6) Implement validations on various UI controls.

Aim:

To implement validations on various UI controls.

Source Code:

Xml Code

```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/btn"

  android:layout_width="wrap_content"

  android:layout_height="wrap_content"

  android:layout_marginTop="76dp"

  android:text="Button"

  app:layout_constraintEnd_toEndOf="parent"

  app:layout_constraintHorizontal_bias="0.498"

  app:layout_constraintStart_toStartOf="parent"

  app:layout_constraintTop_toBottomOf="@+id/t3" />

  <EditText

   android:id="@+id/t3"

   android:layout_width="wrap_content"

   android:layout_height="wrap_content"

   android:layout_marginTop="52dp"
```

```xml
        android:ems="10"

        android:inputType="textPersonName"

        android:text="Name"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.502"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/t2" />

    <EditText

        android:id="@+id/t2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="44dp"

        android:ems="10"

        android:inputType="textPersonName"

        android:text="Name"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.502"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/t1" />

    <EditText

        android:id="@+id/t1"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:ems="10"

        android:inputType="textPersonName"

        android:text="Name"

        app:layout_constraintEnd_toEndOf="parent"
```

app:layout_constraintStart_toStartOf="parent"

tools:layout_editor_absoluteY="167dp" />

</androidx.constraintlayout.widget.ConstraintLayout>

Mainactivity.java

```java
package com.example.myapp;

import static android.text.TextUtils.isEmpty;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.util.Patterns;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.TextView;

