

CO-1

Experiment-1

Design a Login Form with username and password using LinearLayout and toast valid credentials

CODE

Activity_Main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical">
        <ImageView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:src="@mipmap/ic_launcher_round">

        </ImageView>
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginTop="50dp"
            android:text="Enter Email"
            android:textColor="@color/black"
            android:textStyle="bold"
            android:textSize="20dp"
            android:drawableLeft="@drawable/ic_baseline_email_24"
            android:drawableStart="@drawable/ic_baseline_email_24">

        </TextView>
        <EditText
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:hint="Enter valid email"
            android:id="@+id/etmail">

        </EditText>
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginTop="50dp"
            android:text="Enter Password"
            android:textColor="@color/black">
```

```

        android:textStyle="bold"
        android:textSize="20dp"
        android:drawableLeft="@drawable/ic_baseline_lock_24"
        android:drawableStart="@drawable/ic_baseline_lock_24">

</TextView>
<EditText
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Enter valid password"
    android:id="@+id/etpass">

</EditText>

<Button
    android:id="@+id/btlog"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:layout_marginTop="50dp"
    android:text="LOGIN">

</Button>

</LinearLayout>

</LinearLayout>

```

Activity_Main.java

```

package com.example.loginformwithtoast;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
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 {
    private EditText email,password;
    private Button login;
    String mail,pwd;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        email=(EditText)findViewById(R.id.etmail);
        password=(EditText)findViewById(R.id.etpass);
        login=(Button)findViewById(R.id.btlog);
    }
}

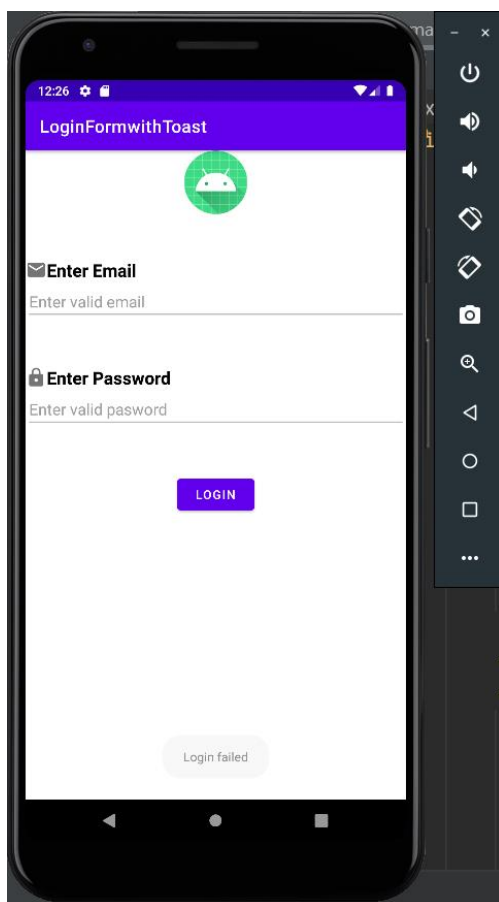
```

```

login.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        mail=email.getText().toString();
        pwd=password.getText().toString();
        if (mail.equals("arathiparambil@gmail.com") && pwd.equals("arathi@123")){
            Toast.makeText(getApplicationContext(), "Login Success",
Toast.LENGTH_SHORT).show();
            startActivity(new Intent(MainActivity.this,MainActivity2.class));
        }
        else {
            Toast.makeText(MainActivity.this, "Login failed", Toast.LENGTH_SHORT).show();
        }
    }
});
}
}

```

OUTPUT



Experiment-2

Write a program that demonstrates Activity Lifecycle.

CODE

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:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

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

Activity_Main.java

```
package com.example.lifecycle;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.util.Log;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Log.i("state", "onCreate");
    }

    @Override
    protected void onStart() {
        super.onStart();
        Log.i("state", "onStart");
    }

    @Override
    protected void onResume() {
        super.onResume();
        Log.i("state", "onResume");
    }
}
```

```

    }

    @Override
    protected void onPause() {
        super.onPause();
        Log.i("state","onPause");
    }

