Experiment 2.2

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1. **Aim:** Create an Android App using various controls such TexEdit, CheckBox, RadioButton, RadioGroup, etc.

2. **Objective:** The objective of an Android app using various controls such as EditText, CheckBox, RadioButton, and RadioGroup could be to create a user interface that involves user input, selection, and interaction with different types of controls. This type of app aims to showcase the usage and functionalities of these UI elements to enhance the user experience.

3. **Script and Output:**

   Script:

   activity_main.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
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"
    tools:context=".MainActivity"
    android:background="@drawable/img">

    <EditText
        android:id="@+id/nameEditText"
        android:layout_width="381dp"
```

```xml
        android:layout_height="79dp"
        android:layout_marginStart="16dp"
        android:layout_marginTop="16dp"
        android:layout_marginEnd="16dp"
        android:layout_marginBottom="16dp"
        android:textColorHint="#F50057"
        android:textSize="40dp"
        android:hint="Enter your name" />

    <RadioGroup
        android:id="@+id/genderRadioGroup"
        android:layout_width="386dp"
        android:layout_height="80dp"
        android:layout_below="@id/nameEditText"
        android:layout_marginStart="16dp"
        android:layout_marginTop="30dp"
        android:layout_marginEnd="16dp"
        android:layout_marginBottom="16dp"
        android:orientation="horizontal">

        <RadioButton
            android:id="@+id/maleRadioButton"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Male"
            android:textColor="#D500F9"
            android:textSize="35dp" />

        <RadioButton
            android:id="@+id/femaleRadioButton"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Female"
            android:textColor="#D500F9"
            android:textSize="35dp" />

    </RadioGroup>

    <CheckBox
        android:id="@+id/javaCheckBox"
        android:layout_width="130dp"
        android:layout_height="67dp"
        android:layout_below="@+id/genderRadioGroup"
        android:layout_marginStart="16dp"
        android:layout_marginTop="32dp"
        android:layout_marginEnd="16dp"
        android:layout_marginBottom="16dp"
```

```xml
        android:text="Java"
        android:textColor="#FF6D00"
        android:textSize="35dp" />

    <CheckBox
        android:id="@+id/kotlinCheckBox"
        android:layout_width="192dp"
        android:layout_height="66dp"
        android:layout_below="@id/javaCheckBox"
        android:layout_marginStart="16dp"
        android:layout_marginTop="16dp"
        android:layout_marginEnd="16dp"
        android:layout_marginBottom="16dp"
        android:text="Kotlin"
        android:textColor="#FF6D00"
        android:textSize="35dp" />

    <CheckBox
        android:id="@+id/pythonCheckBox"
        android:layout_width="194dp"
        android:layout_height="67dp"
        android:layout_below="@+id/kotlinCheckBox"
        android:layout_marginStart="16dp"
        android:layout_marginLeft="16dp"
        android:layout_marginTop="32dp"
        android:layout_marginEnd="16dp"
        android:layout_marginRight="16dp"
        android:layout_marginBottom="16dp"
        android:text="Python"
        android:textColor="#FF6D00"
        android:textSize="35dp" />

    <Button
        android:id="@+id/submitButton"
        android:layout_width="165dp"
        android:layout_height="67dp"
        android:layout_below="@+id/pythonCheckBox"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="16dp"
        android:text="Submit"
        android:textColor="#0BD3EA"
        android:textSize="25dp" />

</RelativeLayout>
```

MainActivity.java

```java
package com.example.mycheckboxapplication;

// MainActivity.java
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    EditText nameEditText;
    RadioGroup genderRadioGroup;
    CheckBox javaCheckBox, kotlinCheckBox, pythonCheckBox;
    Button submitButton;

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

        nameEditText = findViewById(R.id.nameEditText);
        genderRadioGroup = findViewById(R.id.genderRadioGroup);
        javaCheckBox = findViewById(R.id.javaCheckBox);
        kotlinCheckBox = findViewById(R.id.kotlinCheckBox);
        pythonCheckBox = findViewById(R.id.pythonCheckBox);
        submitButton = findViewById(R.id.submitButton);

        submitButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                submitForm();
            }
        });
    }

    private void submitForm() {
        String name = nameEditText.getText().toString();

        int selectedGenderId =
genderRadioGroup.getCheckedRadioButtonId();
        RadioButton selectedGenderRadioButton =
```

```
findViewById(selectedGenderId);
        String gender = selectedGenderRadioButton.getText().toString();

        StringBuilder programmingLanguages = new StringBuilder();
        if (javaCheckBox.isChecked()) {
            programmingLanguages.append("Java, ");
        }
        if (kotlinCheckBox.isChecked()) {
            programmingLanguages.append("Kotlin, ");
        }
        if (pythonCheckBox.isChecked()) {
            programmingLanguages.append("Python, ");
        }

        // Removing the trailing comma and space if any
        if (programmingLanguages.length() > 0) {

programmingLanguages.setLength(programmingLanguages.length() -
2);
        }

        String message = "Name: " + name + "\nGender: " + gender +
"\nProgramming Languages: " + programmingLanguages.toString();
        Toast.makeText(MainActivity.this, message,
Toast.LENGTH_LONG).show();
    }
}
```

Output