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## Practical List 2

### PRACTICAL 1 :- XML FILE

```
<?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:id="@+id/main"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    android:orientation="vertical"

    android:layout_margin="5dp"

    tools:context=".MainActivity">

    <TextView

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:textSize="20dp"

        android:text="Uka Tarsadia University"/>

    <View

        android:layout_width="fill_parent"

        android:layout_height="1dp"

        android:background="@color/black" />

    <TextView

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:textSize="20dp"

        android:text="Maliba Campus,"/>

    <TextView

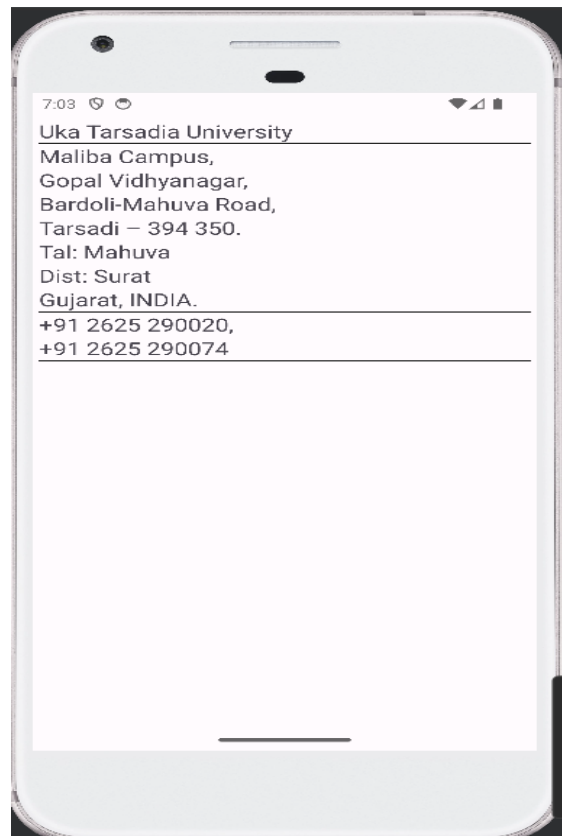
        android:layout_width="match_parent"
```

```
        android:layout_height="wrap_content"
        android:textSize="20dp"
        android:text="Gopal Vidhyanagar,"/>
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:textSize="20dp"
    android:text="Bardoli-Mahuva Road,"/>
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:textSize="20dp"
    android:text="Tarsadi – 394 350."/>
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:textSize="20dp"
    android:text="Tal: Mahuva "/>
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:textSize="20dp"
    android:text="Dist: Surat"/>
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:textSize="20dp"
    android:text="Gujarat, INDIA."/>
<View
    android:layout_width="fill_parent"
    android:layout_height="1dp"
```

```

        android:background="@color/black" />
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:textSize="20dp"
    android:text="+91 2625 290020, " />
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:textSize="20dp"
    android:text="+91 2625 290074 " />
<View
    android:layout_width="fill_parent"
    android:layout_height="1dp"
    android:background="@color/black" />
</LinearLayout>

```



## PRACTICAL 2 :- 1- XML FILE

```
<?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:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:text="SACHIN"
        android:textColor="#DCDCDC"
        android:textSize="20sp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.416"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.332" />

    <Button
        android:layout_width="145dp"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:text="RAHUL"
        android:textColor="#DCDCDC"
```

```
    android:textSize="20sp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="1.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.516" />
```

<Button

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="DHONI"
    android:textColor="#DCDCDC"
    android:textSize="20sp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.333" />
```

<Button

```
    android:layout_width="245dp"
    android:layout_height="wrap_content"
    android:layout_alignParentEnd="true"
    android:text="HARBHAJAN"
    android:textColor="#DCDCDC"
    android:textSize="20sp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
```

```

        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.516" />
<Button
    android:layout_width="191dp"
    android:layout_height="wrap_content"
    android:layout_alignParentEnd="true"
    android:text="VIRAT"
    android:textColor="#DCDCDC"
    android:textSize="20sp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="1.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.42" />
<Button
    android:layout_width="194dp"
    android:layout_height="wrap_content"
    android:text="YUVRAJ"
    android:textColor="#DCDCDC"
    android:textSize="20sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.42" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

## PRACTICAL 2 :- 2 - XML FILE

```
<?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:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".Prectical2_1">

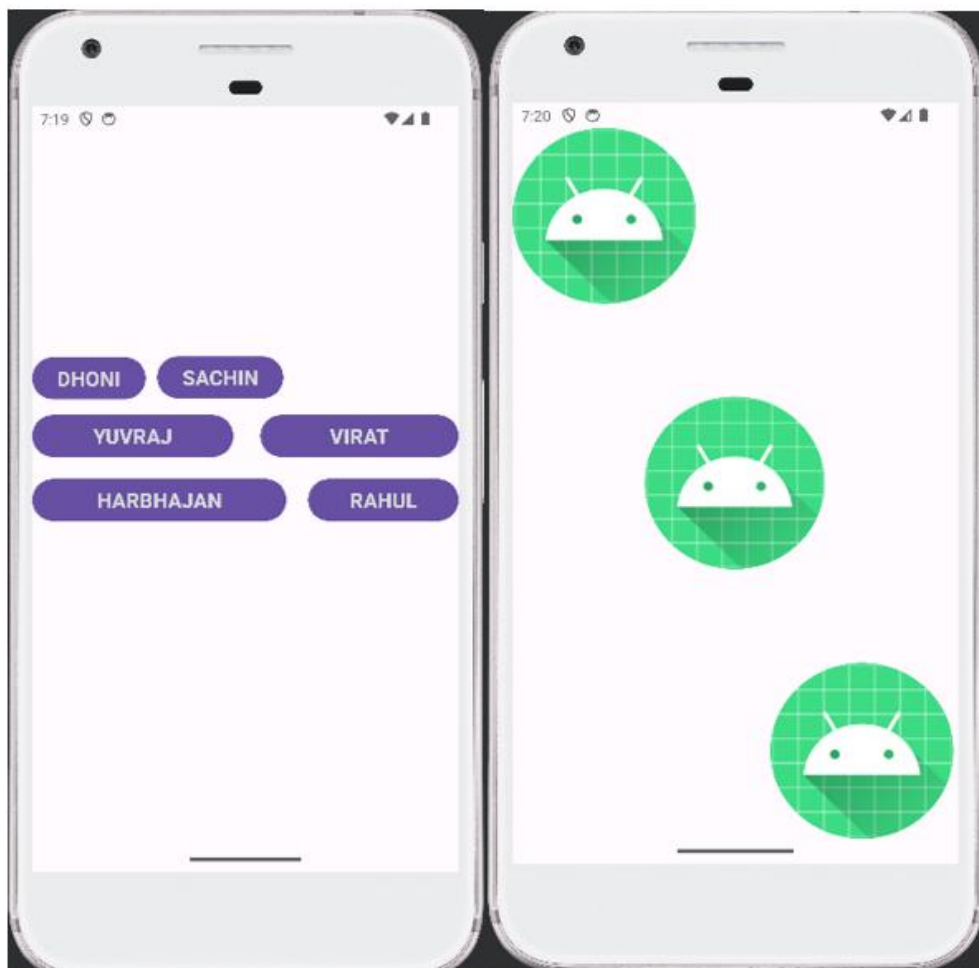
    <ImageView

        android:id="@+id/image1"
        android:layout_width="169dp"
        android:layout_height="169dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.0"
        app:srcCompat="@mipmap/ic_launcher_round" />

    <ImageView

        android:id="@+id/image2"
        android:layout_width="178dp"
        android:layout_height="166dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.497"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.499"
```

```
        app:srcCompat="@mipmap/ic_launcher_round" />
<ImageView
    android:id="@+id/image3"
    android:layout_width="178dp"
    android:layout_height="169dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="1.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="1.0"
    app:srcCompat="@mipmap/ic_launcher_round" />
</androidx.constraintlayout.widget.ConstraintLayout>
```