import android.widget.Toast;

import java.util.regex.Pattern;

public class MainActivity extends AppCompatActivity {

    EditText t1,t2,t3;

    Button btn;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        t1=(EditText) findViewById(R.id.t1);

        t2=(EditText) findViewById(R.id.t2);

        t3=(EditText) findViewById(R.id.t3);

        btn=(Button) findViewById(R.id.btn);

        btn.setOnClickListener(new View.OnClickListener() {
```

```java
    @Override

    public void onClick(View view) {

        String name=t1.getText().toString();

        String email=t2.getText().toString();

        String pwd=t3.getText().toString();

        boolean res=validate(name,email,pwd);

        if(res==false)

        {

Toast.makeText(getApplicationContext(),"LoginSucessful",Toast.LENGTH_LONG).show();

        }}

    });

  }

  private boolean validate(String name,String email,String pwd){

    String regex="^[A-Za-z0-9+]+@(.+)$";

    if(name.length()==0)

    {

       t1.setError("Name cannot be empty");

       return true;

    }

     if(isEmpty(email))

    {

       t2.setError("Email id cannot be empty");

       return true;

    }

    if(!email.matches(regex))

    {
```

```java
            t2.setError("Email id invalid");

            return true;

        }

    if(isEmpty(pwd))

     {

            t3.setError("Password cannot be empty");

            return true;

        }

    if(pwd.length()<8)

     {

            t3.setError("Minimum 8 characters");

            return true;

    }

     return false;

    }

}
```
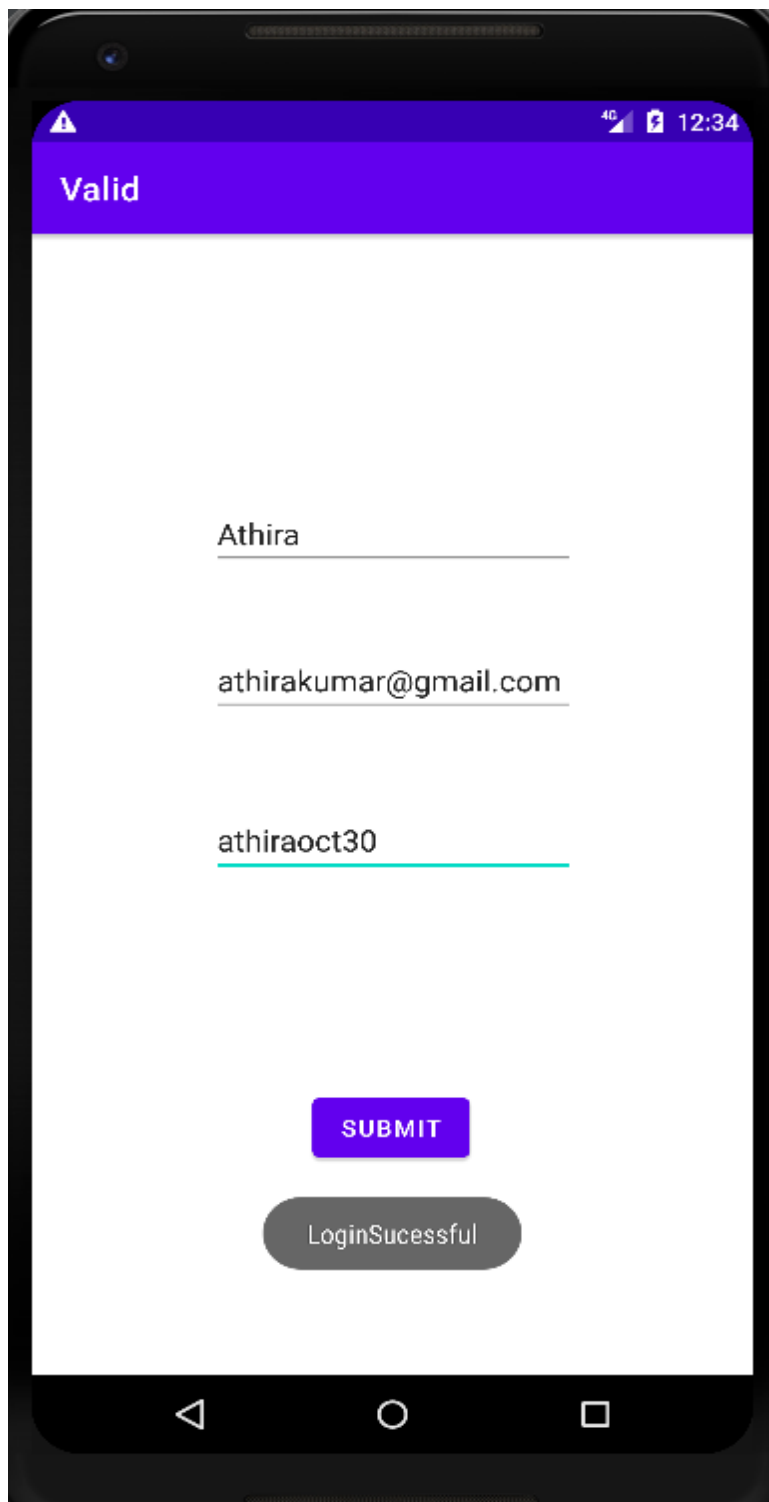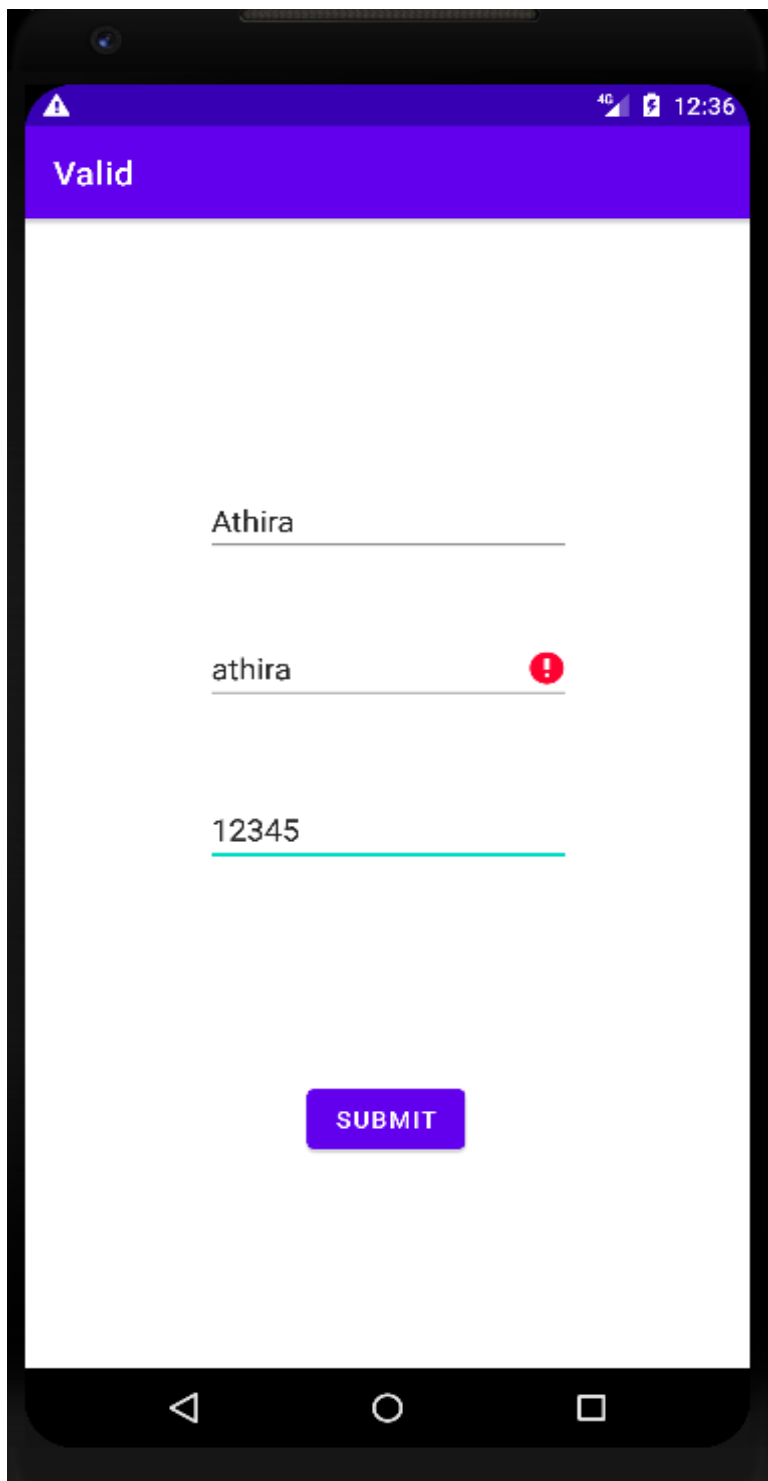
OUTPUT

