

Experiment – 1

Aim: Design an application to perform the arithmetic operations by reading the input from user

Solution:

activity_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">

    <EditText
        android:id="@+id/aBox"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:minHeight="48dp"
        android:minWidth="48dp"
        android:hint="Enter a Value"
        android:inputType="text"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintBottom_toTopOf="@+id/bBox"/>

    <EditText
        android:id="@+id/bBox"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Enter b Value"
        android:inputType="text"
        android:minWidth="48dp"
        android:minHeight="48dp"
        app:layout_constraintBottom_toTopOf="@+id/addBtn"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/aBox" />

    <Button
        android:id="@+id/addBtn"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="+"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toStartOf="@+id/subBtn"
        app:layout_constraintBottom_toTopOf="@+id/mulBtn"
```

```
app:layout_constraintTop_toBottomOf="@+id/bBox"/>
```

```
<Button
    android:id="@+id/subBtn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="-"
    tools:layout_editor_absoluteX="230dp"
    tools:layout_editor_absoluteY="322dp"
    app:layout_constraintBottom_toTopOf="@+id/divBtn"
    app:layout_constraintStart_toEndOf="@+id/addBtn"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/bBox"/>
```

```
<Button
    android:id="@+id/mulBtn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="*"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/addBtn"
    app:layout_constraintEnd_toStartOf="@+id/divBtn"
    app:layout_constraintBottom_toTopOf="@+id/result"/>
```

```
<Button
    android:id="@+id/divBtn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="/"
    tools:layout_editor_absoluteX="230dp"
    tools:layout_editor_absoluteY="322dp"
    app:layout_constraintBottom_toTopOf="@+id/result"
    app:layout_constraintStart_toEndOf="@+id/mulBtn"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/subBtn" />
```

```
<TextView
    android:id="@+id/result"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/divBtn" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java:

```
package com.example.arith;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

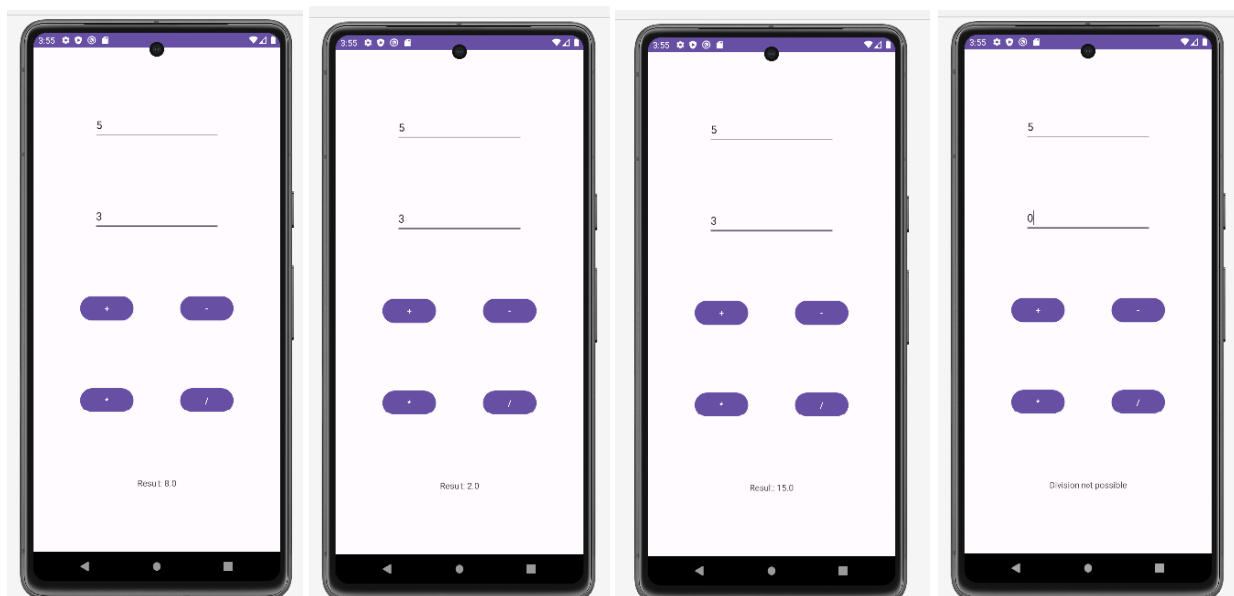
public class MainActivity extends AppCompatActivity {
    EditText aval, bval;
    Button add, sub, mul, div;
    TextView res;
    Double a, b;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        aval = findViewById(R.id.aBox);
        bval = findViewById(R.id.bBox);
        add = findViewById(R.id.addBtn);
        sub = findViewById(R.id.subBtn);
        mul = findViewById(R.id.mulBtn);
        div = findViewById(R.id.divBtn);
        res = findViewById(R.id.result);
        add.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                a = Double.parseDouble(aval.getText().toString());
                b = Double.parseDouble(bval.getText().toString());
                res.setText("Result: "+(a+b));
            }
        });
        sub.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                a = Double.parseDouble(aval.getText().toString());
                b = Double.parseDouble(bval.getText().toString());
                res.setText("Result: "+(a-b));
            }
        });
        mul.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                a = Double.parseDouble(aval.getText().toString());
                b = Double.parseDouble(bval.getText().toString());
                res.setText("Result: "+(a*b));
            }
        });
    }
}
```

```

    }
    });
    div.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            a = Double.parseDouble(aval.getText().toString());
            b = Double.parseDouble(bval.getText().toString());
            if(b!=0)
                res.setText("Result: "+(a/b));
            else
                res.setText("Division not possible");
        }
    });
}
}

```

Output:



Experiment - 2

Aim: Design an application to calculate the body mass index by reading the input from user

Solution:

activity_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">

    <TextView
        android:id="@+id/header"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="BMI Calculator"
        android:textSize="48dp"
        android:textStyle="bold"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintBottom_toTopOf="@+id/wtLbl" />