### PRACTICAL 3 :- XML FILE

```
<?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:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <EditText
        android:id="@+id/txtStudentName"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginHorizontal="16dp"
        android:hint="Enter Student Name"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.211" />
    <Button
        android:id="@+id/btnShow"
        android:layout_width="190dp"
        android:layout_height="59dp"
        android:layout_below="@id/txtStudentName"
        android:layout_centerHorizontal="true"
        android:layout_marginHorizontal="16dp"
        android:text="Show"
        app:layout_constraintBottom_toBottomOf="parent"
```

```

        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.497"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.376" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

### **JAVA FILE :-**

```

package com.example.a129_prectical3;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

    EditText txtStudentName;

    Button btnShow;

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

        EdgeToEdge.enable(this);

        setContentView(R.layout.activity_main);

        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {
            Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);
            return insets;});
    }
}

```

```

txtStudentName = findViewById(R.id.txtStudentName);

btnShow = findViewById(R.id.btnShow);

btnShow.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View view) {

        String studentName =

            txtStudentName.getText().toString();

        Toast.makeText(getApplicationContext(), "Student Name: " + studentName,
Toast.LENGTH_SHORT).show();

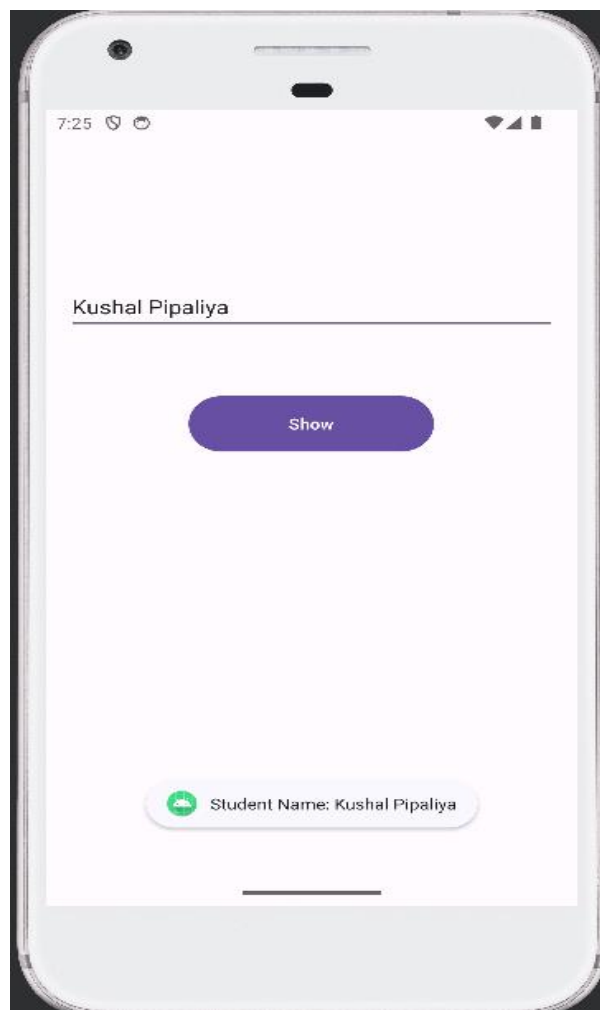
    }

});

}

}

```



#### PRACTICAL 4 :- XML FILE

```
<?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:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <RadioGroup
        android:id="@+id/rgCourse"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.073">

        <RadioButton
            android:id="@+id/rbBscIT"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="B.sc (IT)"
            android:textSize="15sp" />

        <RadioButton
            android:id="@+id/rbIntMscIT"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
```

```

        android:text="Integrated M.sc (IT)"
        android:textSize="15sp" />
<RadioButton
    android:id="@+id/rbMscIT"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="M.sc (IT)"
    android:textSize="15sp" />
</RadioGroup>
<Button
    android:id="@+id/btnSubmit"
    android:layout_width="255dp"
    android:layout_height="68dp"
    android:text="Submit"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.34" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

### **Java File:-**

```

package com.example.a129_prectical4;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.Toast;
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;

