



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

Experiment – 2.2

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Subject Name: Mobile Application Development Lab

Subject Code: 20CSP-356

1. Aim/Overview of the practical:

Create an Android App using various controls such as TextEdit, CheckBox, RadioButton, RadioGroup, etc.

2. Task to be done:

To Create an Android App using various controls such as TextEdit, CheckBox, RadioButton, RadioGroup, etc. and understand the specific requirements, possibilities and challenges when developing a mobile context.

3. System Requirements:

The required tools to develop Android applications are open source and can be downloaded from the Web. Following is the list of software's you will need before you start your Android application programming.

- Android Studio .exe file
- Java JDK5 or later version
- Java Runtime Environment (JRE) 6 Android Studio

4. Steps of Experiment:

In this experiment, we are submitting a for which has TextEdit, CheckBox, RadioButton, RadioGroup, etc components. On pressing the proceed button, it will display entered values as toast and on clicking cancel button it will reset all fields.

Step 01: Now, start Android Studio app and start new project as “Experiment05” and select activity as “Empty Activity” as shown below and enter activity details such as activity name, package name, save location, language as Java, minimum SDK and then select Finish.

Step 02: New window will open with MyActivity.java file, our new project is started as shown below:

Code:

MainActivity.java:

```
package com.example.experiment05;

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 name;
    CheckBox music, game;
    RadioButton male, female;
    Button proceed, clear;
    RadioGroup radioGroup;
    String c1, c2, g;

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

        name = findViewById(R.id.etName);
        music = findViewById(R.id.checkMusic);
        game = findViewById(R.id.checkGaming);
        male = findViewById(R.id.radioMale);
        female = findViewById(R.id.radioFemale);
        proceed = findViewById(R.id.btnProceed);
        clear = findViewById(R.id.btnCancel);
        radioGroup = findViewById(R.id.radioGroup);

        if(radioGroup != null){
            radioGroup.setOnCheckedChangeListener(new
RadioGroup.OnCheckedChangeListener() {
                @Override
                public void onCheckedChanged(RadioGroup radioGroup, int
i) {
                    if(R.id.radioFemale == i){
                        g = female.getText().toString();
                    }else{
                        g = male.getText().toString();
                    }
                }
            })
        }
    }
}
```

```

    }
    });
}
proceed.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        String n = name.getText().toString();

        // CheckBox selection
        if(music.isChecked()) {
            c1 = music.getText().toString();
        } else if(game.isChecked()) {
            c2 = game.getText().toString();
        }

        // Toast
        Toast.makeText(MainActivity.this, "You Name is : " + n
, Toast.LENGTH_SHORT).show();
        Toast.makeText(MainActivity.this, "You selected your
hobbies as : " + c1 + " and " + c2, Toast.LENGTH_SHORT).show();
        Toast.makeText(MainActivity.this, "You selected your
gender as : " + g, Toast.LENGTH_SHORT).show();
    }
});
clear.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        name.setText("");
        music.setChecked(false);
        game.setChecked(false);
        male.setChecked(false);
        female.setChecked(false);
    }
});
}
}

```

acticity_main.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=".MainActivity">

