // This function is invoked when the button is pressed.
    public void Check(View v)
    {
        String msg="";

        // Concatenation of the checked options in if
```
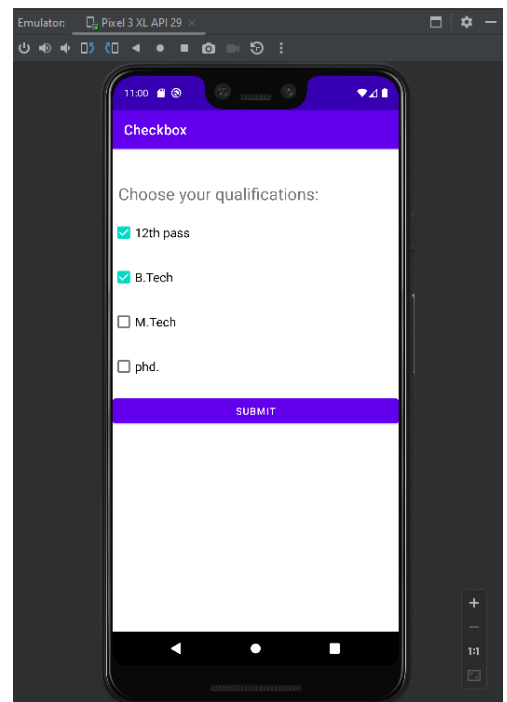
```java
        // isChecked() is used to check whether
        // the CheckBox is in true state or not.

        if(ch.isChecked())
            msg = msg + " Painting ";
        if(ch1.isChecked())
            msg = msg + " Reading ";
        if(ch2.isChecked())
            msg = msg + " Singing ";
        if(ch3.isChecked())
            msg = msg + " Cooking ";

        // Toast is created to display the
        // message using show() method.
        Toast.makeText(this, msg + "are selected",
            Toast.LENGTH_LONG).show();
    }
}
```

XML

```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"
    android:background="#ffffff"
    android:orientation="vertical"
    tools:context="com.myapplication.checkbox.MainActivity">

    <TextView
        android:id="@+id/textView"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginEnd="8dp"
    android:layout_marginStart="8dp"
    android:layout_marginTop="48dp"
    android:text="Choose your qualifications:"
    android:textSize="24sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

    <CheckBox
        android:id="@+id/checkBox"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="12th pass"
    android:layout_marginTop="16dp"
    android:textSize="18sp" />

    <CheckBox
        android:id="@+id/checkBox2"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
```

```xml
        android:text="B.Tech"
        android:layout_marginTop="16dp"
        android:textSize="18sp" />

    <CheckBox
        android:id="@+id/checkBox3"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="16dp"
        android:text="M.Tech"
        android:textSize="18sp"
        app:layout_constraintTop_toTopOf="@+id/textView"
        tools:layout_editor_absoluteX="382dp" />

    <CheckBox
        android:id="@+id/checkBox4"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="phd."
        android:layout_marginTop="16dp"
        android:textSize="18sp"
        app:layout_constraintTop_toBottomOf="@+id/checkBox"
        tools:layout_editor_absoluteX="386dp" />

    <Button
        android:id="@+id/button"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="16dp"
        android:onClick="Check"
        android:text="submit" />
</LinearLayout>
```