```

```

import androidx.core.view.ViewCompat;

import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

    RadioGroup rgCourse;

    Button btnSubmit;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        EdgeToEdge.enable(this);

        setContentView(R.layout.activity_main);

        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {

            Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());

            v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);

            return insets;

        });

        rgCourse = findViewById(R.id.rgCourse);

        btnSubmit = findViewById(R.id.btnSubmit);

        btnSubmit.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                int selectedId = rgCourse.getCheckedRadioButtonId();

                if (selectedId != -1) {

                    RadioButton selectedRadioButton = findViewById(selectedId);

                    String selectedCourse = selectedRadioButton.getText().toString();

                    Toast.makeText(MainActivity.this, "Selected Course: " + selectedCourse,
Toast.LENGTH_SHORT).show();

                } else {

                    Toast.makeText(MainActivity.this, "Please select a course", Toast.LENGTH_SHORT).show();

                }

            }

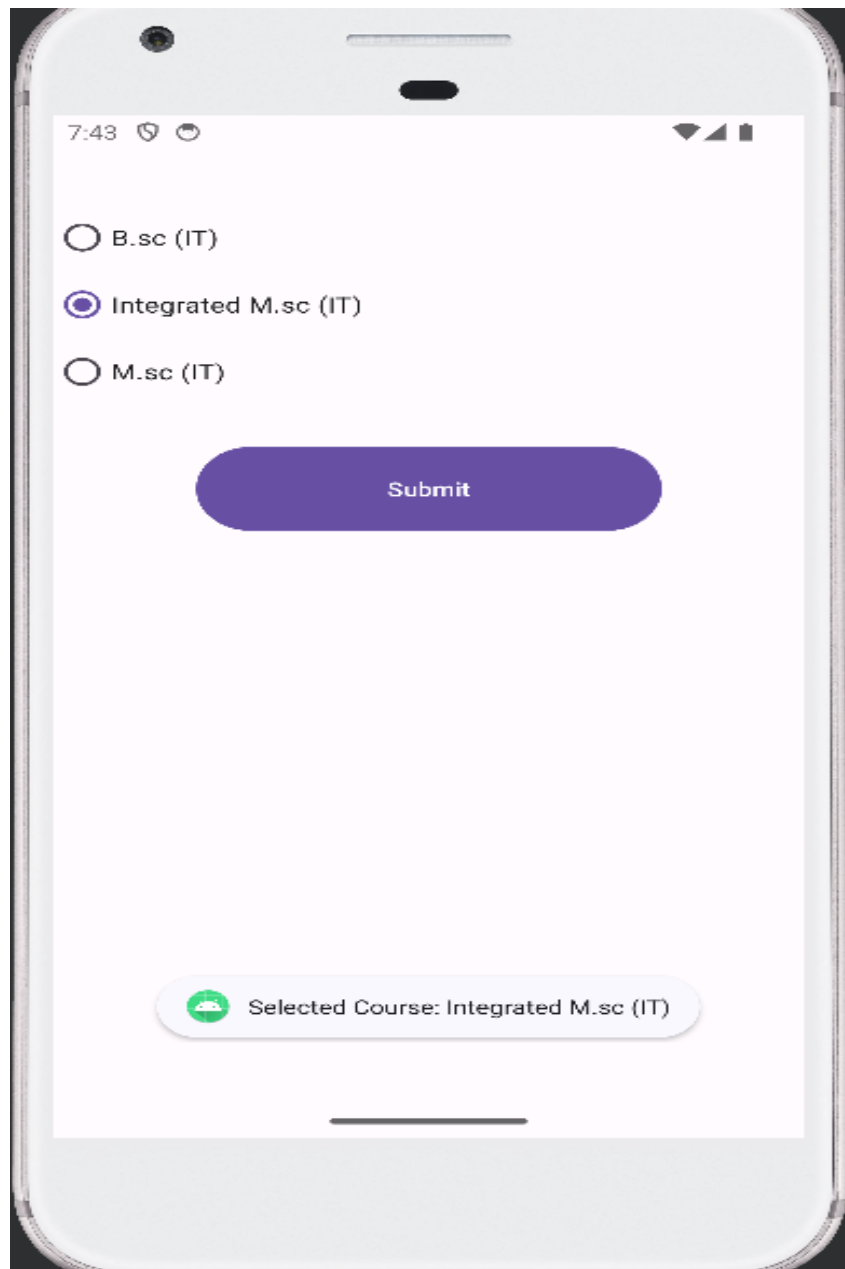
        });

    }

```

}

}



## PRACTICAL 5 :- XML FILE

```
<?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:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <CheckBox
        android:id="@+id/iphoneCheckbox"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="iPhone"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.119"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.07" />
    <CheckBox
        android:id="@+id/androidCheckbox"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@id/iphoneCheckbox"
        android:text="Android"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
```



```
app:layout_constraintVertical_bias="0.07" />
```

```
<CheckBox
```

```
    android:id="@+id/windowsCheckbox"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@id/androidCheckbox"
    android:text="Windows"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.95"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.07" />
```

```
<Button
```

```
    android:id="@+id/submitButton"
    android:layout_width="211dp"
    android:layout_height="63dp"
    android:layout_below="@id/windowsCheckbox"
    android:text="Submit"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.218" />
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```

### Java File:-

```
package com.example.a129_prectical5;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;
```

```

import android.widget.CheckBox;

import android.widget.Toast;

import androidx.activity.EdgeToEdge;

import androidx.appcompat.app.AppCompatActivity;

import androidx.core.graphics.Insets;

import androidx.core.view.ViewCompat;

import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

    CheckBox iphoneCheckbox, androidCheckbox,

        windowsCheckbox;

    Button submitButton;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        EdgeToEdge.enable(this);

        setContentView(R.layout.activity_main);

        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {

            Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());

            v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);

            return insets;

        });

        iphoneCheckbox = findViewById(R.id.iphoneCheckbox);

        androidCheckbox = findViewById(R.id.androidCheckbox);

        windowsCheckbox = findViewById(R.id.windowsCheckbox);

        submitButton = findViewById(R.id.submitButton);

        submitButton.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                StringBuilder selectedOptions = new StringBuilder("Selected Options: ");

                if (iphoneCheckbox.isChecked()) {

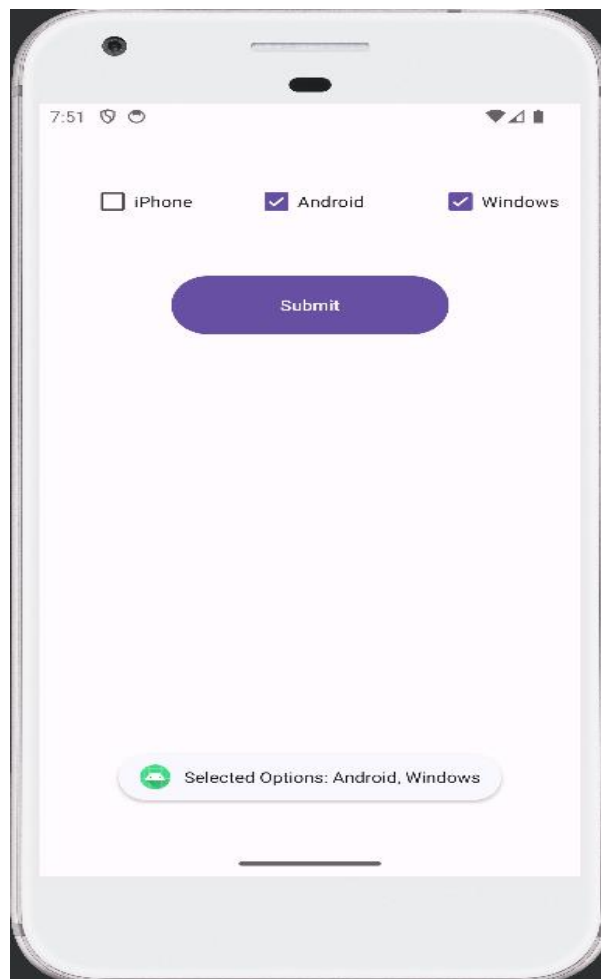
                    selectedOptions.append("iPhone, "); }

```