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    tools:context=".MainActivity">

```

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="vertical"
    android:layout_marginTop="20dp">
    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter your name"
        android:id="@+id/etName"
    />
</LinearLayout>
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    android:layout_marginLeft="0dp"
    android:orientation="vertical">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Select your Hobbies"/>
    <CheckBox
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/checkMusic"
        android:text="Music"
        android:checked="false"/>
    <CheckBox
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/checkGaming"
        android:text="Gaming"
        android:checked="false"/>
</LinearLayout>
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="vertical"
    android:layout_marginTop="20dp">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Select your Gender"/>
    <RadioGroup
        android:id="@+id/radioGroup"
        android:layout_width="match_parent"
        android:layout_height="match_parent">
        <RadioButton
            android:id="@+id/radioMale"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Male"/>
```

```

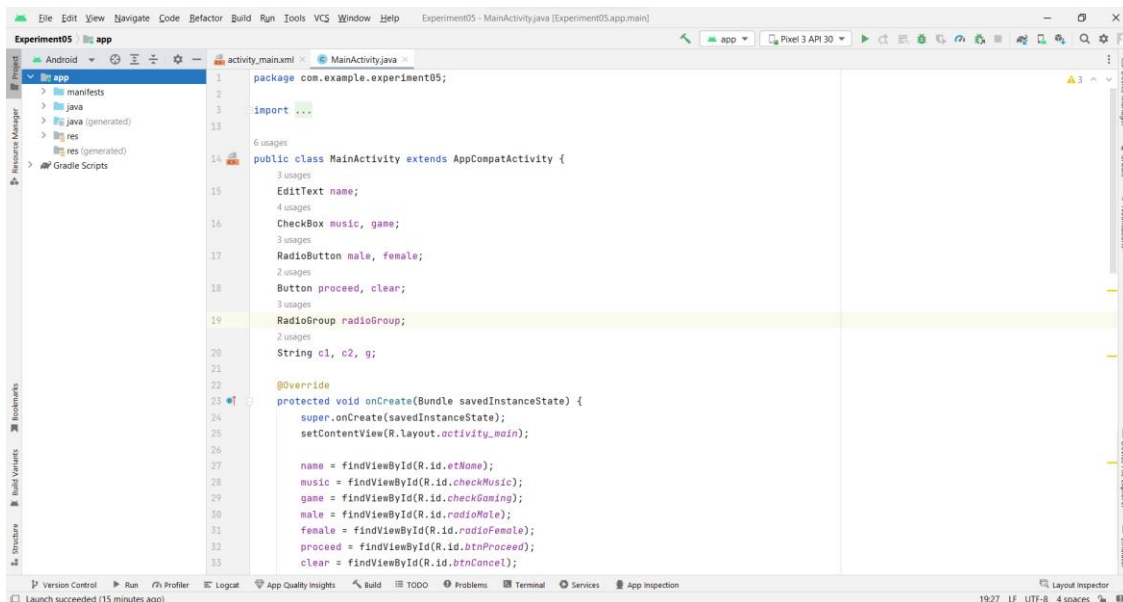
        <RadioButton
            android:id="@+id/radioFemale"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Female"/>
    </RadioGroup>
</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:gravity="center"
    android:orientation="horizontal">

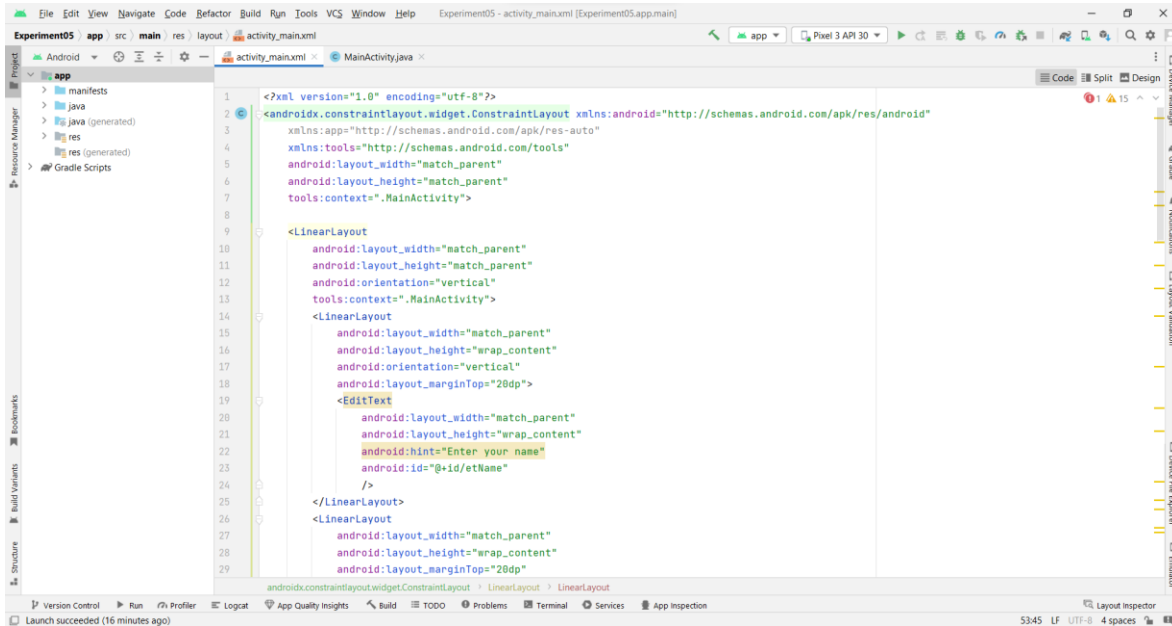
    <Button
        android:id="@+id/btnProceed"
        android:layout_width="150dp"
        android:layout_height="wrap_content"
        android:text="Proceed" />

    <Button
        android:id="@+id/btnCancel"
        android:layout_width="150dp"
        android:layout_height="wrap_content"
        android:layout_marginLeft="20dp"
        android:text="Clear" />
</LinearLayout>
</LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>

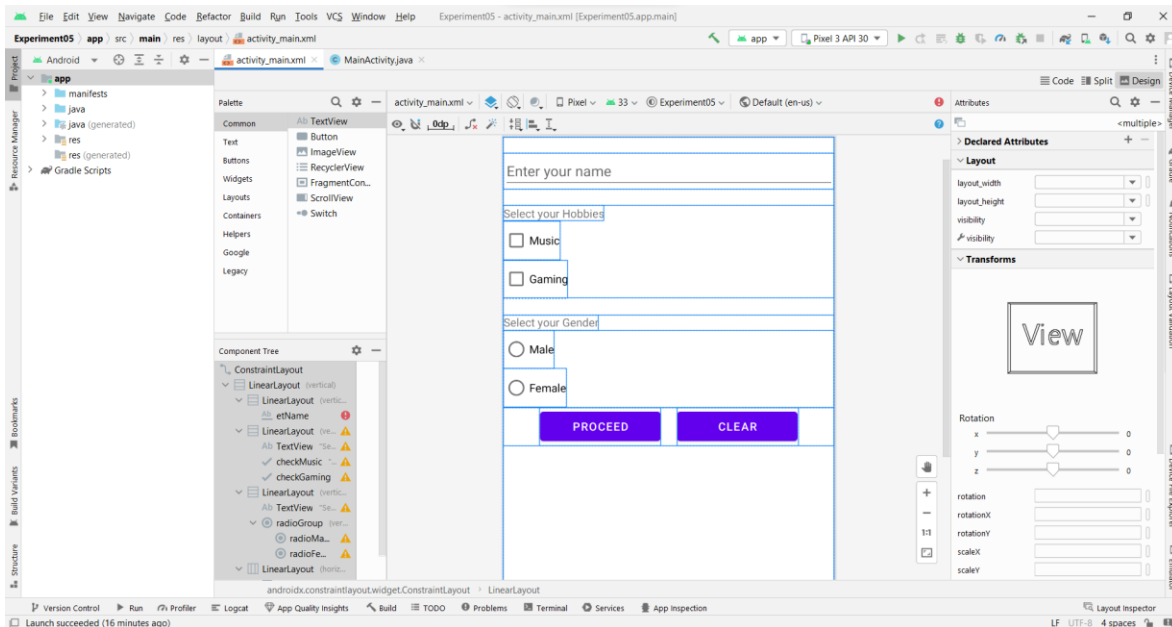
```