    <TextView
        android:id="@+id/wtLbl"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Weight (in Kg)"
        android:textStyle="bold"
        tools:layout_editor_absoluteX="53dp"
        tools:layout_editor_absoluteY="178dp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toStartOf="@+id/wtBox"
        app:layout_constraintBottom_toTopOf="@+id/htLbl"
        app:layout_constraintTop_toBottomOf="@+id/header" />

    <EditText
        android:id="@+id/wtBox"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Enter Weight"
        android:inputType="text"
        android:minHeight="48dp"
        tools:layout_editor_absoluteX="184dp"
        tools:layout_editor_absoluteY="164dp"
```

```
app:layout_constraintBottom_toTopOf="@+id/htBox"
app:layout_constraintStart_toEndOf="@+id/wtLbl"
app:layout_constraintTop_toBottomOf="@+id/header"
app:layout_constraintEnd_toEndOf="parent"/>
```

```
<TextView
    android:id="@+id/htLbl"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Height (in Cm)"
    android:textStyle="bold"
    tools:layout_editor_absoluteX="56dp"
    tools:layout_editor_absoluteY="295dp"
    app:layout_constraintTop_toBottomOf="@+id/wtLbl"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/wtBox"
    app:layout_constraintBottom_toTopOf="@+id/calcBtn"/>
```

```
<EditText
    android:id="@+id/htBox"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:minHeight="48dp"
    android:hint="Enter Height"
    android:inputType="text"
    tools:layout_editor_absoluteX="184dp"
    tools:layout_editor_absoluteY="275dp"
    app:layout_constraintBottom_toTopOf="@+id/calcBtn"
    app:layout_constraintStart_toEndOf="@+id/htLbl"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/wtBox"/>
```

```
<Button
    android:id="@+id/calcBtn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Calculate"
    tools:layout_editor_absoluteX="157dp"
    tools:layout_editor_absoluteY="431dp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/htBox"
    app:layout_constraintBottom_toTopOf="@+id/result"/>
```

```
<TextView
    android:id="@+id/result"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:gravity="center_horizontal"
```

```

        android:textStyle="bold"
        tools:layout_editor_absoluteX="180dp"
        tools:layout_editor_absoluteY="571dp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/calcBtn"/>
</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java:

```
package com.example.bmicalc;
```

```
import androidx.appcompat.app.AppCompatActivity;
```

```
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
```

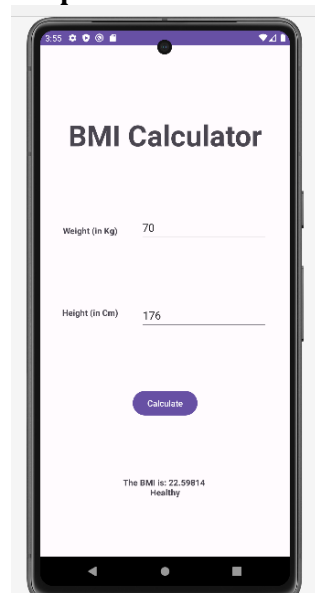
```
public class MainActivity extends AppCompatActivity {
    EditText wtval, htval;
    Button btn;
    TextView res;
```

```
@Override
```

```
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    wtval = findViewById(R.id.wtBox);
    htval = findViewById(R.id.htBox);
    btn = findViewById(R.id.calcBtn);
    res = findViewById(R.id.result);
    btn.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            Float wt = Float.parseFloat(wtval.getText().toString());
            Float ht_m = Float.parseFloat(htval.getText().toString())/100;
            Float bmi = wt/ (ht_m*ht_m);
            if(bmi < 18.5)
                res.setText("The BMI is: "+bmi+" \n Under Weight ");
            else if (bmi >= 18.5 && bmi < 24.9)
                res.setText("The BMI is: "+bmi+" \n Healthy ");
            else if (bmi >= 24.9 && bmi < 30)
                res.setText("The BMI is: "+bmi+" \n Over Weight ");
            else if (bmi>=30)
                res.setText("The BMI is: "+bmi+" \n Suffering from obesity ");
        }
    });
}
```

```
}  
}
```

Output:



Experiment - 3

Aim: Design an application to fill the registration form using AutoCompleteTextView and RadioButton by reading the input from user

Solution:

activity_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">

    <TextView
        android:id="@+id/header"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Registration Form"
        android:textSize="34sp"
        android:textStyle="bold"
        app:layout_constraintBottom_toTopOf="@+id/nameLbl"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.605"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/nameLbl"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Name"
        android:textStyle="bold"
        app:layout_constraintBottom_toTopOf="@+id/FNameLbl"
        app:layout_constraintEnd_toStartOf="@+id/NameBox"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/header" />

    <AutoCompleteTextView
        android:id="@+id/PlaceBox"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:hint="Enter Location"
        android:minHeight="48dp"
        app:layout_constraintBottom_toTopOf="@+id/SubmitBtn"
        app:layout_constraintStart_toEndOf="@+id/PlaceLbl"
        app:layout_constraintTop_toBottomOf="@+id/GenderGroup"
        app:layout_constraintEnd_toEndOf="parent" />
```

```
<TextView
    android:id="@+id/PlaceLbl"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Place of Birth"
    android:textStyle="bold"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/GenderGroup"
    app:layout_constraintEnd_toStartOf="@+id/PlaceBox"
    app:layout_constraintBottom_toTopOf="@+id/SubmitBtn"/>
```

```
<TextView
    android:id="@+id/GenderLbl"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Gender"
    android:textStyle="bold"
    app:layout_constraintBottom_toTopOf="@+id/PlaceLbl"
    app:layout_constraintEnd_toStartOf="@+id/GenderGroup"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/FNameLbl" />
```

```
<TextView
    android:id="@+id/FNameLbl"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Father Name"
    android:textStyle="bold"
    app:layout_constraintBottom_toTopOf="@+id/GenderLbl"
    app:layout_constraintEnd_toStartOf="@+id/FNameBox"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/nameLbl" />
```

```
<RadioGroup
    android:id="@+id/GenderGroup"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    app:layout_constraintStart_toEndOf="@+id/GenderLbl"
    app:layout_constraintBottom_toTopOf="@+id/PlaceBox"
    app:layout_constraintTop_toBottomOf="@+id/FNameBox"
    app:layout_constraintEnd_toEndOf="parent">
```