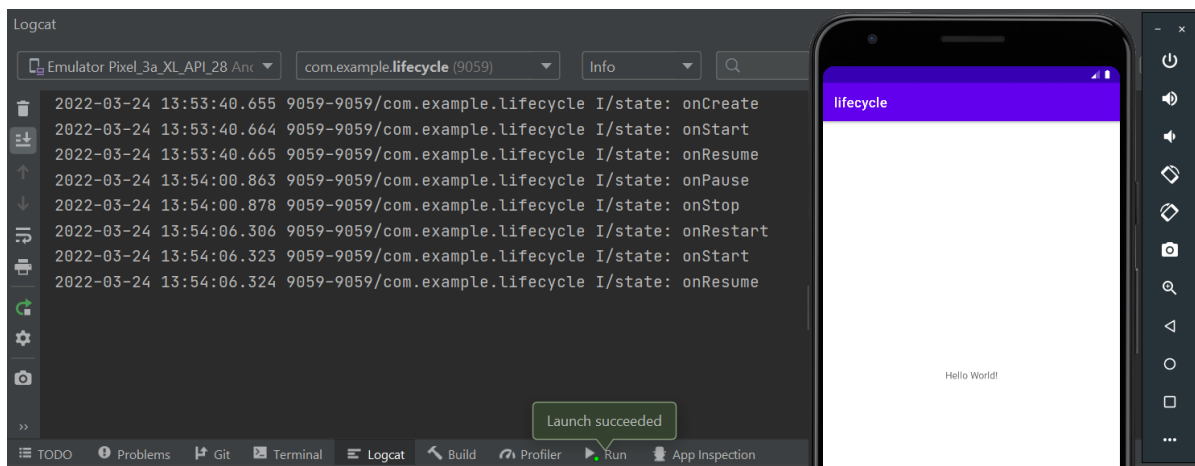
    @Override
    protected void onStop() {
        super.onStop();
        Log.i("state","onStop");
    }

    @Override
    protected void onRestart() {
        super.onRestart();
        Log.i("state","onRestart");
    }

    @Override
    protected void onDestroy() {
        super.onDestroy();
        Log.i("state","onDestroy");
    }
}

```

OUTPUT



Experiment-3

Implementing basic arithmetic operations of a simple calculator

CODE

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">

    <Button
        android:id="@+id/btadd"
        android:layout_width="65dp"
        android:layout_height="45dp"
        android:layout_marginStart="36dp"
        android:layout_marginEnd="281dp"
        android:layout_marginBottom="360dp"
        android:onClick="add"
        android:text="ADD"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.034"
        app:layout_constraintStart_toStartOf="parent" />

    <Button
        android:id="@+id/btsub"
        android:layout_width="65dp"
        android:layout_height="45dp"
        android:layout_marginStart="4dp"
        android:layout_marginEnd="182dp"
        android:layout_marginBottom="360dp"
        android:onClick="sub"
        android:text="SUB"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.275"
        app:layout_constraintStart_toEndOf="@+id/btadd" />

    <Button
        android:id="@+id/btdiv"
        android:layout_width="65dp"
        android:layout_height="45dp"
        android:layout_marginStart="5dp"
        android:layout_marginEnd="82dp"
        android:layout_marginBottom="360dp"
        android:onClick="div"
        android:text="DIV"
```

```

app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.349"
app:layout_constraintStart_toEndOf="@+id/btsub" />

<Button
    android:id="@+id/btmul"
    android:layout_width="65dp"
    android:layout_height="45dp"
    android:layout_marginStart="5dp"
    android:layout_marginEnd="8dp"
    android:layout_marginBottom="360dp"
    android:onClick="mul"
    android:text="MUL"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.361"
    app:layout_constraintStart_toEndOf="@+id/btdiv" />

<EditText
    android:id="@+id/etnum1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="105dp"
    android:layout_marginTop="57dp"
    android:layout_marginEnd="96dp"
    android:layout_marginBottom="34dp"
    android:ems="10"
    android:hint="Enter num1"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toTopOf="@+id/etnum2"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

<EditText
    android:id="@+id/etnum2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="107dp"
    android:layout_marginTop="34dp"
    android:layout_marginEnd="94dp"
    android:layout_marginBottom="145dp"
    android:ems="10"
    android:hint="Enter num2"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toTopOf="@+id/btsub"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/etnum1" />

<TextView
    android:id="@+id/etans"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="177dp"