```

        if (androidCheckbox.isChecked()) {
            selectedOptions.append("Android, ");
        }
        if (windowsCheckbox.isChecked()) {
            selectedOptions.append("Windows, ");
        }
        String result = selectedOptions.toString().trim();
        if (result.endsWith(","))
        {
            result = result.substring(0, result.length() - 1);
        }
        Toast.makeText(MainActivity.this, result, Toast.LENGTH_SHORT).show();
    }
});

```



## PRACTICAL 5 :- XML FILE

```
<?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:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:layout_margin="20dp"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>

    <ListView
        android:id="@+id/colorListView"
        android:layout_width="match_parent"
        android:layout_height="match_parent" />

</LinearLayout>
```

### Java File:-

```
package com.example.a129_prectical6;

import android.graphics.Color;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.LinearLayout;
import android.widget.ListView;
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
```

```

import androidx.core.view.ViewCompat;

import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

    ListView colorListView;

    LinearLayout mainLayout;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        EdgeToEdge.enable(this);

        setContentView(R.layout.activity_main);

        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {

            Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());

            v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);

            return insets;

        });

        colorListView = findViewById(R.id.colorListView);

        mainLayout = findViewById(R.id.main);

        ArrayAdapter<CharSequence> adapter = ArrayAdapter.createFromResource( this,
R.array.color_names,android.R.layout.simple_list_item_1);

        colorListView.setAdapter(adapter);

        colorListView.setOnItemClickListener(new AdapterView.OnItemClickListener() {

            @Override

            public void onItemClick(AdapterView<?> parent, View view, int position, long id)

            {

                String selectedColor = (String) parent.getItemAtPosition(position);

                changeBackgroundColor(selectedColor);

            }

        });

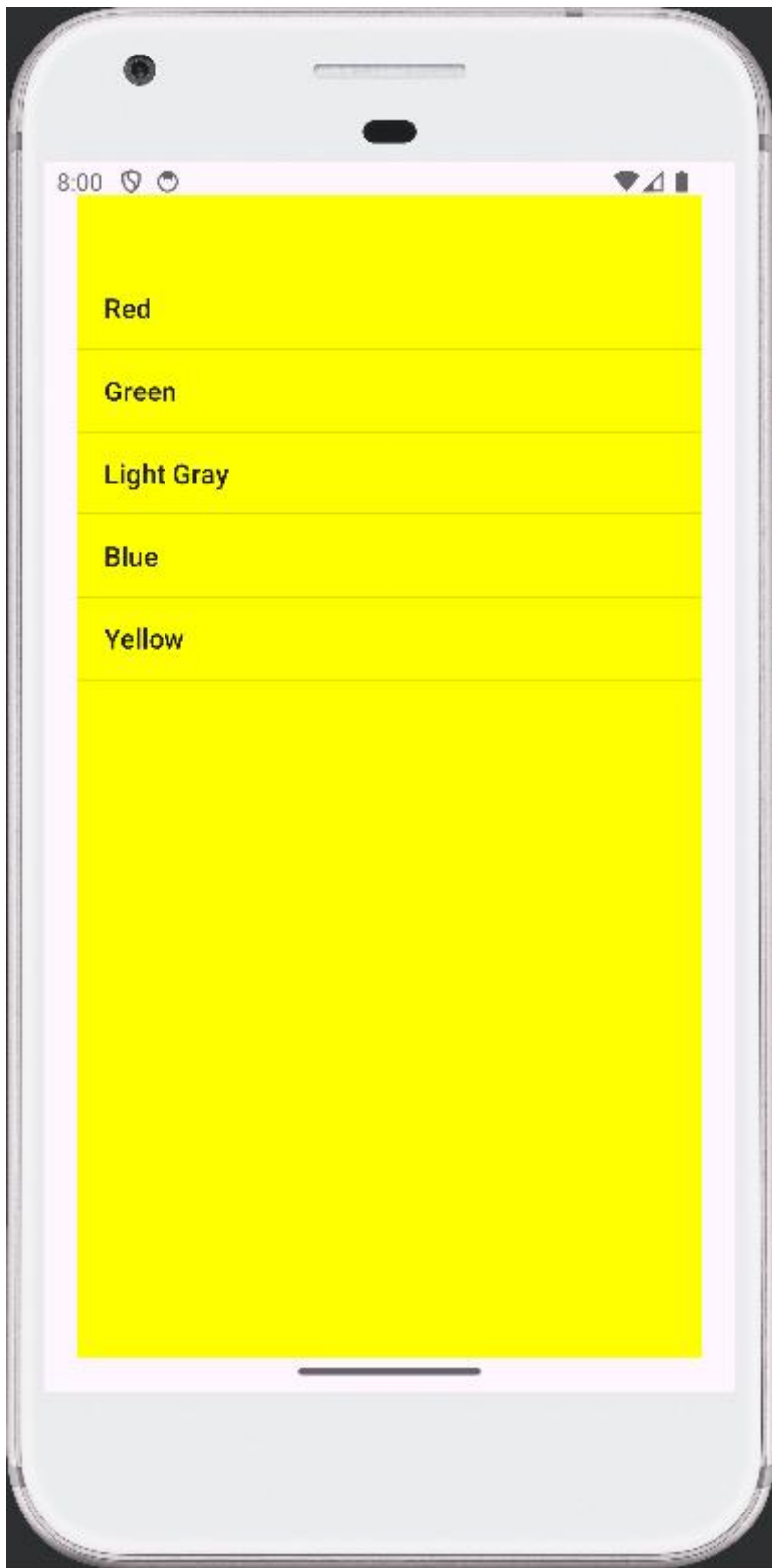
    }

    protected void changeBackgroundColor(String colorName) {

        int colorValue;

```

```
switch (colorName.toLowerCase()) {  
    case "red":  
        colorValue = Color.RED;  
        break;  
    case "green":  
        colorValue = Color.GREEN;  
        break;  
    case "pink":  
        colorValue = Color.LTGRAY;  
        break;  
    case "blue":  
        colorValue = Color.BLUE;  
        break;  
    case "yellow":  
        colorValue = Color.YELLOW;  
        break;  
    default:  
        colorValue = Color.WHITE;  
        break;  
}  
mainLayout.setBackgroundColor(colorValue);  
}  
}
```



## PRACTICAL 7 :- XML FILE

```
<?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:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <Spinner
        android:id="@+id/countrySpinner"
        android:layout_width="411dp"
        android:layout_height="39dp"
        android:layout_centerHorizontal="true"
        android:entries="@array/country"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.115" />
    <TextView
        android:id="@+id/selectedCountryText"
        android:layout_width="251dp"
        android:layout_height="48dp"
        android:layout_below="@id/countrySpinner"
        android:layout_centerHorizontal="true"
        android:text="Selected Country: "
        android:textSize="18dp"
        app:layout_constraintBottom_toBottomOf="parent"
```



```
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.331"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.275" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

### **String.xml File:-**

```
<resources>

    <string name="app_name">129_Prectical7</string>

    <string-array name="country">

        <item>Select Country</item>

        <item>INDIA</item>

        <item>RUSSIA</item>

        <item>UK</item>

        <item>GERMANY</item>

        <item>USA</item>

        <item>CANADA</item>

    </string-array>

</resources>
```

### **Java File:-**

```
package com.example.a129_prectical7;

import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.Spinner;
import android.widget.TextView;
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
```

```

import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

    Spinner countrySpinner;

    TextView selectedCountryText;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        EdgeToEdge.enable(this);

        setContentView(R.layout.activity_main);

        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {

            Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());

            v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);

            return insets;

        });

        countrySpinner = findViewById(R.id.countrySpinner);

        selectedCountryText =

            findViewById(R.id.selectedCountryText);

        ArrayAdapter<CharSequence> adapter = ArrayAdapter.createFromResource(this,
R.array.country, android.R.layout.simple_spinner_item);

        adapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);

        countrySpinner.setAdapter(adapter);

        countrySpinner.setOnItemSelectedListener(new AdapterView.OnItemSelectedListener() {

            @Override

            public void onItemSelected(AdapterView<?> parentView, View selectedItemView, int position,
long id)

            {

                String selectedCountry = parentView.getItemAtPosition(position).toString();

                selectedCountryText.setText("Selected Country: " + selectedCountry);

            }

            @Override

            public void onNothingSelected(AdapterView<?> parent)

            { }

        })
    }
}

```

```
});  
}  
}
```



## PRACTICAL 8 :- XML FILE

```
<?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:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:layout_margin="10dp"
    tools:context=".MainActivity">

    <TextView

        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text=" mobile model's"
        android:textSize="20dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.501"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.0" />

    <GridView

        android:id="@+id/gridView"
        android:layout_width="392dp"
        android:layout_height="612dp"
        android:layout_margin="5dp"
        android:columnWidth="100dp"
        android:gravity="center"
        android:horizontalSpacing="10dp"
        android:numColumns="3"
```

```

        android:verticalSpacing="10dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.98" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

### Java File:-

```

package com.example.a129_prectical8;

import android.os.Bundle;
import android.widget.GridView;
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

    private GridView gridView;

    private int[] Images = {
        R.drawable.mobile1,
        R.drawable.mobile2,
        R.drawable.mobile3,
        R.drawable.mobile4,
        R.drawable.mobile5,
        R.drawable.mobile6,
    };

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
    }
}

```

```

setContentView(R.layout.activity_main);

ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {

    Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());

    v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);

    return insets;

});

gridView = findViewById(R.id.gridView);

CustomAdapter ad = new CustomAdapter(this, Images);

gridView.setAdapter(ad);

}

}

```

### **CustomAdapter.Java File:-**

```

package com.example.a129_prectical8;

import android.content.Context;

import android.database.DataSetObserver;

import android.view.View;

import android.view.ViewGroup;

import android.widget.BaseAdapter;

import android.widget.ImageView;

import android.widget.ListAdapter;

public class CustomAdapter extends BaseAdapter {

    private Context context;

    private int[] Images;

    public CustomAdapter(Context context, int[] Images) {

        this.context = context;

        this.Images = Images;

    }

    @Override

    public int getCount() {

        return Images.length;