```
<RadioButton
    android:id="@+id/MaleBtn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Male" />
```

```
<RadioButton
```

```

        android:id="@+id/FemaleBtn"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Female" />

</RadioGroup>

<EditText
    android:id="@+id/NameBox"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="Enter Name"
    android:inputType="text"
    android:minHeight="48dp"
    app:layout_constraintBottom_toTopOf="@+id/FNameBox"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toEndOf="@+id/nameLbl"
    app:layout_constraintTop_toBottomOf="@+id/header" />

<EditText
    android:id="@+id/FNameBox"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="Enter Father Name"
    android:inputType="text"
    android:minHeight="48dp"
    app:layout_constraintBottom_toTopOf="@+id/GenderGroup"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toEndOf="@+id/FNameLbl"
    app:layout_constraintTop_toBottomOf="@+id/NameBox" />

<Button
    android:id="@+id/SubmitBtn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Submit"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/PlaceBox"
    app:layout_constraintBottom_toBottomOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java:

```
package com.example.registrationformacrg;
```

```
import androidx.appcompat.app.AppCompatActivity;
```

```

import android.annotation.SuppressLint;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AutoCompleteTextView;
import android.widget.Button;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.TextView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    EditText name,fname;
    AutoCompleteTextView places;
    RadioGroup rg;
    RadioButton rb;
    Button btn;
    String[] Locations = {"Bangalore","Delhi","Pune","Bombay","Chennai","Hyderabad","Calcutta"};
    @SuppressWarnings("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        name = findViewById(R.id.NameBox);
        fname = findViewById(R.id.FNameBox);
        places = findViewById(R.id.PlaceBox);
        btn = findViewById(R.id.SubmitBtn);
        ArrayAdapter adapter = new ArrayAdapter(this, android.R.layout.select_dialog_item,Locations);
        places.setThreshold(1);
        places.setAdapter(adapter);
        rg = findViewById(R.id.GenderGroup);
        rg.setOnCheckedChangeListener(new RadioGroup.OnCheckedChangeListener() {
            @Override
            public void onCheckedChanged(RadioGroup group, int checkedId) {
                rb = findViewById(checkedId);
            }
        });
        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String res1 = "Name: "+name.getText().toString()+"\nFather Name: "+fname.getText().toString()+"\nGender: "+rb.getText()+"\nPlace of Birth: "+places.getText().toString();
                Toast.makeText(MainActivity.this,res1,Toast.LENGTH_SHORT).show();
            }
        });
    }
}

```

Output:

The image displays two side-by-side smartphone screens showing a registration form. The left screen shows the form with fields for Name, Father Name, Gender, and Place of Birth, and a Submit button. The right screen shows the same form with the same data entered, but with a confirmation message at the bottom.

Registration Form

Name: Sindhu

Father Name: Vijay

Gender: ☐ Male ☒ Female

Place of Birth: Chennai

Submit

Registration Form

Name: Sindhu

Father Name: Vijay

Gender: ☐ Male ☒ Female

Place of Birth: Chennai

Name: Sindhu
Father Name: Vijay
Gender: Female
Place of Birth: Chennai

Experiment - 4

Aim: Design an application to fill the course selection of discipline electives for upcoming semester using Spinner by reading the input from user

Solution:

activity_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">

    <TextView
        android:id="@+id/header"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Electives Selection"
        android:textSize="34sp"
        android:textStyle="bold"
        app:layout_constraintBottom_toTopOf="@+id/nameBox"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/nameLbl"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Student Name"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toStartOf="@+id/nameBox"
        app:layout_constraintTop_toBottomOf="@+id/header"
        app:layout_constraintBottom_toTopOf="@+id/rollnoLbl" />

    <EditText
        android:id="@+id/nameBox"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:minHeight="48dp"
        android:hint="Enter Student Name"
        android:inputType="text"
        app:layout_constraintStart_toEndOf="@+id/nameLbl"
        app:layout_constraintTop_toBottomOf="@+id/header"
        app:layout_constraintBottom_toTopOf="@+id/rollnoBox"
```

```
app:layout_constraintEnd_toEndOf="parent"/>
```

```
<TextView
    android:id="@+id/rollnoLbl"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Roll No"
    android:textStyle="bold"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/nameLbl"
    app:layout_constraintEnd_toStartOf="@+id/rollnoBox"
    app:layout_constraintBottom_toTopOf="@+id/delbl"/>
```

```
<EditText
    android:id="@+id/rollnoBox"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:minHeight="48dp"
    android:hint="Enter Student RollNo"
    android:inputType="text"
    app:layout_constraintStart_toEndOf="@+id/rollnoLbl"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintBottom_toTopOf="@+id/delbl"
    app:layout_constraintTop_toBottomOf="@+id/nameBox"/>
```

```
<TextView
    android:id="@+id/delbl"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Discipline Elective"
    android:textStyle="bold"
    app:layout_constraintBottom_toTopOf="@+id/electivesBox"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.054"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/rollnoLbl" />
```

```
<Spinner
    android:id="@+id/electivesBox"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:minHeight="48dp"
    app:layout_constraintBottom_toTopOf="@+id/SubmitBtn"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/delbl"/>
```

```
<Button
    android:id="@+id/SubmitBtn"
```

```

        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Submit"
        android:onClick="displayDetails"
        app:layout_constraintTop_toBottomOf="@+id/electivesBox"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintBottom_toTopOf="@+id/result"
        app:layout_constraintEnd_toStartOf="@+id/ResetBtn"/>

<Button
    android:id="@+id/ResetBtn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Reset"
    android:onClick="resetDetails"
    app:layout_constraintStart_toEndOf="@+id/SubmitBtn"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/electivesBox"
    app:layout_constraintBottom_toTopOf="@+id/result"/>

<TextView
    android:id="@+id/result"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:gravity="center_horizontal"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/SubmitBtn"/>
</androidx.constraintlayout.widget.ConstraintLayout>

```

strings.xml:

```

<resources>
    <string name="app_name">DESelectionSpinner</string>
    <string-array name="courses">
        <item>Mobile Application Development</item>
        <item>Java Full Stack</item>
        <item>.Net Full Stack</item>
    </string-array>
</resources>

```

MainActivity.java:

```

package com.example.deselectionspinner;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;

```



```

import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Spinner;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {
    EditText name,rollno;
    Spinner elec;
    TextView res;
    String selectedCourse;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        name = findViewById(R.id.nameBox);
        rollno = findViewById(R.id.rollnoBox);
        elec = findViewById(R.id.electivesBox);
        res = findViewById(R.id.result);
        ArrayAdapter adapter = new ArrayAdapter(this,
android.R.layout.simple_spinner_item,getResources().getStringArray(R.array.courses));
        adapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
        elec.setAdapter(adapter);
        elec.setOnItemClickListener(new AdapterView.OnItemClickListener() {
            @Override
            public void onItemClick(AdapterView<?> parent, View view, int position, long id) {
                selectedCourse = parent.getItemAtPosition(position).toString();
            }

            @Override
            public void onNothingSelected(AdapterView<?> parent) {

            }
        });
    }
    public void displayDetails(View v) {
        res.setText("Name: "+name.getText().toString()+"\nRoll No:
"+rollno.getText().toString()+"\nSelected Course: "+selectedCourse);
    }
    public void resetDetails(View v){
        name.setText("");
        rollno.setText("");
        res.setText("");
    }
}

```

Output:

The image displays three sequential screenshots of a mobile application interface titled "Electives Selection".

First Screenshot (Empty Form): The form contains three input fields: "Student Name" with placeholder text "Enter Student Name", "Roll No" with placeholder text "Enter Student RollNo", and "Discipline Elective" with a dropdown menu currently showing "Mobile Application Development". At the bottom are "Submit" and "Reset" buttons.

Second Screenshot (Filled Form): The form is filled with the following data: "Student Name" is "Sindhuri", "Roll No" is "202121CSE0001", and the "Discipline Elective" dropdown now shows "Java Full Stack". The "Submit" and "Reset" buttons remain at the bottom.

Third Screenshot (Submitted Form): This screen shows the result of the submission. The input fields are now disabled. Below the "Submit" and "Reset" buttons, the following text is displayed: "Name: Sindhuri", "Roll No: 202121CSE0001", and "Selected Course: Java Full Stack".

Experiment – 5

Aim: Design an application to check the user is eligibility to vote or not by reading the data of birth and aadhar card number.

activity_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">

<TextView
    android:id="@+id/header"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Vote Eligibility"
    android:textSize="24sp"
    android:textStyle="bold"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintBottom_toTopOf="@+id/nameBox"/>

<TextView
    android:id="@+id/nameLbl"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="User Name"
    android:textStyle="bold"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/header"
    app:layout_constraintBottom_toTopOf="@+id/aadharLbl"
    app:layout_constraintEnd_toStartOf="@+id/nameBox" />

<EditText
    android:id="@+id/nameBox"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:minHeight="48dp"
    android:hint="Enter Username"
    android:inputType="text"
    app:layout_constraintStart_toEndOf="@+id/nameLbl"
    app:layout_constraintBottom_toTopOf="@+id/aadharBox"
    app:layout_constraintTop_toBottomOf="@+id/header"
    app:layout_constraintEnd_toEndOf="parent"/>
```

```
<TextView
    android:id="@+id/aadharLbl"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Aadhar No."
    android:textStyle="bold"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/nameLbl"
    app:layout_constraintBottom_toTopOf="@+id/dobLbl"
    app:layout_constraintEnd_toStartOf="@+id/aadharBox"/>
```

```
<EditText
    android:id="@+id/aadharBox"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:minHeight="48dp"
    android:hint="Enter Aadhar Number"
    android:inputType="number"
    app:layout_constraintStart_toEndOf="@+id/aadharLbl"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/nameBox"
    app:layout_constraintBottom_toTopOf="@id/dateBox"/>
```

```
<TextView
    android:id="@+id/dobLbl"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Date of Birth"
    android:textStyle="bold"
    app:layout_constraintBottom_toTopOf="@+id/checkBtn"
    app:layout_constraintTop_toBottomOf="@+id/aadharLbl"
    app:layout_constraintEnd_toStartOf="@+id/dateBox"
    app:layout_constraintStart_toStartOf="parent"/>
```

```
<EditText
    android:id="@+id/dateBox"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:minHeight="48dp"
    android:hint="Select Date"
    android:inputType="date"
    app:layout_constraintStart_toEndOf="@+id/dobLbl"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/aadharBox"
    app:layout_constraintBottom_toTopOf="@+id/checkBtn"/>
```

```
<Button
```

```
    android:id="@+id/checkBtn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Check"
    android:onClick="checkEligibility"
    app:layout_constraintTop_toBottomOf="@+id/aadharBox"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintBottom_toBottomOf="parent"/>
```

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

MainActivity.java:

```
package com.example.agecalcdpd;

import androidx.appcompat.app.AppCompatActivity;

import android.annotation.SuppressLint;
import android.app.DatePickerDialog;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.DatePicker;
import android.widget.EditText;

import java.util.Calendar;

public class MainActivity extends AppCompatActivity {
    EditText name, num, date;
    Button btn;
    int diff;

    @SuppressWarnings("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        name = findViewById(R.id.nameBox);
        num = findViewById(R.id.aadharBox);
        date = findViewById(R.id.dateBox);
        date.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Calendar c = Calendar.getInstance();
                int pYear = c.get(Calendar.YEAR);
                int pMonth = c.get(Calendar.MONTH);
                int pDate = c.get(Calendar.DATE);
```

```

        DatePickerDialog dialog = new DatePickerDialog(MainActivity.this,
android.R.style.Theme_DeviceDefault_DialogWhenLarge, new
DatePickerDialog.OnDateSetListener() {
    @Override
    public void onDateSet(DatePicker view, int year, int month, int dayOfMonth) {
        date.setText(dayOfMonth+"/"+(month+1)+"/"+year);
        diff = pYear - year;
    }
},pYear, pMonth, pDate);
    dialog.show();
}
});
}

public void checkEligibility(View v) {
    String s_name = name.getText().toString();
    String s_num = num.getText().toString();
    Intent in = new Intent(getApplicationContext(), ResultActivity.class);
    in.putExtra("NAME",s_name);
    in.putExtra("AADHAR",s_num);
    in.putExtra("AGE",diff);
    startActivity(in);
}
}