Valid

Athira

athirakumar@gmail.com

athiraoct30

SUBMIT

LoginSucessful

Valid

Athira

athira

12345

SUBMIT

7) Design a registration activity and store registration details in local memory of phone using Intents.

Aim:

To design a registration activity and store registration details in local memory of phone using Intents.

Source Code:

Xml Code

Activity_xml1

```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/btn1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="116dp"
    android:text="Submit"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.498"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/t6" />
  <EditText
    android:id="@+id/t4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="Username"
    android:inputType="textPersonName"
```

```xml
        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        tools:layout_editor_absoluteY="167dp" />

    <EditText

        android:id="@+id/t5"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="44dp"

        android:ems="10"

        android:hint="Email"

        android:inputType="textPersonName"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.502"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/t4" />

    <EditText

        android:id="@+id/t6"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="52dp"

        android:ems="10"

        android:hint="Password"

        android:inputType="textPersonName"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.502"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/t5" />

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

Activity_xml2

```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"
```

```xml
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity2">
    <Button
        android:id="@+id/btn1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="96dp"
        android:text="BACK"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.41"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/t6" />
    <EditText
        android:id="@+id/t6"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="80dp"
        android:ems="10"
        android:inputType="textPersonName"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.447"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/t5" />
    <EditText
        android:id="@+id/t5"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="68dp"
        android:ems="10"
        android:inputType="textPersonName"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.447"
```

```
        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/t4" />

    <EditText

        android:id="@+id/t4"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="168dp"

        android:ems="10"

        android:inputType="textPersonName"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.497"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent" />