    }

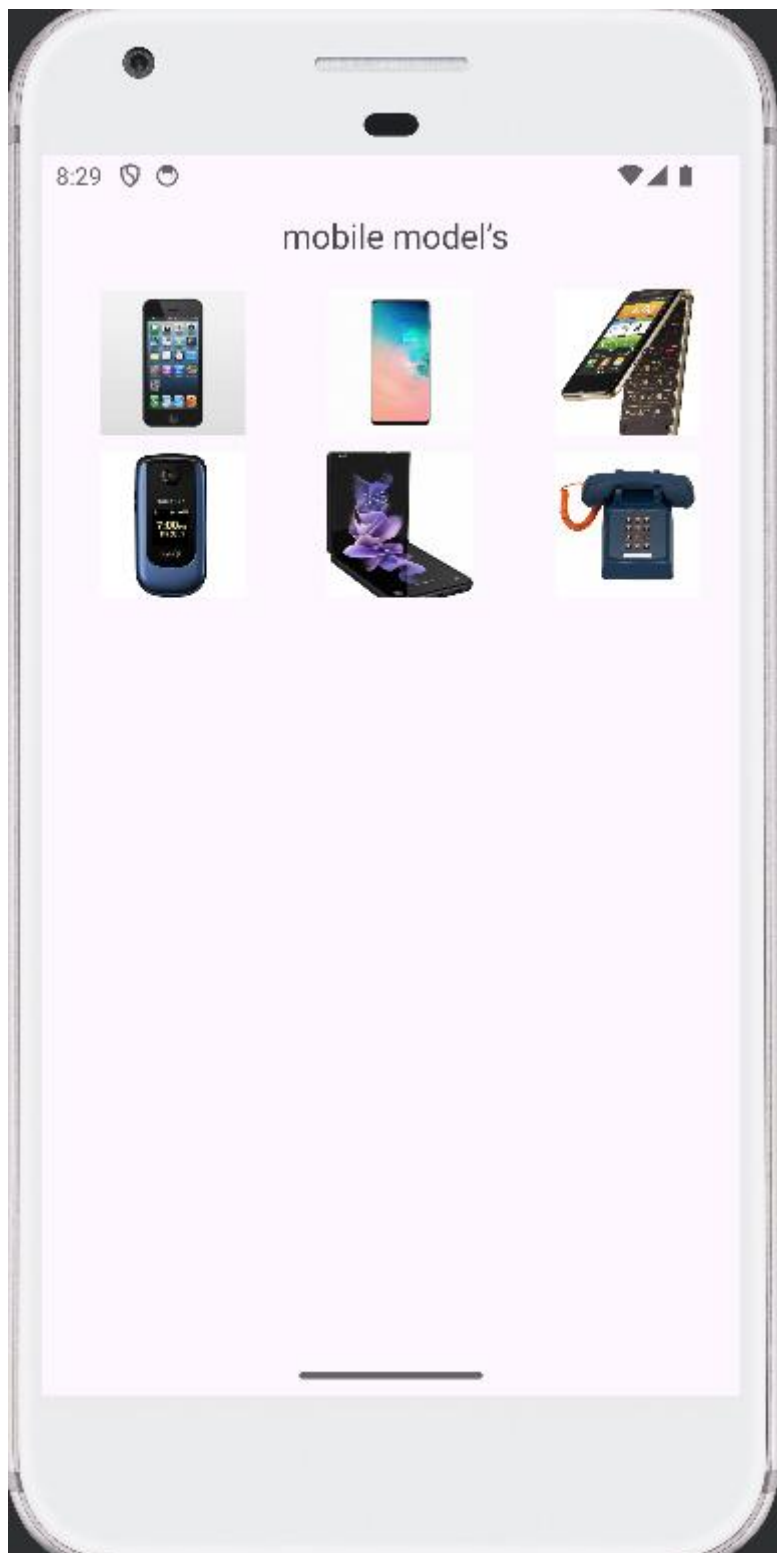
}

```

```
@Override
public Object getItem(int position) {
    return null;
}

@Override
public long getItemId(int position) {
    return 0;
}

@Override
public View getView(int position, View convertView,
    ViewGroup parent) {
    ImageView imageView;
    if (convertView == null)
    {
        imageView = new ImageView(context);
        imageView.setLayoutParams(new
            ViewGroup.LayoutParams(300, 300));
        imageView.setScaleType(ImageView.ScaleType.CENTER_CROP);
    } else
    {
        imageView = (ImageView) convertView;
    }
    imageView.setImageResource(Images[position]);
    return imageView;
}
}
```





## PRACTICAL 9 :- XML FILE

```
<?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:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <Button

        android:id="@+id/downloadButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_centerVertical="true"
        android:text="Download"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.115" />

    <ProgressBar

        android:id="@+id/progressBar"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_below="@id/downloadButton"
        android:layout_centerHorizontal="true"
        android:visibility="invisible"
        app:layout_constraintBottom_toBottomOf="parent"
```

```

        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.219" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

### Java File:-

```

package com.example.a129_prectical9;

import android.os.AsyncTask;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.ProgressBar;
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

    Button downloadButton;
    ProgressBar progressBar;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main);
        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {
            Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);
            return insets;
        });
    }
}

```

```

downloadButton = findViewById(R.id.downloadButton);

progressBar = findViewById(R.id.progressBar);

downloadButton.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View v) {

        new DownloadTask().execute();

    }

});

}

private class DownloadTask extends AsyncTask<Void, Integer,

    Void> {

    @Override

    protected void onPreExecute() {

        super.onPreExecute();

        progressBar.setVisibility(View.VISIBLE);

    }

    @Override

    protected Void doInBackground(Void... voids) {

        for (int progress = 0; progress <= 100; progress += 10) {

            try {

                Thread.sleep(500);

                publishProgress(progress);

            } catch (InterruptedException e) {

                e.printStackTrace();

            }

        }

        return null;

    }

    @Override

    protected void onProgressUpdate(Integer... values) {

```

```
        super.onProgressUpdate(values);  
        progressBar.setProgress(values[0]);  
    }  
    @Override  
    protected void onPostExecute(Void aVoid) {  
        super.onPostExecute(aVoid);  
        progressBar.setVisibility(View.INVISIBLE);  
    }  
}  
}
```



## PRACTICAL 10 :- XML FILE

```
<?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:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <AutoCompleteTextView
        android:id="@+id/autoCompleteTextView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginStart="8dp"
        android:hint="Type a course"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.16" />
    <TextView
        android:id="@+id/selectedCourseTextView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_below="@id/autoCompleteTextView"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
```

```
        app:layout_constraintVertical_bias="0.278" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

### Java File:-

```
package com.example.a129_preactical10;

import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.AutoCompleteTextView;
import android.widget.TextView;
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

    AutoCompleteTextView autoCompleteTextView;
    TextView selectedCourseTextView;
    String[] courses = {
        "B.Sc (IT)",
        "M.Sc (IT)",
        "5 Years Integrated M.Sc (IT)",
    };

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main);
        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {
            Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);
        });
    }
}
```

```

        return insets;
    });

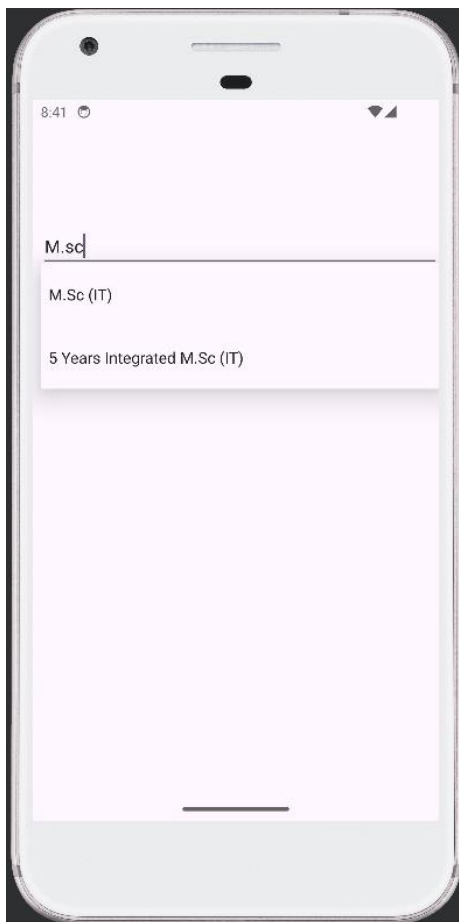
    autoCompleteTextView = findViewById(R.id.autoCompleteTextView);
    selectedCourseTextView = findViewById(R.id.selectedCourseTextView);

    ArrayAdapter<String> adapter = new ArrayAdapter<>(this,
    android.R.layout.simple_dropdown_item_1line, courses);

    autoCompleteTextView.setAdapter(adapter);

    autoCompleteTextView.setOnItemClickListener(new AdapterView.OnItemClickListener()
    {
        @Override
        public void onItemClick(AdapterView<?> parent, View view, int position, long id)
        {
            String selectedCourse = (String) parent.getItemAtPosition(position);
            selectedCourseTextView.setText("Selected Course: " + selectedCourse);
        }
    });
}
}

```



## PRACTICAL 11 :- XML FILE

```
<?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:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <LinearLayout

        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal">

        <DatePicker

            android:id="@+id/datePicker"
            android:layout_width="190dp"
            android:layout_height="wrap_content"
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintHorizontal_bias="0.0"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toTopOf="parent"
            app:layout_constraintVertical_bias="0.0" />

        <TimePicker

            android:id="@+id/timePicker"
            android:layout_width="219dp"
            android:layout_height="match_parent"
            android:layout_below="@id/datePicker"
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout_constraintEnd_toEndOf="parent"
```



```

        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="1.0" />
</LinearLayout>
<Button
    android:id="@+id/showButton"
    android:layout_width="178dp"
    android:layout_height="49dp"
    android:layout_below="@id/timePicker"
    android:text="Show"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.497"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.728" />
<TextView
    android:id="@+id/displayDateTimeTextView"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_below="@id/showButton"
    android:textSize="30sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="1.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.818" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

## Java File:-

```
package com.example.a129_prectical11;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.DatePicker;
import android.widget.TextView;
import android.widget.TimePicker;
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

    DatePicker datePicker;

    TimePicker timePicker;

    Button showButton;

    TextView displayDateTimeTextView;

    @Override
    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        EdgeToEdge.enable(this);

        setContentView(R.layout.activity_main);

        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {

            Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());

            v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);

            return insets;

        });

        datePicker = findViewById(R.id.datePicker);

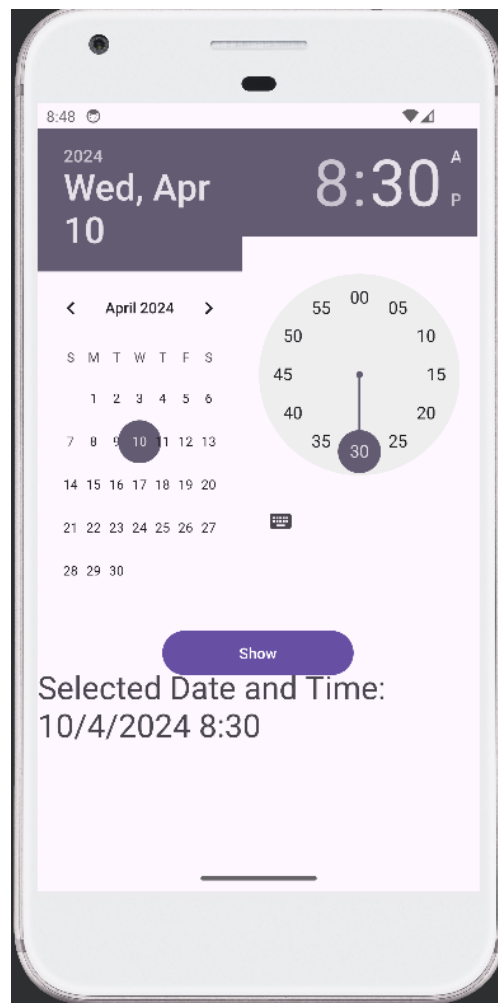
        timePicker = findViewById(R.id.timePicker);

        showButton = findViewById(R.id.showButton);
```

```

displayDateTimeTextView = findViewById(R.id.displayDateTimeTextView);
showButton.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v) {
        int day = datePicker.getDayOfMonth();
        int month = datePicker.getMonth() + 1;
        int year = datePicker.getYear();
        int hour = timePicker.getCurrentHour();
        int minute = timePicker.getCurrentMinute();
        String dateTime = "Selected Date and Time: " + day +
            "/" + month + "/" + year + " " + hour + ":" + minute;
        displayDateTimeTextView.setText(dateTime);
    }
});
}

```



## PRACTICAL 12 :- XML FILE

```
<?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:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/setDateButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Set Date"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.166" />

    <TextView
        android:id="@+id/dateTextView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="DATE"
        android:textSize="20dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
```

```
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.099" />
<Button
    android:id="@+id/setTimeButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Set Time"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.503"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.361" />
```

```
<TextView
    android:id="@+id/timeTextView"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="TIME"
    android:textSize="20dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.264" />
```

```
<Button
    android:id="@+id/setNameButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Set Name"
    app:layout_constraintBottom_toBottomOf="parent"
```

```

        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.511"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.563" />
<TextView
    android:id="@+id/nameTextView"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Name"
    android:textSize="20dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.471" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

### **custom\_dialog.xml File:-**

```

<?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:orientation="vertical"
    android:gravity="center">
    <EditText
        android:id="@+id/inputName"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"

```

```

        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.148" />
<Button
    android:id="@+id/submitButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Submit"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.251" />
</LinearLayout>

```

### Java File:-

```

package com.example.a129_prectical12;

import android.app.DatePickerDialog;
import android.app.Dialog;
import android.app.TimePickerDialog;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.DatePicker;
import android.widget.TextView;
import android.widget.TimePicker;
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;

```

```

import androidx.core.view.ViewCompat;

import androidx.core.view.WindowInsetsCompat;

import java.util.Calendar;

public class MainActivity extends AppCompatActivity {

    Button setDateButton, setTimeButton, setNameButton;

    TextView dateTextView, timeTextView, nameTextView;

    int mYear, mMonth, mDay, mHour, mMinute;

    @Override

    protected void onCreate ( Bundle savedInstanceState ) {

        super.onCreate (savedInstanceState);

        EdgeToEdge.enable (this);

        setContentView (R.layout.activity_main);

        ViewCompat.setOnApplyWindowInsetsListener (findViewById (R.id.main), ( v, insets ) -> {

            Insets systemBars = insets.getInsets (WindowInsetsCompat.Type.systemBars ());

            v.setPadding (systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);

            return insets;

        });

        setDateButton = findViewById (R.id.setDateButton);

        setTimeButton = findViewById (R.id.setTimeButton);

        setNameButton = findViewById (R.id.setNameButton);

        dateTextView = findViewById (R.id.dateTextView);

        timeTextView = findViewById (R.id.timeTextView);

        nameTextView = findViewById (R.id.nameTextView);

        setDateButton.setOnClickListener (new View.OnClickListener () {

            @Override

            public void onClick ( View v ) {

                showDatePickerDialog ();

            }

        });

        setTimeButton.setOnClickListener (new View.OnClickListener () {

            @Override

```



```

        public void onClick ( View v ) {
            showTimePickerDialog ();
        }
    });

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

protected void showDatePickerDialog () {
    final Calendar c = Calendar.getInstance ();
    mYear = c.get (Calendar.YEAR);
    mMonth = c.get (Calendar.MONTH);
    mDay = c.get (Calendar.DAY_OF_MONTH);

    DatePickerDialog datePickerDialog = new DatePickerDialog (this, new
    DatePickerDialog.OnDateSetListener () {
        @Override
        public void onDateSet (
            DatePicker view, int year, int
            monthOfYear, int dayOfMonth
        ) {
            dateTextView.setText ("Selected Date: " + dayOfMonth + "-" + ( monthOfYear + 1 ) + "-"
+ year);
        }
    }, mYear, mMonth, mDay);

    datePickerDialog.show ();
}

protected void showTimePickerDialog () {
    final Calendar c = Calendar.getInstance ();

```

```

mHour = c.get (Calendar.HOUR_OF_DAY);

mMinute = c.get (Calendar.MINUTE);

TimePickerDialog timePickerDialog = new TimePickerDialog (this, new
TimePickerDialog.OnTimeSetListener () {

    @Override

    public void onTimeSet (

        TimePicker view, int

        hourOfDay,

        int minute

    ) {

        timeTextView.setText ("Selected Time: " + hourOfDay + ":" + minute);

    }

}, mHour, mMinute, false);

timePickerDialog.show ();
}

protected void showNameInputDialog () {

    final Dialog dialog = new Dialog (this);

    dialog.setTitle ("Enter Name:");

    dialog.setContentView (R.layout.custom_dialog);

    Button submitButton =

        dialog.findViewById (R.id.submitButton);

    final TextView inputName =

        dialog.findViewById (R.id.inputName);

    submitButton.setOnClickListener (new View.OnClickListener () {

        @Override

        public void onClick ( View v ) {

            String name = inputName.getText ().toString ();

            nameTextView.setText ("Entered Name: " + name);

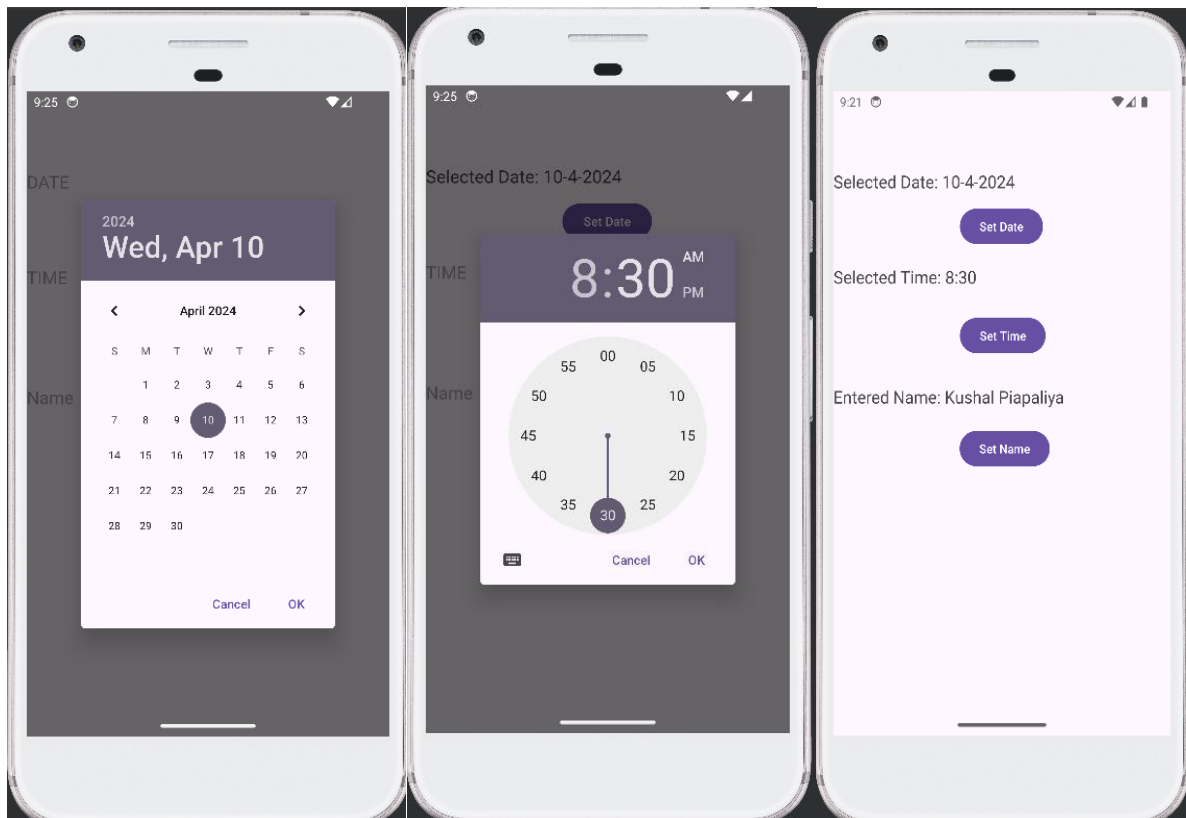
            dialog.dismiss ();

        }

    });
}

```

```
dialog.show ();  
}  
}
```



### PRACTICAL 13 :- XML FILE

```
<?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:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:layout_margin="20dp"
    tools:context=".MainActivity">

    <EditText
        android:id="@+id/editTextNo1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="No1"
        android:inputType="numberDecimal"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.096" />

    <EditText
        android:id="@+id/editTextNo2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="No2"
        android:inputType="numberDecimal"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
```

```

        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.192" />
<TextView
    android:id="@+id/resultTextView"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Result: "
    android:textSize="20dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="1.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.325" />
</LinearLayout>

```

### **option\_menu.xml FILE :-**

```

<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">
    <item
        android:id="@+id/menuAddition"
        android:title="Addition"/>
    <item
        android:id="@+id/menuSubtraction"
        android:title="Subtraction"/>
    <item
        android:id="@+id/menuMultiplication"
        android:title="Multiplication"/>
</menu>

```

## Java File:-

```
package com.example.a129_prectical13;

import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.EditText;
import android.widget.TextView;
import androidx.activity.EdgeToEdge;
import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

    EditText editTextNo1, editTextNo2;
    TextView resultTextView;

    @Override
    protected void onCreate ( Bundle savedInstanceState ) {
        super.onCreate (savedInstanceState);
        EdgeToEdge.enable (this);
        setContentView (R.layout.activity_main);
        ViewCompat.setOnApplyWindowInsetsListener (findViewById (R.id.main), ( v, insets ) -> {
            Insets systemBars = insets.getInsets (WindowInsetsCompat.Type.systemBars ());
            v.setPadding (systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);
            return insets;
        });
        editTextNo1 = findViewById(R.id.editTextNo1);
        editTextNo2 = findViewById(R.id.editTextNo2);
        resultTextView = findViewById(R.id.resultTextView);
    }

    @Override
```

```

public boolean onCreateOptionsMenu(Menu menu) {

    getMenuInflater().inflate(R.menu.option_menu, menu);

    return true;
}

@Override

public boolean onOptionsItemSelected(@NonNull MenuItem item) {

    int id = item.getItemId();

    String strNo1 = editTextNo1.getText().toString();

    String strNo2 = editTextNo2.getText().toString();

    double no1 = Double.parseDouble(strNo1);

    double no2 = Double.parseDouble(strNo2);

    double result = 0;

    if (id == R.id.menuAddition) {

        result = no1 + no2;

    } else if (id == R.id.menuSubtraction) {

        result = no1 - no2;

    } else if (id == R.id.menuMultiplication) {

        result = no1 * no2;

    }

    resultTextView.setText(String.valueOf(result));

    return super.onOptionsItemSelected(item);

}
}

```