```

activity result.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=".ResultActivity">

    <TextView
        android:id="@+id/result"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:gravity="center_horizontal"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

ResultActivity.java:

```

package com.example.agecalcdpd;

```

```

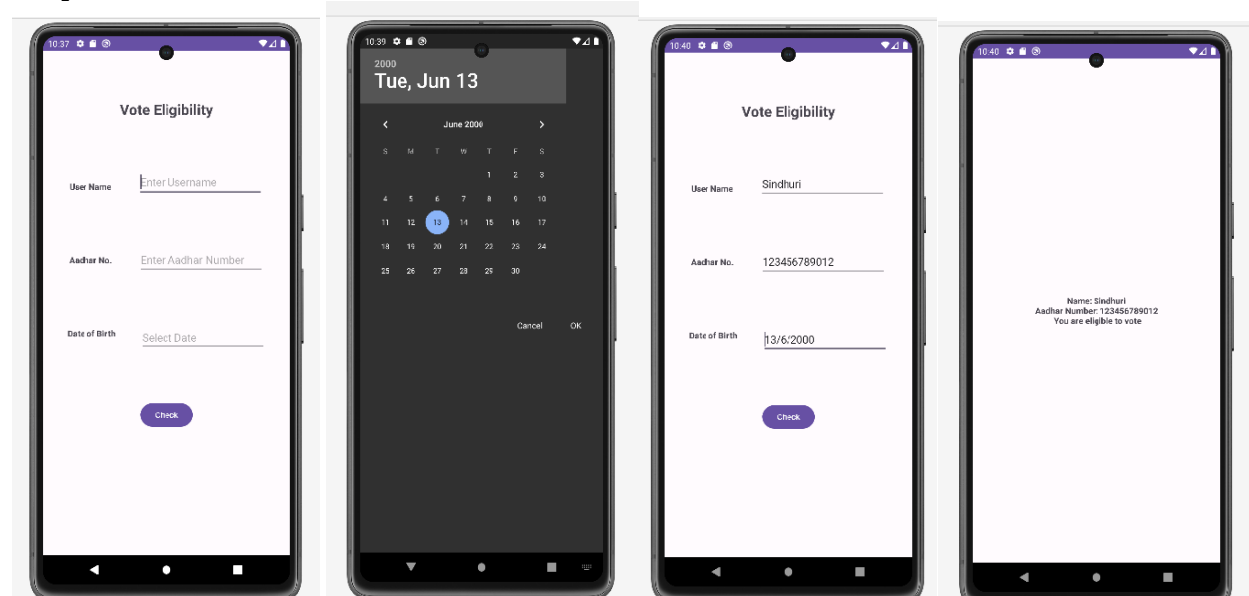
import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.widget.TextView;

public class ResultActivity extends AppCompatActivity {
    TextView res;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_result);
        res = findViewById(R.id.result);
        Intent intt = getIntent();
        String r_name = intt.getStringExtra("NAME");
        String r_aadhar = intt.getStringExtra("AADHAR");
        int age = intt.getIntExtra("AGE",0);
        if(age>=18)
            res.setText("Name: "+r_name+"\nAadhar Number: "+r_aadhar+"\n You are eligible to vote");
        else
            res.setText("Name: "+r_name+"\nAadhar Number: "+r_aadhar+"\n You are not eligible to
vote");
    }
}

```

Output:



Experiment – 6

Aim: Design an application to order the cake by selecting the date and time and display the order details in another activity.

activity_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">

<TextView
    android:id="@+id/header"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Cake Bakery"
    android:textSize="34sp"
    android:textStyle="bold"
    app:layout_constraintBottom_toTopOf="@+id/cakeBox"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

<TextView
    android:id="@+id/itemLbl"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="76dp"
    android:text="Cake Flavour"
    android:textStyle="bold"
    app:layout_constraintEnd_toStartOf="@+id/cakeBox"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/header" />

<Spinner
    android:id="@+id/cakeBox"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:minHeight="48dp"
    app:layout_constraintTop_toBottomOf="@+id/header"
    app:layout_constraintBottom_toTopOf="@+id/cakeImage"
    app:layout_constraintStart_toEndOf="@+id/itemLbl"
    app:layout_constraintEnd_toEndOf="parent" />

<TextView
    android:id="@+id/dateLbl"
```



```
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Date of Delivery"
android:textStyle="bold"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintEnd_toStartOf="@+id/cakeImage"
app:layout_constraintTop_toBottomOf="@+id/itemLbl"
app:layout_constraintBottom_toTopOf="@+id/timeLbl" />
```

```
<ImageView
    android:id="@+id/cakeImage"
    android:layout_width="157dp"
    android:layout_height="152dp"
    app:srcCompat="@drawable/download"
    android:onClick="selectDate"
    app:layout_constraintBottom_toTopOf="@+id/timeImage"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toEndOf="@+id/dateLbl"
    app:layout_constraintTop_toBottomOf="@+id/cakeBox" />
```

```
<TextView
    android:id="@+id/timeLbl"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Time of Delivery"
    android:textStyle="bold"
    app:layout_constraintBottom_toTopOf="@+id/orderBtn"
    app:layout_constraintEnd_toStartOf="@+id/timeImage"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/dateLbl"
    android:contentDescription="@null" />
```

```
<ImageView
    android:id="@+id/timeImage"
    android:layout_width="192dp"
    android:layout_height="102dp"
    android:onClick="selectTime"
    app:layout_constraintBottom_toTopOf="@+id/orderBtn"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toEndOf="@+id/timeLbl"
    app:layout_constraintTop_toBottomOf="@+id/cakeImage"
    app:srcCompat="@drawable/_90436_time" />
```