```

```

        android:layout_marginTop="119dp"
        android:layout_marginEnd="176dp"
        android:layout_marginBottom="222dp"
        android:text="Result"
        android:textSize="30dp"
        android:textColor="@color/black"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/btsub" />

```

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

Activity_Main.java

```

package com.example.simplecalculatorapp;

import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity {
    private EditText etnum1,etnum2;
    private TextView etans;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void add(View V){
        etnum1=(EditText) findViewById(R.id.etnum1);
        etnum2=(EditText) findViewById(R.id.etnum2);
        etans=(TextView) findViewById(R.id.etans);

        int n1=Integer.parseInt(etnum1.getText().toString());
        int n2=Integer.parseInt(etnum2.getText().toString());

        int result=n1+n2;
        etans.setText("Result:"+result);
    }
    public void sub(View V){
        etnum1=(EditText) findViewById(R.id.etnum1);
        etnum2=(EditText) findViewById(R.id.etnum2);
        etans=(TextView) findViewById(R.id.etans);

        int n1=Integer.parseInt(etnum1.getText().toString());
        int n2=Integer.parseInt(etnum2.getText().toString());

        int result=n1-n2;
        etans.setText("Result:"+result);
    }
}

```



```

public void div(View V){
    etnum1=(EditText) findViewById(R.id.etnum1);
    etnum2=(EditText) findViewById(R.id.etnum2);
    etans=(TextView) findViewById(R.id.etans);

    int n1=Integer.parseInt(etnum1.getText().toString());
    int n2=Integer.parseInt(etnum2.getText().toString());

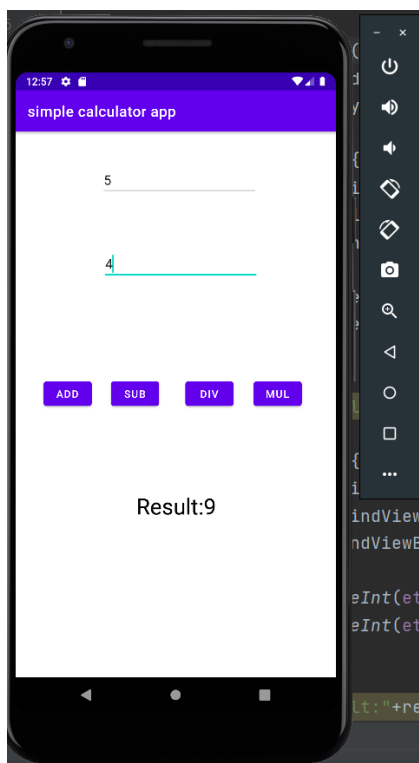
    int result=n1/n2;
    etans.setText("Result:"+result);
}
public void mul(View V){
    etnum1=(EditText) findViewById(R.id.etnum1);
    etnum2=(EditText) findViewById(R.id.etnum2);
    etans=(TextView) findViewById(R.id.etans);

    int n1=Integer.parseInt(etnum1.getText().toString());
    int n2=Integer.parseInt(etnum2.getText().toString());

    int result=n1*n2;
    etans.setText("Result:"+result);
}
}

```

OUTPUT



CO-2

Experiment-2

Design a simple Calculator using GridLayout and Cascaded LinearLayout

CODE

Activity_Main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_gravity="center_vertical"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    tools:context=".MainActivity">

    <EditText
        android:id="@+id/num1"
        android:layout_width="358dp"
        android:layout_height="21dp"
        android:layout_gravity="center"
        android:layout_marginBottom="10dp"
        android:layout_weight="7"
        android:ems="10"
        android:textColor="@color/white"
        android:hint="Enter First number" />

    <EditText
        android:id="@+id/num2"
        android:layout_width="358dp"
        android:layout_height="28dp"
        android:layout_gravity="center"
        android:layout_marginBottom="10dp"
        android:layout_weight="7"
        android:textColor="@color/white"
        android:ems="10"
        android:hint="Enter second number"
        android:minHeight="48dp" />