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

MainActivity2.java

```java
package com.example.intent;

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;

public class MainActivity2 extends AppCompatActivity {

    EditText t4,t5,t6;

    Button btn1;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main2);

        t4=(EditText) findViewById(R.id.t4);

        t5=(EditText) findViewById(R.id.t5);

        t6=(EditText) findViewById(R.id.t6);

        btn1=(Button) findViewById(R.id.btn1);
```

```java
        Intent intent=getIntent();
        String name=intent.getStringExtra("name");
        String email=intent.getStringExtra("email");
        String pwd=intent.getStringExtra("pwd");
        t4.setText(name);
        t5.setText(email);
        t6.setText(pwd);
        btn1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent intent=new Intent(MainActivity2.this,MainActivity.class);
                startActivity(intent);
            }
        });


    }
    }
```

MainActivity.java

```java
package com.example.intent;
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;
public class MainActivity extends AppCompatActivity
{
    EditText t1,t2,t3;
    Button btn;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
```

```java
        setContentView(R.layout.activity_main);
        t1=(EditText) findViewById(R.id.t4);
        t2=(EditText) findViewById(R.id.t5);
        t3=(EditText) findViewById(R.id.t6);
        btn=(Button) findViewById(R.id.btn1);
        getSupportActionBar().setTitle("Home");
        btn.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View view) {
                String name=t1.getText().toString();
                String email=t2.getText().toString();
                String pwd=t3.getText().toString();
                Intent intent=new Intent(MainActivity.this,MainActivity2.class);
                intent.putExtra("name",name);
                intent.putExtra("email",email);
                intent.putExtra("pwd",pwd);
                startActivity(intent);
            }
        });
    }
}
```

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Home

Enter your details

Username

Email Id

Course

SEND

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Home

Enter your details

Athira

athirapradeep@gmail.com

MCA

SEND

◁　　◯　　▢

IntentApp

Your Details

Athira

athirapradeep@gmail.com

MCA

HOME PAGE

◁   ○   ▢

8) Develop an application that toggles image using FrameLayout.

Aim:

To develop an application that toggles image using FrameLayout.

Source Code:

Xml Code (Toggle)

```xml
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical">
    <ImageView
        android:id="@+id/first_image"
        android:src = "@drawable/kitten"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:scaleType="fitXY" />
    <ImageView
        android:id="@+id/second_image"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:scaleType="fitXY"
        android:src="@drawable/puppy" />
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Click the image to switch"
        android:layout_gravity="center_horizontal|bottom"
        android:padding="5dip"
        android:textColor="#ffffff"
```

```
        android:textStyle="bold"

        android:background="#333333"

        android:layout_marginBottom="10dip" />

</FrameLayout>
```