```
<Button
    android:id="@+id/orderBtn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Place Order"
    android:onClick="placeOrder"
    app:layout_constraintStart_toStartOf="parent"
```

```

        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/timeImage"/>
</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java:

```

package com.example.cakedelapptp;

import androidx.appcompat.app.AppCompatActivity;

import android.app.DatePickerDialog;
import android.app.TimePickerDialog;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.Adapter;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.DatePicker;
import android.widget.Spinner;
import android.widget.TimePicker;

import java.util.Calendar;

public class MainActivity extends AppCompatActivity {
    Spinner cakeitem;
    String[] cakes = {"Vanilla","Red Velvet","Chocolate","Strawberry","Butterscotch"};
    String c_flavour,datedel,timedel;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        cakeitem = findViewById(R.id.cakeBox);
        ArrayAdapter adapter = new ArrayAdapter(this, android.R.layout.simple_spinner_item,cakes);
        adapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
        cakeitem.setAdapter(adapter);
        cakeitem.setOnItemSelectedListener(new AdapterView.OnItemSelectedListener() {
            @Override
            public void onItemSelected(AdapterView<?> parent, View view, int position, long id) {
                c_flavour = parent.getItemAtPosition(position).toString();
            }

            @Override
            public void onNothingSelected(AdapterView<?> parent) {

            }
        });
    }
    public void selectDate(View v){
        Calendar c = Calendar.getInstance();
    }
}

```

```

        int pYear = c.get(Calendar.YEAR);
        int pMonth = c.get(Calendar.MONTH);
        int pDate = c.get(Calendar.DATE);
        DatePickerDialog dialog = new DatePickerDialog(this,
        android.R.style.Theme_DeviceDefault_DialogWhenLarge, new
        DatePickerDialog.OnDateSetListener() {
            @Override
            public void onDateSet(DatePicker view, int year, int month, int dayOfMonth) {
                datedel = dayOfMonth+"/"+(month+1)+"/"+year;
            }
        },pYear,pMonth,pDate);
        dialog.show();
    }
    public void selectTime(View v){
        Calendar c1 = Calendar.getInstance();
        int pHour = c1.get(Calendar.HOUR);
        int pMinute = c1.get(Calendar.MINUTE);
        TimePickerDialog tdialog = new TimePickerDialog(this,
        android.R.style.Theme_DeviceDefault_DialogWhenLarge, new
        TimePickerDialog.OnTimeSetListener() {
            @Override
            public void onTimeSet(TimePicker view, int hourOfDay, int minute) {
                timedel = hourOfDay+": "+minute;
            }
        },pHour,pMinute,false);
        tdialog.show();
    }
    public void placeOrder(View v) {
        Intent in = new Intent(getApplicationContext(), OrderActivity.class);
        in.putExtra("ITEM",c_flavour);
        in.putExtra("DATE",datedel);
        in.putExtra("TIME",timedel);
        startActivity(in);
    }
}

```

Activity order.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=".OrderActivity">

    <TextView
        android:id="@+id/result"
        android:layout_width="wrap_content"

```

```
        android:layout_height="wrap_content"
        android:gravity="center_horizontal"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

OrderActivity.java:

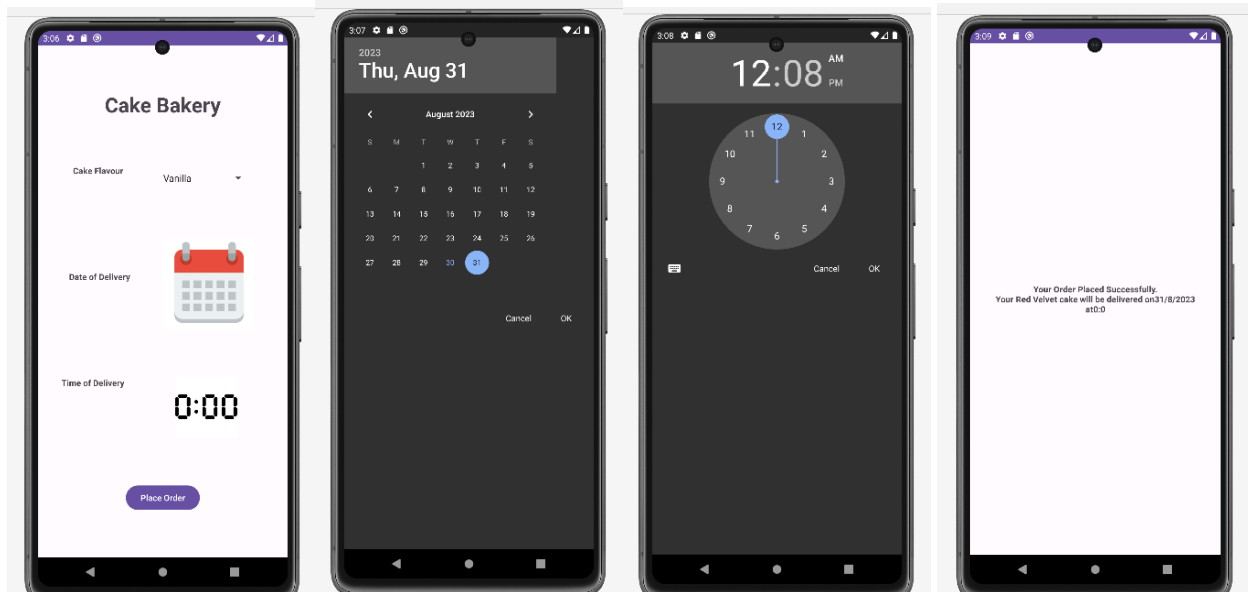
```
package com.example.cakedelapptp;

import androidx.appcompat.app.AppCompatActivity;

import android.annotation.SuppressLint;
import android.content.Intent;
import android.os.Bundle;
import android.widget.TextView;

public class OrderActivity extends AppCompatActivity {
    TextView res;
    @SuppressWarnings("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_order);
        res = findViewById(R.id.result);
        Intent intt = getIntent();
        String cakeFlavour = intt.getStringExtra("ITEM");
        String dated = intt.getStringExtra("DATE");
        String timed = intt.getStringExtra("TIME");
        res.setText("Your Order Placed Successfully."+"\nYour "+cakeFlavour+" cake will be delivered\n"+dated+"\nat"+timed);
    }
}
```