    <TextView
        android:id="@+id/result"
        android:layout_width="358dp"
        android:layout_height="21dp"
        android:layout_gravity="center"
        android:textColor="@color/white"
```

```

        android:layout_marginBottom="10dp"
        android:layout_weight="7"
        android:height="20dp"
        android:ems="10"
        android:hint="result"
        android:minHeight="32dp" />

<androidx.gridlayout.widget.GridLayout
    android:layout_width="match_parent"
    android:layout_height="200dp"
    android:layout_weight="1">

    <Button
        android:id="@+id/add"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="8dp"
        android:text="+" />

    <Button
        android:id="@+id/sub"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="8dp"
        android:text="-" />

    <Button
        android:id="@+id/divide"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="8dp"
        android:text="/" />

    <Button
        android:id="@+id/mult"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="8dp"
        android:text="*" />
</androidx.gridlayout.widget.GridLayout>

</LinearLayout>

```

Activity_Main.java

```

package com.example.calculatorusinggridlayout;

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 num1,num2;
    TextView result;
    Button add,sub, multi,divide;
    private Double n1,n2,r;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        num1=(EditText) findViewById(R.id.num1);
        num2=(EditText) findViewById(R.id.num2);
        result=(TextView) findViewById(R.id.result);
        add=(Button) findViewById(R.id.add);
        sub=(Button) findViewById(R.id.sub);
        multi =(Button) findViewById(R.id.mult);
        divide=(Button) findViewById(R.id.divide);

        add.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                n1=Double.parseDouble(num1.getText().toString());
                n2=Double.parseDouble(num2.getText().toString());
                r=n1+n2;
                result.setText(r.toString());
                num1.setText("");
                num2.setText("");
            }
        });

        divide.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                n1=Double.parseDouble(num1.getText().toString());
                n2=Double.parseDouble(num2.getText().toString());
                r=n1/n2;
                result.setText(r.toString());
                num1.setText("");
                num2.setText("");
            }
        });

        sub.setOnClickListener(new View.OnClickListener() {
            @Override

```

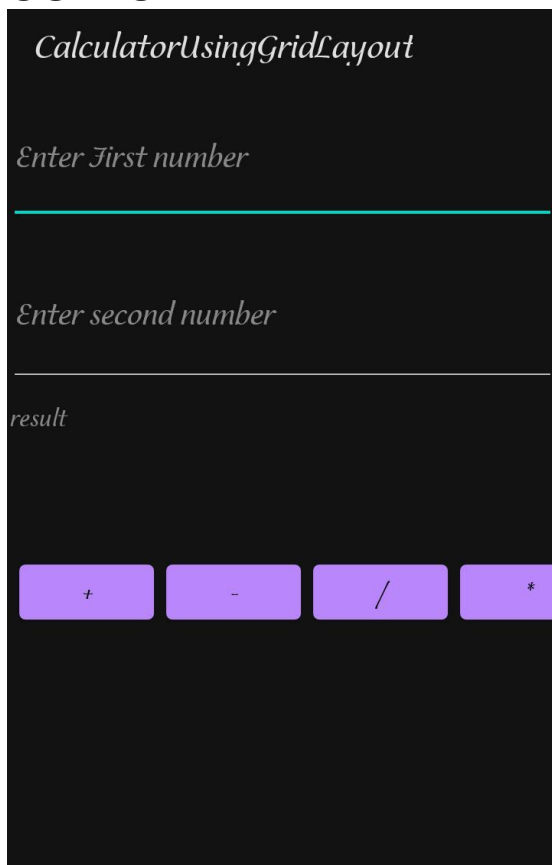
```

        public void onClick(View view) {
            n1=Double.parseDouble(num1.getText().toString());
            n2=Double.parseDouble(num2.getText().toString());
            r=n1-n2;
            result.setText(r.toString());
            num1.setText("");
            num2.setText("");
        }
    });