MainActivity.java file screenshot

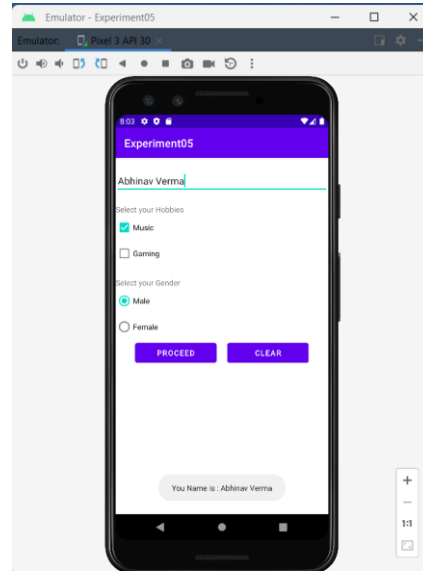
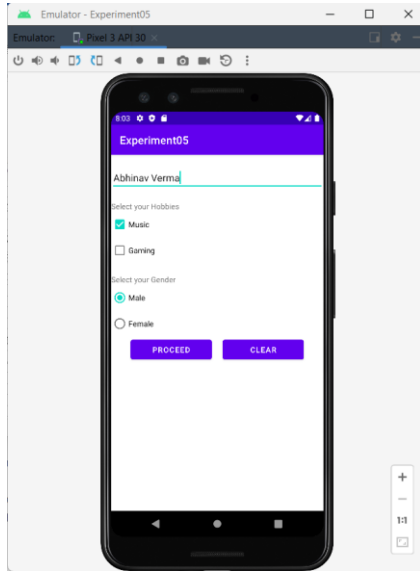


activity_main.xml file screenshot

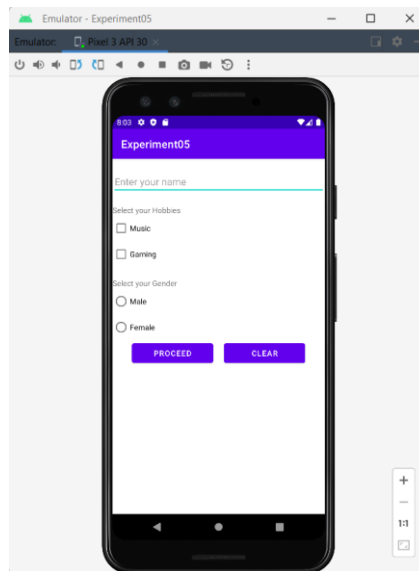


activity_main.xml file (design format) screenshot

Step 3: Now, if we run the application, it will show as below and on filling up the entry and on clicking proceed button we will pass our values into toast and display them as shown below activity as shown in third screenshot, it will display the details entered in previous activity:



On clicking clear it will reset all values as shown below:



As we can see from above screenshots, we are passing values from to toast by pressing proceed button.

Learning Outcomes:

1. Learned how to add toast, radioButton, radioButton in our application.
2. Learned to add buttons and textview, editText, button.
3. Learned more about Android Studio and its components.