Output:



Experiment – 7

Aim: Design an application to provide the nutrition details of burger and pizza by using fragments.

activity_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">

<ImageView
    android:id="@+id/burgerBtn"
    android:layout_width="180dp"
    android:layout_height="205dp"
    app:srcCompat="@drawable/photo_1571091718767_18b5b1457add"
    android:onClick="changeFragment"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/pizzaBtn"
    app:layout_constraintBottom_toTopOf="@+id/fragmentPortion"/>

<ImageView
    android:id="@+id/pizzaBtn"
    android:layout_width="179dp"
    android:layout_height="184dp"
    app:srcCompat="@drawable/pizza_recipe_1"
    android:onClick="changeFragment"
    app:layout_constraintStart_toEndOf="@+id/burgerBtn"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintBottom_toTopOf="@+id/fragmentPortion"/>

<androidx.fragment.app.FragmentContainerView
    android:id="@+id/fragmentPortion"
    android:name="com.example.fragmentsexample.BlankFragment"
    android:layout_width="375dp"
    android:layout_height="375dp"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/burgerBtn"/>

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

MainActivity.java:

```
package com.example.fragmentsexample;

import androidx.appcompat.app.AppCompatActivity;
import androidx.fragment.app.Fragment;
import androidx.fragment.app.FragmentManager;
import androidx.fragment.app.FragmentTransaction;

import android.os.Bundle;
import android.view.View;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void changeFragment(View v){
        Fragment frag;
        FragmentManager fm = getSupportFragmentManager();
        FragmentTransaction ft = fm.beginTransaction();
        if(v==findViewById(R.id.burgerBtn)){
            frag = new BlankFragment();
            ft.replace(R.id.fragmentPortion,frag);
            ft.commit();
        }
        if(v==findViewById(R.id.pizzaBtn)){
            frag = new BlankFragment2();
            ft.replace(R.id.fragmentPortion,frag);
            ft.commit();
        }
    }
}
```

fragment_blank.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout 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:background="#BF9000"
    tools:context=".BlankFragment">

    <!-- TODO: Update blank fragment layout -->
    <TextView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
```

```
        android:textSize="24dp"
        android:textStyle="bold"
        android:textAlignment="center"
        android:textColor="#990000"
        android:text = "Burger Details\nCalories:354\nFat:18g\nProtein:22g"
        android:gravity="center_vertical"
        tools:ignore="RtlCompat" />
```

```
</FrameLayout>
```

BlankFragment.java:

```
package com.example.fragmentsexample;

import android.os.Bundle;

import androidx.fragment.app.Fragment;

import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;

/**
 * A simple {@link Fragment} subclass.
 * Use the {@link BlankFragment#newInstance} factory method to
 * create an instance of this fragment.
 */
public class BlankFragment extends Fragment {

    // TODO: Rename parameter arguments, choose names that match
    // the fragment initialization parameters, e.g. ARG_ITEM_NUMBER
    private static final String ARG_PARAM1 = "param1";
    private static final String ARG_PARAM2 = "param2";

    // TODO: Rename and change types of parameters
    private String mParam1;
    private String mParam2;

    public BlankFragment() {
        // Required empty public constructor
    }

    /**
     * Use this factory method to create a new instance of
     * this fragment using the provided parameters.
     *
     * @param param1 Parameter 1.
     * @param param2 Parameter 2.
     * @return A new instance of fragment BlankFragment.
     */
}
```



```

// TODO: Rename and change types and number of parameters
public static BlankFragment newInstance(String param1, String param2) {
    BlankFragment fragment = new BlankFragment();
    Bundle args = new Bundle();
    args.putString(ARG_PARAM1, param1);
    args.putString(ARG_PARAM2, param2);
    fragment.setArguments(args);
    return fragment;
}

@Override
public void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    if (getArguments() != null) {
        mParam1 = getArguments().getString(ARG_PARAM1);
        mParam2 = getArguments().getString(ARG_PARAM2);
    }
}

@Override
public View onCreateView(LayoutInflater inflater, ViewGroup container,
                         Bundle savedInstanceState) {
    // Inflate the layout for this fragment
    return inflater.inflate(R.layout.fragment_blank, container, false);
}
}

```

fragment blank2.xml:

```

<?xml version="1.0" encoding="utf-8"?>
<FrameLayout 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:background="#38761d"
    tools:context=".BlankFragment2">

    <!-- TODO: Update blank fragment layout -->
    <TextView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:textSize="24dp"
        android:textStyle="bold"
        android:textAlignment="center"
        android:textColor="#85200c"
        android:text = "Pizza Details\nCalories:285\nFat:10g\nProtein:12g"
        android:gravity="center_vertical"
        tools:ignore="RtlCompat" />

</FrameLayout>

```

BlankFragment2.xml:

```
package com.example.fragmentsexample;

import android.os.Bundle;

import androidx.fragment.app.Fragment;

import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;

/**
 * A simple {@link Fragment} subclass.
 * Use the {@link BlankFragment2#newInstance} factory method to
 * create an instance of this fragment.
 */
public class BlankFragment2 extends Fragment {

    // TODO: Rename parameter arguments, choose names that match
    // the fragment initialization parameters, e.g. ARG_ITEM_NUMBER
    private static final String ARG_PARAM1 = "param1";
    private static final String ARG_PARAM2 = "param2";

    // TODO: Rename and change types of parameters
    private String mParam1;
    private String mParam2;

    public BlankFragment2() {
        // Required empty public constructor
    }

    /**
     * Use this factory method to create a new instance of
     * this fragment using the provided parameters.
     *
     * @param param1 Parameter 1.
     * @param param2 Parameter 2.
     * @return A new instance of fragment BlankFragment2.
     */
    // TODO: Rename and change types and number of parameters
    public static BlankFragment2 newInstance(String param1, String param2) {
        BlankFragment2 fragment = new BlankFragment2();
        Bundle args = new Bundle();
        args.putString(ARG_PARAM1, param1);
        args.putString(ARG_PARAM2, param2);
        fragment.setArguments(args);
        return fragment;
    }
}
```