    multi.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            n1=Double.parseDouble(num1.getText().toString());
            n2=Double.parseDouble(num2.getText().toString());
            r=n1*n2;
            result.setText(r.toString());
            num1.setText("");
            num2.setText("");
        }
    });
}
}

```

OUTPUT



Experiment-4

Develop an application that toggles image using FrameLayout

CODE

Activity_Main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:layout_gravity="center"
    android:orientation="vertical"
    tools:context=".MainActivity">

    <ToggleButton
        android:layout_width="wrap_content"
        android:onClick="onDefaultToggleClick"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"/>

    <ToggleButton
        android:layout_width="50dp"
        android:textOn=""
        android:textOff=""
        android:background="@drawable/toggle_selector"
        android:onClick="OnCustomToggleClick"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"/>

</LinearLayout>
```

Activity_Main.java

```
package com.example.toggle;

import androidx.appcompat.app.AppCompatActivity;

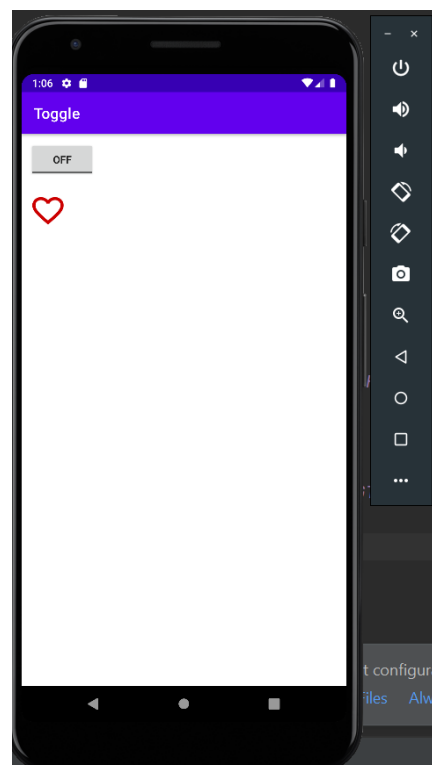
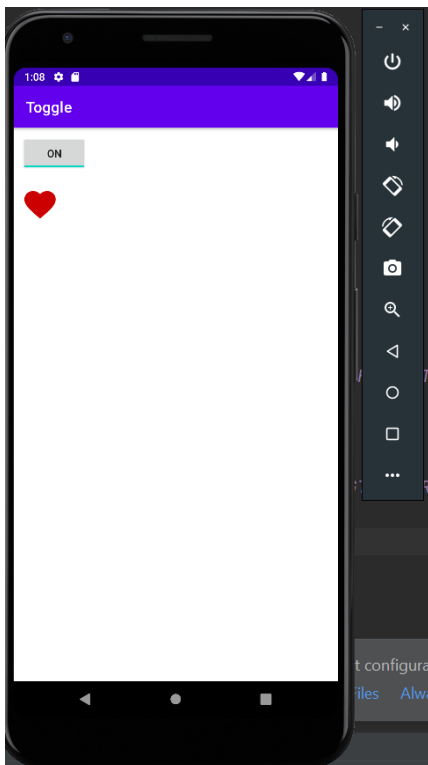
import android.os.Bundle;
import android.view.View;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

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

```
public void OnCustomToggleClick(View view) {  
    Toast.makeText(this, "CustomToggleClick", Toast.LENGTH_SHORT).show();  
}  
  
public void onDefaultToggleClick(View view) {  
    Toast.makeText(this, "DefaultToggleClick", Toast.LENGTH_SHORT).show();  
}  
}
```

OUTPUT



CO-3

Experiment-1

Implement Adapters and perform exception handling

CODE

Activity_Main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <ListView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/lv">
    </ListView>

</RelativeLayout>
```

Item_view.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/tvitem"
        android:textSize="30dp"
        android:textColor="@color/teal_700">

    </TextView>

</LinearLayout>
```

Activity_Main.java

```
package com.example.arrayadapter;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
```



```

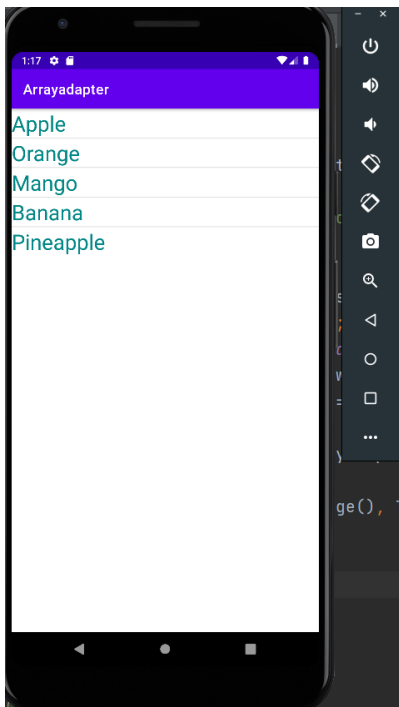
import android.widget.ArrayAdapter;
import android.widget.ListView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    ListView simplelistview;
    String[] list ={"Apple","Orange","Mango","Banana","Pineapple"};

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        simplelistview = (ListView)findViewById(R.id.lv);
        ArrayAdapter<String> arrayAdapter = new ArrayAdapter<String>(this, R.layout.item_view,
R.id.tvitem, list);
        try{
            simplelistview.setAdapter(arrayAdapter);
        }catch (Exception e){
            Toast.makeText(this,e.getMessage(), Toast.LENGTH_LONG).show();
        }
    }
}

```

OUTPUT



Experiment-2

Implement Intent to navigate between multiple activities

CODE

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/textView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="First page!"
    android:textColor="@color/teal_700"
    android:textSize="50dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintHorizontal_bias="0.497"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.185" />

<Button
    android:id="@+id/bt"
    android:layout_width="200dp"
    android:layout_height="50dp"
    android:layout_marginStart="119dp"
    android:layout_marginTop="233dp"
    android:layout_marginEnd="92dp"
    android:layout_marginBottom="258dp"
    android:text="Go to second page"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView" />

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

Activity_Main2.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=".MainActivity2">

<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="96dp"
    android:layout_marginTop="203dp"
    android:layout_marginEnd="97dp"
    android:layout_marginBottom="279dp"
    android:text="Go back to first page"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView2" />

<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="90dp"
    android:layout_marginTop="149dp"
    android:layout_marginEnd="90dp"
    android:layout_marginBottom="202dp"
    android:text="Second page"
    android:textSize="40dp"
    app:layout_constraintBottom_toTopOf="@+id/button"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

Activity_Main.java

```

package com.example.intenttonavigate;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button bt=(Button)findViewById(R.id.bt);
        Intent intent=new Intent(this,MainActivity2.class);
        bt.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                startActivity(intent);
            }
        });
    }
}

```

```

    }
  });
}
}

```

Activity_Main2.java

```

package com.example.intenttonavigate;

import androidx.appcompat.app.AppCompatActivity;

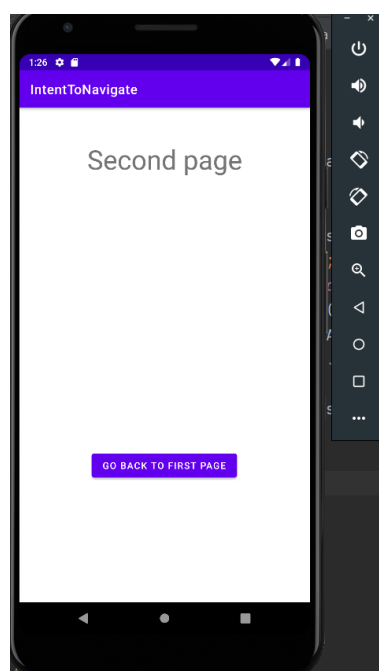
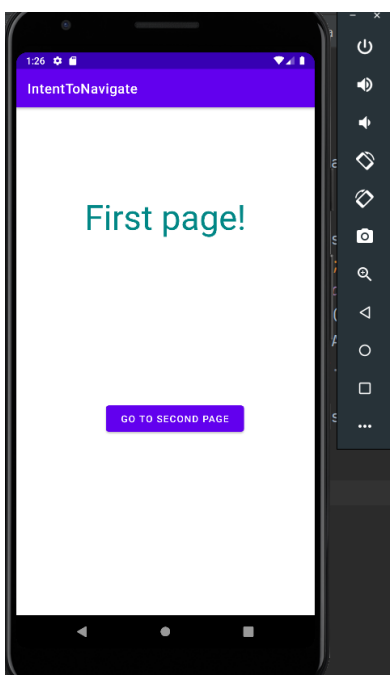
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

public class MainActivity2 extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main2);
        Button button=(Button)findViewById(R.id.button);
        Intent intent=new Intent(this,MainActivity.class);
        button.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                startActivity(intent);
            }
        });
    }
}

```

OUTPUT



Experiment-5

Develop an application that uses ArrayAdapter with ListView.

CODE

Activity_Main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <ListView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/lv">
    </ListView>

</RelativeLayout>
```

Item_view.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/tvitem"
        android:textSize="30dp"
        android:textColor="@color/teal_700">

    </TextView>

</LinearLayout>
```

Activity_Main.java

```
package com.example.arrayadapter;

import androidx.appcompat.app.AppCompatActivity;

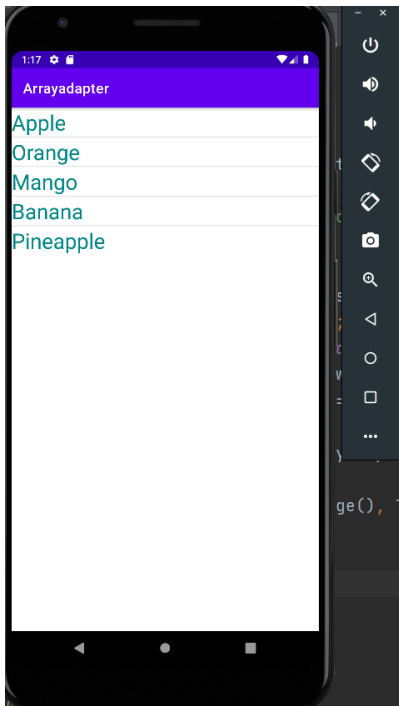
import android.os.Bundle;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    ListView simplelistview;
```

```
String[] list = {"Apple", "Orange", "Mango", "Banana", "Pineapple"};

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    simplelistview = (ListView)findViewById(R.id.lv);
    ArrayAdapter<String> arrayAdapter = new ArrayAdapter<String>(this, R.layout.item_view,
R.id.tvitem, list);
}
}
```

OUTPUT



CO-4

Experiment-1

Develop an application that use GridView with images and display Alert box on selection

CODE

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">

    <GridView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:id="@+id/gvitem"
        android:horizontalSpacing="6dp"
        android:verticalSpacing="6dp"
        android:numColumns="2"/>

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

Card_item.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="120dp"
android:layout_gravity="center"
android:layout_margin="5dp"
android:elevation="5dp">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical"
        tools:ignore="MissingConstraints">
        <ImageView
            android:layout_width="100dp"
            android:layout_height="100dp"
            android:id="@+id/ivimage"
            android:layout_gravity="center"
            android:src="@mipmap/ic_launcher"/>
        <TextView
            android:layout_width="match_parent"
```

```

        android:layout_height="wrap_content"
        android:id="@+id/tvtext"
        android:text="@string/app_name"
        android:textAlignment="center"/>
    </LinearLayout>

</androidx.constraintlayout.widget.ConstraintLayout>

```

ImageModel.java

```

package com.example.gridview;

public class ImageModel {
    private String img_name;
    private int imgid;
    public ImageModel(String img_name,int imgid){
        this.img_name=img_name;
        this.imgid=imgid;
    }
    public String getImg_name(){
        return img_name;
    }
    public void setImg_name(String img_name){
        this.img_name=img_name;
    }
    public int getImgid(){
        return imgid;
    }
    public void setImgid(int imgid){
        this.imgid=imgid;
    }
}

```

ImGVAdapter.java

```

package com.example.gridview;

import android.content.Context;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.ArrayAdapter;
import android.widget.ImageView;
import android.widget.TextView;

import androidx.annotation.NonNull;
import androidx.annotation.Nullable;

import java.util.ArrayList;

public class ImGVAdapter extends ArrayAdapter<ImageModel> {

    public ImGVAdapter(@NonNull Context context, ArrayList<ImageModel>
    imageModelArrayList) {

```



```

        super(context, 0,imageModelArrayList);
    }
    @NonNull
    @Override
    public View getView(int position, @Nullable View convertView, @NonNull ViewGroup
parent){

        View listitemView=convertView;
        if (listitemView==null){
            listitemView= LayoutInflater.from(getContext()).inflate(R.layout.card_item,parent,false);
        }
        ImageModel imageModel=getItem(position);
        TextView imTV=listitemView.findViewById(R.id.tvtext);
        ImageView imIV=listitemView.findViewById(R.id.ivimage);
        imTV.setText(imageModel.getImg_name());
        imIV.setImageResource(imageModel.getImgid());
        return listitemView;
    }
}

```

Activity_Main.java

```

package com.example.gridview;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.widget.GridView;

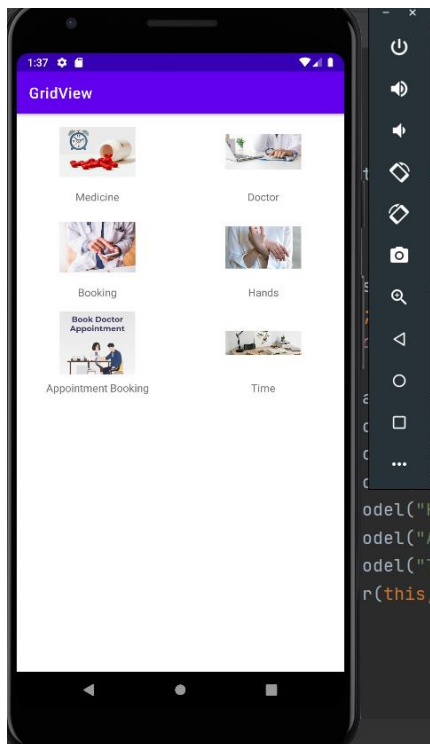
import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {
    GridView imageGV;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        imageGV=findViewById(R.id.gvitem);
        ArrayList<ImageModel>imageModelArrayList=new ArrayList<ImageModel>();
        imageModelArrayList.add(new ImageModel("Medicine",R.drawable.image));
        imageModelArrayList.add(new ImageModel("Doctor",R.drawable.image2));
        imageModelArrayList.add(new ImageModel("Booking",R.drawable.image3));
        imageModelArrayList.add(new ImageModel("Hands",R.drawable.main));
        imageModelArrayList.add(new ImageModel("Appointment Booking",R.drawable.med2));
        imageModelArrayList.add(new ImageModel("Time",R.drawable.top));
        ImGVAdapter adapter=new ImGVAdapter(this,imageModelArrayList);
        imageGV.setAdapter(adapter);
    }
}

```

OUTPUT



Experiment-2

Develop an application that implements Spinner component and perform event handling

CODE

Activity_Main.java

```
<?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">

    <Spinner
        android:id="@+id/spinner"
        android:scrollbarSize="100dp"
        android:layout_width="200dp"
        android:layout_height="50dp"
        android:layout_marginStart="1dp"
        android:layout_marginTop="163dp"
        android:layout_marginEnd="1dp"
        android:layout_marginBottom="169dp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

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

Activity_Main.java

```
package com.example.spinner;

import androidx.appcompat.app.AppCompatActivity;

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.Toast;

public class MainActivity extends AppCompatActivity implements
    AdapterView.OnItemClickListener {
    String[] Country={"India","USA","Germany","France","Italy"};

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

```

Spinner sp=(Spinner)findViewById(R.id.spinner);
sp.setOnItemSelectedListener(this);
ArrayAdapter aa=new ArrayAdapter(this, android.R.layout.simple_spinner_item,Country);
aa.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
sp.setAdapter(aa);

}

@Override
public void onItemSelected(AdapterView<?> arg0, View arg1, int position, long id) {
    Toast.makeText(getApplicationContext(),Country[position],
    Toast.LENGTH_LONG).show();
}

@Override
public void onNothingSelected(AdapterView<?> arg0) {

}

}

```

OUTPUT