MainActivity.java

```java
package com.example.image_toggle;

import androidx.appcompat.app.AppCompatActivity;

import android.app.Activity;

import android.os.Bundle;

import android.view.View;

import android.widget.ImageView;

public class MainActivity extends Activity {

  @Override

  protected void onCreate(Bundle savedInstanceState) {

     super.onCreate(savedInstanceState);

     setContentView(R.layout.activity_main);

     final ImageView first_image = (ImageView)this.findViewById(R.id.first_image);

     final ImageView second_image = (ImageView)this.findViewById(R.id.second_image);

     first_image.setOnClickListener(new View.OnClickListener(){

        public void onClick(View view) {

           second_image.setVisibility(View.VISIBLE);

           view.setVisibility(View.GONE);

        }

     });

     second_image.setOnClickListener(new View.OnClickListener(){

        public void onClick(View view) {

           first_image.setVisibility(View.VISIBLE);

           view.setVisibility(View.GONE);

        }
```
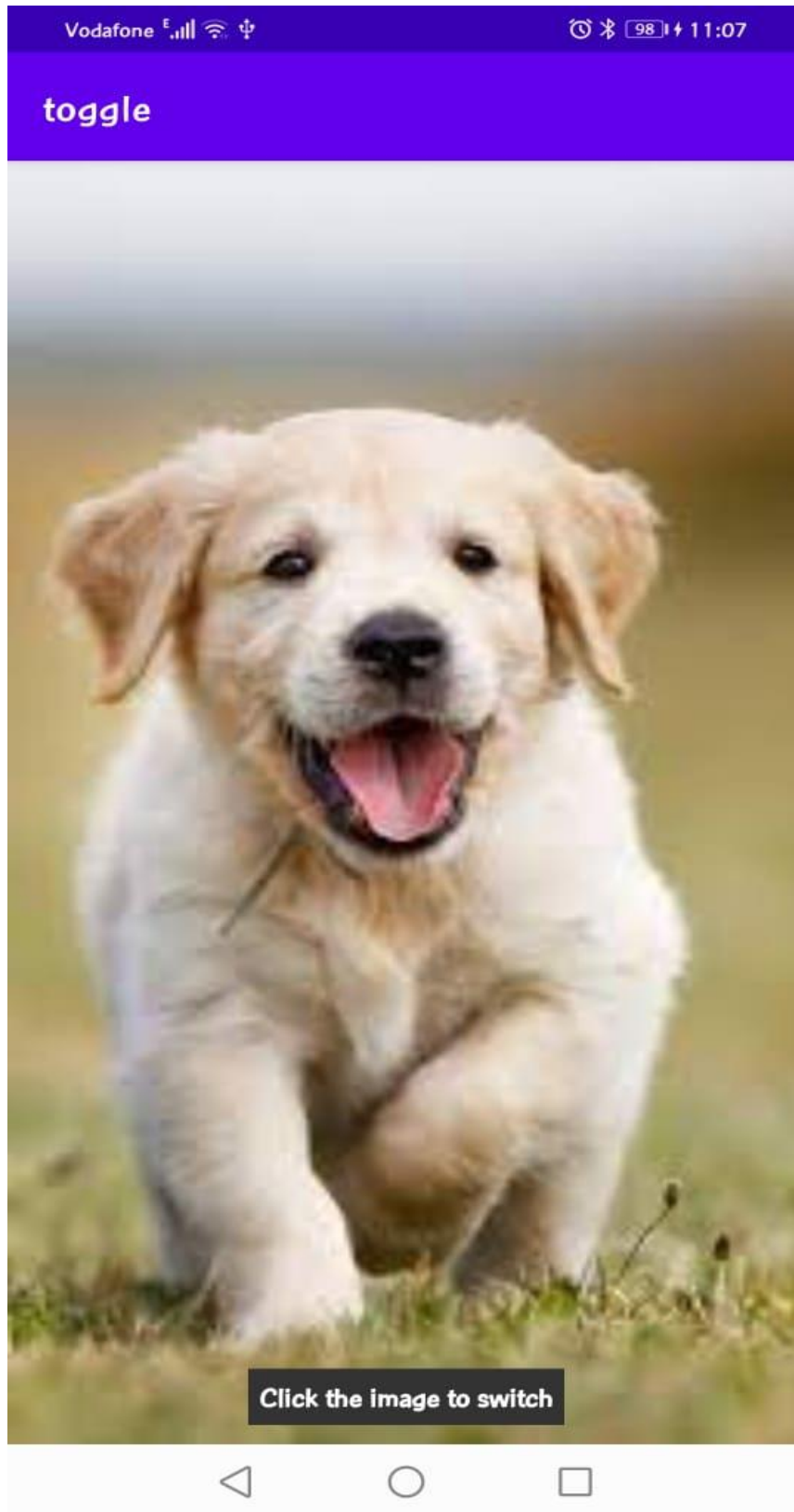
```
        });

    }}
```

OUTPUT

toggle

Click the image to switch

9) Implement Intent to navigate between multiple activities.

Aim:

To implement Intent to navigate between multiple activities.

Source Code:

Xml Code

Activity_xml

```xml
<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"

    xmlns:tools="http://schemas.android.com/tools"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    tools:context=".MainActivity">

    <TextView

        android:id="@+id/textView2"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_alignParentStart="true"

        android:layout_alignParentTop="true"

        android:layout_marginStart="117dp"

        android:layout_marginTop="60dp"

        android:background="#3e7d02"

        android:clickable="false"

        android:text="CLICK ANY BUTTON"

        android:textAppearance="?android:attr/textAppearanceMedium"

        android:textColor="#ffffff" />

    <Button

        android:id="@+id/explicit_Intent"
```

```xml
        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_alignParentTop="true"

        android:layout_centerHorizontal="true"

        android:layout_marginTop="194dp"

        android:text="Explicit Intent Example" />

    <Button

        android:id="@+id/implicit_Intent"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_centerInParent="true"

        android:text="Implicit Intent Example" />

</RelativeLayout>
```

Activity_xml2

```xml
<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    android:background="#009688"

    android:orientation="vertical">

    <TextView

        android:id="@+id/textView"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_centerInParent="true"

        android:text="Navigated to Next Page"

        android:textAppearance="?android:attr/textAppearanceLarge" />
```

```xml
<Button

    android:id="@+id/button1"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:layout_above="@+id/textView"

    android:layout_alignRight="@+id/textView"

    android:layout_marginRight="73dp"

    android:layout_marginBottom="-173dp"

    android:contentDescription="back"

    android:text="back" />

</RelativeLayout>
```

MainActivity.java

```java
package com.example.multiple_intent;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;

import android.net.Uri;

import android.os.Bundle;

import android.view.Menu;

import android.view.View;

import android.widget.Button;

public class MainActivity extends AppCompatActivity {

    Button explicit_btn, implicit_btn;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        explicit_btn = (Button)findViewById(R.id.explicit_Intent);
```

```java
        implicit_btn = (Button) findViewById(R.id.implicit_Intent);

        //implement Onclick event for Explicit Intent

        explicit_btn.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                Intent intent = new Intent(getBaseContext(), MainActivity2.class);

                startActivity(intent);

            }

        });

        //implement onClick event for Implicit Intent

        implicit_btn.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                Intent intent = new Intent(Intent.ACTION_VIEW);

                intent.setData(Uri.parse("https://www.google.com"));

                startActivity(intent);

            }

        });

    }

}
```

MainActivity2.java

```java
package com.example.multiple_intent;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.widget.Toast;

public class MainActivity2 extends AppCompatActivity {
```

```
    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main2);

        Toast.makeText(getApplicationContext(), "We are moved to second Activity",
Toast.LENGTH_LONG).show();



    }

}
```

<u>OUTPUT</u>

Multiple_intent

Navigated to Next Page

BACK

We are moved to second Activity

🏠   🔒 google.com   4   ⋮

≡   **ALL**   **IMAGES**   ⠿   Ⓐ

Google

🔍   🎤

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↗   lord shiva maha shivaratri

↗   madhabi puri buch sebi

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10) Develop an application that use GridView with image and display Alert box on selection.

Aim:

To develop an application that use GridView with images and display Alert box on selection.

Source Code:

Xml Code

Activity_main.xml

```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:orientation="vertical">
<GridView
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:numColumns="2"
    android:stretchMode="columnWidth"
    android:columnWidth="72dp"
    android:id="@+id/dialog_gv"
    android:horizontalSpacing="2dp"
    android:verticalSpacing="2dp">
</GridView>
</LinearLayout>
```

grid_adapter.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
android:layout_width="match_parent"
android:layout_height="96dp"
android:orientation="vertical">
<ImageView
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:src="@drawable/ic_launcher" />
<button
```
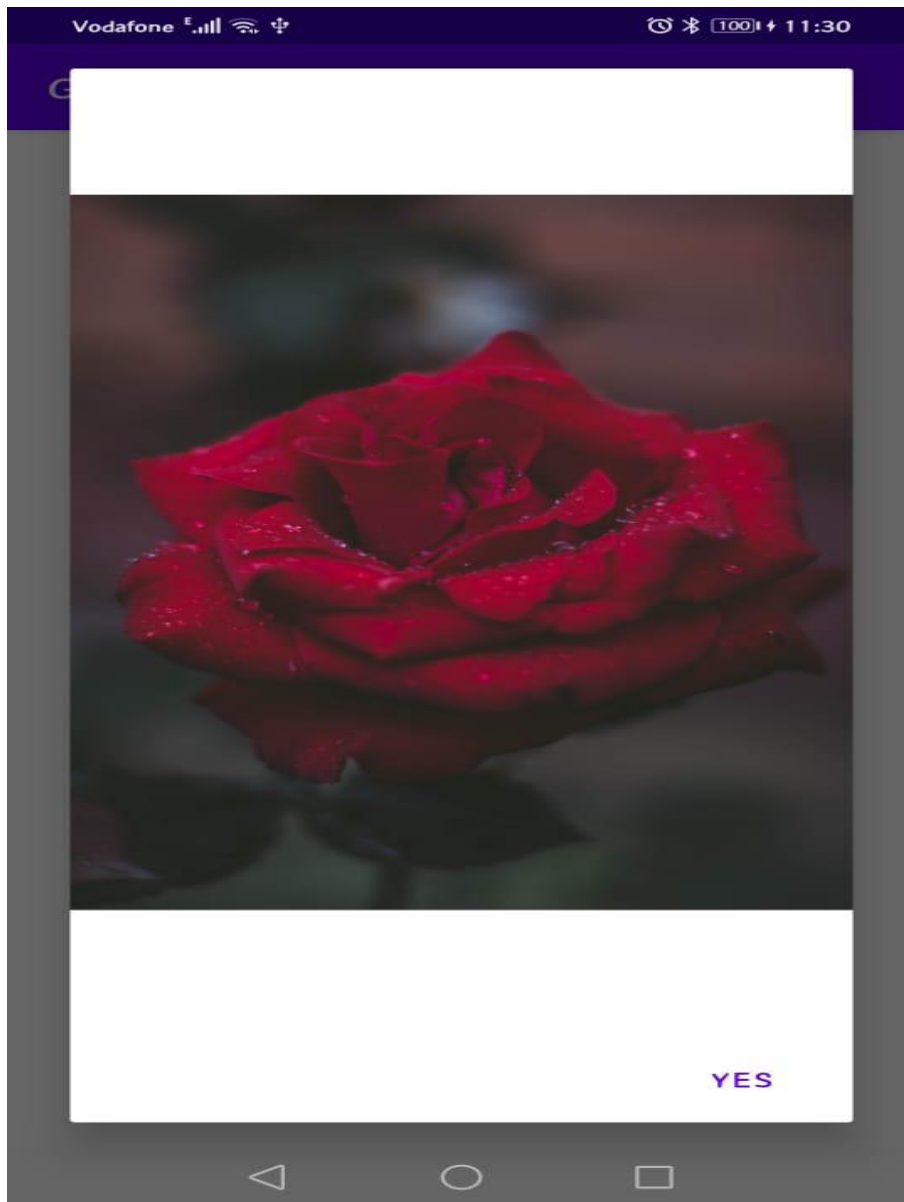
```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentRight="true"
    android:layout_alignParentTop="true" />
</RelativeLayout>
```

MainActivity.java

```
package com.example.gridviewimages;
import android.os.Bundle;
import android.app.Activity;
import android.app.AlertDialog;
import android.content.DialogInterface;
import android.view.LayoutInflater;
import android.view.Menu;
import android.view.View;
import android.widget.Toast;
public class MainActivity extends Activity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.grid_adapter);
        AlertDialog.Builder builder = new AlertDialog.Builder(MainActivity.this);
        //Yes Button
        builder.setPositiveButton("Yes", new DialogInterface.OnClickListener() {
            @Override
            public void onClick(DialogInterface dialog, int which) {
                Toast.makeText(getApplicationContext(), "Yes button Clicked",
Toast.LENGTH_LONG).show();
                dialog.dismiss();
            }
        });
        LayoutInflater inflater = getLayoutInflater();
        View dialoglayout = inflater.inflate(R.layout.grid_adapter, null);
        builder.setView(dialoglayout);
```

```
    builder.show();

}
@Override

public boolean onCreateOptionsMenu(Menu menu) {

    // Inflate the menu; this adds items to the action bar if it is present.

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

    return true;

}  }
```

OUTPUT

Grid_View

Yes button Clicked

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