```

@Override
public void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    if (getArguments() != null) {
        mParam1 = getArguments().getString(ARG_PARAM1);
        mParam2 = getArguments().getString(ARG_PARAM2);
    }
}

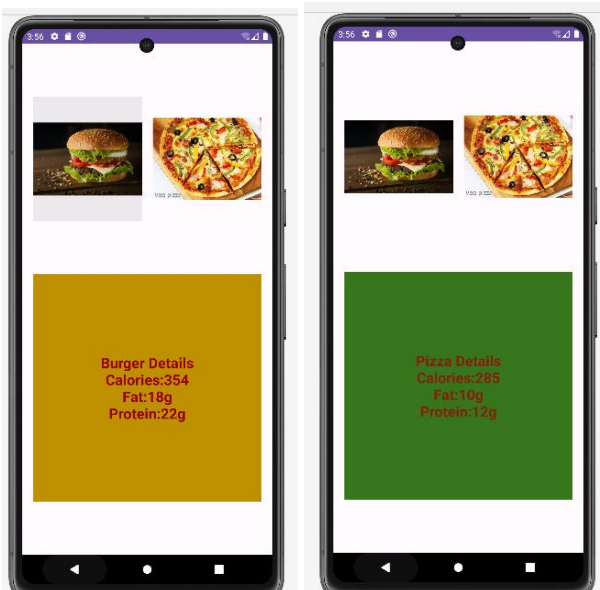
```

```

@Override
public View onCreateView(LayoutInflater inflater, ViewGroup container,
    Bundle savedInstanceState) {
    // Inflate the layout for this fragment
    return inflater.inflate(R.layout.fragment_blank2, container, false);
}
}

```

Output:



Experiment – 8

Aim: Design an application to provide the student details with section number using fragments.

activity_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">

    <ListView
        android:id="@+id/studentList"
        android:layout_width="175dp"
        android:layout_height="match_parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toStartOf="@+id/fragmentPortion"
        app:layout_constraintBottom_toBottomOf="parent"/>

    <androidx.fragment.app.FragmentContainerView
        android:id="@+id/fragmentPortion"
        android:name="com.example.studentdetailsfragments.DetailsFragment"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toEndOf="@+id/studentList"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintEnd_toEndOf="parent"/>

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

MainActivity.java:

```
package com.example.studentdetailsfragments;

import androidx.appcompat.app.AppCompatActivity;

import android.app.Fragment;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.ListView;

public class MainActivity extends AppCompatActivity {
```

```

ListView list;
String Stu[] = {"ABC","DEF","GHI","JKL"};

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    list = findViewById(R.id.studentList);
    ArrayAdapter adapter = new ArrayAdapter(this, android.R.layout.simple_list_item_1,Stu);
    list.setAdapter(adapter);
    list.setOnItemClickListener(new AdapterView.OnItemClickListener() {
        @Override
        public void onItemClick(AdapterView<?> parent, View view, int position, long id) {
            DetailsFragment frag = (DetailsFragment)
getSupportFragmentManager().findFragmentById(R.id.fragmentPortion);
            frag.change(position);
        }
    });
}
}

```

fragment details.xml:

```

<?xml version="1.0" encoding="utf-8"?>
<FrameLayout 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=".DetailsFragment">

    <!-- TODO: Update blank fragment layout -->
    <TextView
        android:id="@+id/result"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:textAlignment="center"
        android:gravity="center_vertical"
        android:text="Name: \nSection Number:"
        android:textStyle="bold"
        android:textSize="18dp"
        tools:ignore="RtlCompat" />

</FrameLayout>

```

DetailsFragment.java:

```

package com.example.studentdetailsfragments;

import android.os.Bundle;

```

```

import androidx.fragment.app.Fragment;

import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.TextView;

/**
 * A simple {@link Fragment} subclass.
 * Use the {@link DetailsFragment#newInstance} factory method to
 * create an instance of this fragment.
 */
public class DetailsFragment extends Fragment {

    // TODO: Rename parameter arguments, choose names that match
    // the fragment initialization parameters, e.g. ARG_ITEM_NUMBER
    private static final String ARG_PARAM1 = "param1";
    private static final String ARG_PARAM2 = "param2";

    // TODO: Rename and change types of parameters
    private String mParam1;
    private String mParam2;
    String Users[] = {"ABC","DEF","GHI","JKL"};
    String Section[] = {"5CSE1","5CSE2","5CSE3","5CSE4"};
    TextView res;

    public DetailsFragment() {
        // Required empty public constructor
    }

    /**
     * Use this factory method to create a new instance of
     * this fragment using the provided parameters.
     *
     * @param param1 Parameter 1.
     * @param param2 Parameter 2.
     * @return A new instance of fragment DetailsFragment.
     */
    // TODO: Rename and change types and number of parameters
    public static DetailsFragment newInstance(String param1, String param2) {
        DetailsFragment fragment = new DetailsFragment();
        Bundle args = new Bundle();
        args.putString(ARG_PARAM1, param1);
        args.putString(ARG_PARAM2, param2);
        fragment.setArguments(args);
        return fragment;
    }

    @Override
    public void onCreate(Bundle savedInstanceState) {

```

```

super.onCreate(savedInstanceState);
if (getArguments() != null) {
    mParam1 = getArguments().getString(ARG_PARAM1);
    mParam2 = getArguments().getString(ARG_PARAM2);
}

}

@Override
public View onCreateView(LayoutInflater inflater, ViewGroup container,
    Bundle savedInstanceState) {
    // Inflate the layout for this fragment
    View view = inflater.inflate(R.layout.fragment_details, container, false);
    res = view.findViewById(R.id.result);
    return view;
}
public void change(int position){
    res.setText("Name: "+Users[position]+"\\nSection Number: "+Section[position]);
}
}

```

Output:

