Pr-18

Q1.implicit intent that displays a web page.

activity_main.xml
File: activity_main.xml

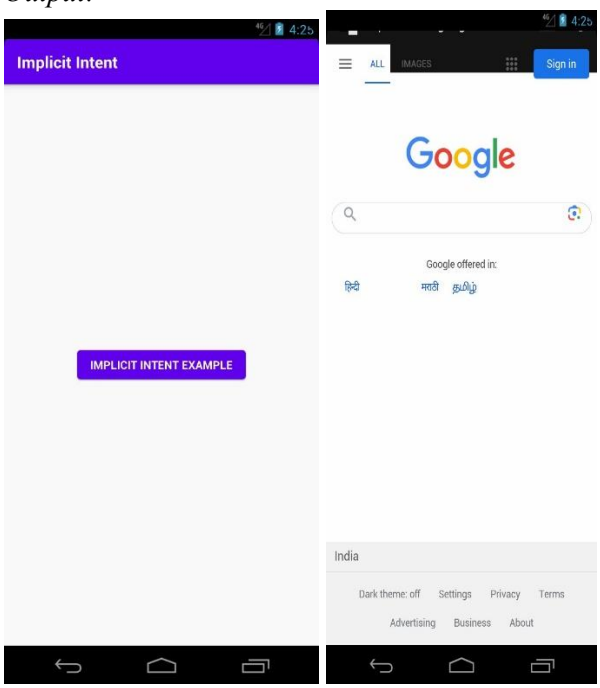
```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
   xmlns:app="http://schemas.android.com/apk/res-auto"
   xmlns:tools="http://schemas.android.com/tools"
   android:layout_width="match_parent"
   android:layout_height="match_parent"
   tools:context="example.javatpoint.com.implicitintent.MainActivity">

   <EditText
      android:id="@+id/editText"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:layout_marginEnd="8dp"
      android:layout_marginStart="8dp"
      android:layout_marginTop="60dp"
      android:ems="10"
      app:layout_constraintEnd_toEndOf="parent"
      app:layout_constraintHorizontal_bias="0.575"
      app:layout_constraintStart_toStartOf="parent"
      app:layout_constraintTop_toTopOf="parent" />

   <Button
      android:id="@+id/button"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:layout_marginRight="8dp"
      android:layout_marginLeft="156dp"
      android:layout_marginTop="172dp"
      android:text="Visit"
      app:layout_constraintEnd_toEndOf="parent"
      app:layout_constraintHorizontal_bias="0.0"
      app:layout_constraintStart_toStartOf="parent"
      app:layout_constraintTop_toBottomOf="@+id/editText" />
</android.support.constraint.ConstraintLayout>
```

File: MainActivity.java

```
package example.javatpoint.com.implicitintent;

import android.content.Intent;
import android.net.Uri;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
```

```
import android.widget.EditText;
 public class MainActivity extends AppCompatActivity {
   Button button;
   EditText editText;

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

      button = findViewById(R.id.button);
      editText =  findViewById(R.id.editText);

      button.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View view) {
            String url=editText.getText().toString();
            Intent intent=new Intent(Intent.ACTION_VIEW, Uri.parse(url));
            startActivity(intent);
         }
      });
   }
}
```

Output:



Q2.Start Dialer App

This app creates a ***"Start Dialer"*** *button. When clicked, it will open the phone dialer.*

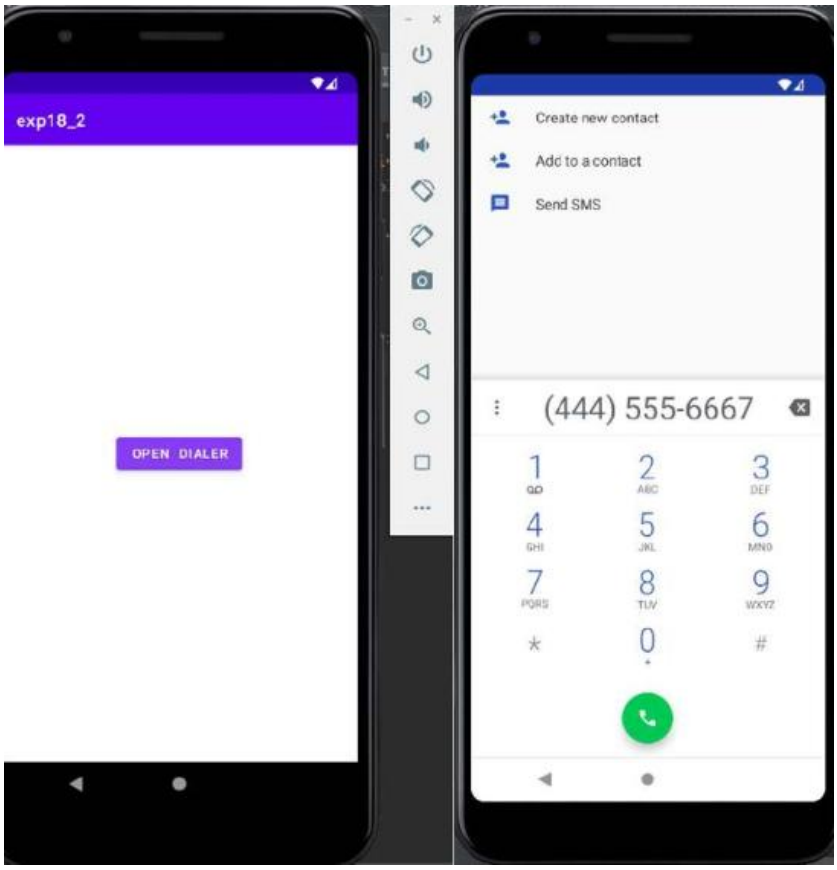
Java Code (MainActivity.java)

```
package com.example.dialerapp;

import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

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

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

        dialButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(Intent.ACTION_DIAL);
                intent.setData(Uri.parse("tel:")); // Empty, user enters number manually
                startActivity(intent);
            }
        });
    }
}
```

XML Layout (activity_main.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:gravity="center"
    android:orientation="vertical">

    <Button
        android:id="@+id/dialButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Start Dialer" />
</LinearLayout>
```

Output:



Ans 3) 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:id=”@+id/relativeLayout”
android:layout_width=”match_parent”
android:layout_height=”match_parent”
tools:context=”.MainActivity”>
<EditText
android:id=”@+id/editText”
android:layout_width=”315dp”
android:layout_height=”53dp”
android:layout_centerHorizontal=”true”
android:layout_centerVertical=”true”
android:fontFamily=”@font/poppins_medium”
android:hint=”Enter a number”
android:inputType=”number”
```

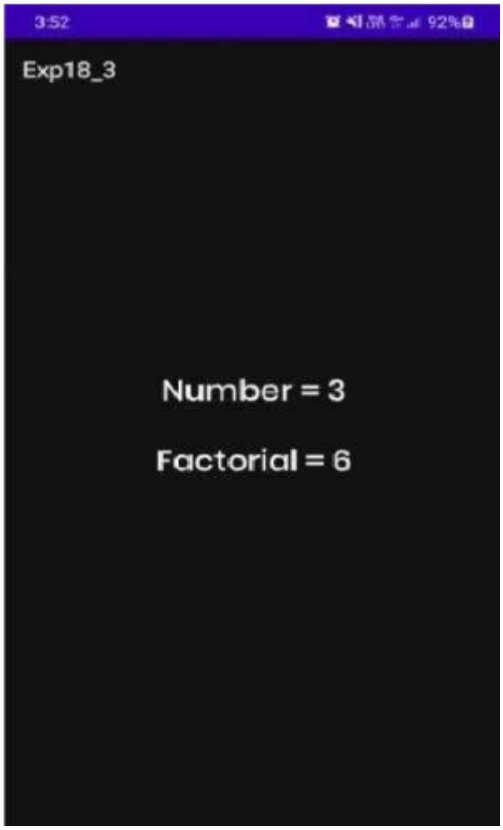
```
android:textSize="20sp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintLeft_toLeftOf="parent"
app:layout_constraintRight_toRightOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.371"/>

<Button
android:id="@+id/btnFact"
android:layout_width="195dp"
android:layout_height="43dp"
android:layout_marginTop="84dp"
android:fontFamily="@font/poppins_medium"
android:text="Factorial"
app:layout_constraintLeft_toLeftOf="parent"
app:layout_constraintRight_toRightOf="parent"
app:layout_constraintTop_toBottomOf="@+id/editText"/>
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.exp18_2;
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 editText;
Button btnFact;
int fact = 1;
int  num=0;
@Override
protected void onCreate(Bundle savedInstanceState)
{super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
editText = findViewById(R.id.editText);
btnFact = findViewById(R.id.btnFact);
btnFact.setOnClickListener(new View.OnClickListener()
{@Override
public void onClick(View v)
{go();
}

});
}

public void go(){
num = Integer.parseInt(editText.getText().toString().trim());
for(int i = 1; i <= num; i++){
```

```
fact = fact * i;
}

navigate();
}

public void navigate(){
Intent intent = new Intent(MainActivity.this,EmptyActivity.class);
intent.putExtra("Fact",fact);
intent.putExtra("Num",num);
startActivity(intent);
}

}
```

Outputs :



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```
import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.animation.Animation;
import android.view.animation.AnimationUtils;
import android.widget.ImageView;
import android.widget.Toast;
public class MainActivity extends Activity {
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
}
public void clockwise(View view){
ImageView image = (ImageView)findViewById(R.id.imageView);
Animation animation = AnimationUtils.loadAnimation(getApplicationContext(),
R.anim.clockwise);
image.startAnimation(animation);
}
public void zoom(View view){
ImageView image = (ImageView)findViewById(R.id.imageView);
Animation animation1 = AnimationUtils.loadAnimation(getApplicationContext(),
R.anim.Zoom);
image.startAnimation(animation1);
}
public void fade(View view){
ImageView image = (ImageView)findViewById(R.id.imageView);
Animation animation1 =
AnimationUtils.loadAnimation(getApplicationContext(),
R.anim.fade);
image.startAnimation(animation1);
}
public void blink(View view){
ImageView image = (ImageView)findViewById(R.id.imageView);
Animation animation1 =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.blink);
image.startAnimation(animation1);
}
public void move(View view){
ImageView image = (ImageView)findViewById(R.id.imageView);
Animation animation1 =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.move);
image.startAnimation(animation1);
}
public void slide(View view){
ImageView image = (ImageView)findViewById(R.id.imageView);
Animation animation1 =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.slide);
image.startAnimation(animation1);
```

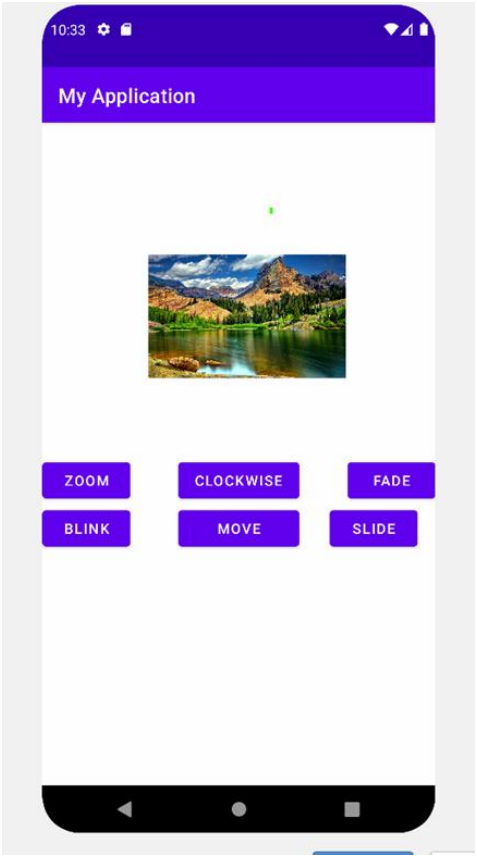
```
}
}
```

activity_main.xml.

```
<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"
android:paddingLeft="@dimen/activity_horizontal_margin"
android:paddingRight="@dimen/activity_horizontal_margin"
android:paddingTop="@dimen/activity_vertical_margin"
android:paddingBottom="@dimen/activity_vertical_margin"
tools:context=".MainActivity">
<ImageView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:id="@+id/imageView"
android:src="@drawable/abc"
android:layout_below="@+id/textView2"
android:layout_alignRight="@+id/textView2"
android:layout_alignEnd="@+id/textView2"
android:layout_alignLeft="@+id/textView"
android:layout_alignStart="@+id/textView"/>
<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="zoom"
android:id="@+id/button"
android:layout_below="@+id/imageView"
android:layout_alignParentLeft="true"
android:layout_alignParentStart="true"
android:layout_marginTop="40dp"
android:onClick="zoom "/>
<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="clockwise"
android:id="@+id/button2"
android:layout_alignTop="@+id/button"
android:layout_centerHorizontal="true"
android:onClick=" clockwise "/>
<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="fade"
android:id="@+id/button3"
android:layout_alignTop="@+id/button2"
android:layout_alignParentRight="true"
android:layout_alignParentEnd="true"
android:onClick="fade"/>
```

```
<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="blink"
android:onClick="blink"
android:id="@+id/button4"
android:layout_below="@+id/button"
android:layout_alignParentLeft="true"
android:layout_alignParentStart="true" />
<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="move"
android:onClick="move"
android:id="@+id/button5"
android:layout_below="@+id/button2"
android:layout_alignRight="@+id/button2"
android:layout_alignEnd="@+id/button2"
android:layout_alignLeft="@+id/button2"
android:layout_alignStart="@+id/button2" />
<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="slide"
android:onClick="slide"
android:id="@+id/button6"
android:layout_below="@+id/button3"
android:layout_toRightOf="@+id/textView"
android:layout_toEndOf="@+id/textView" />
</RelativeLayout>
```

Outputs:


10:33
My Application
ZOOM
CLOCKWISE
FADE
BLINK
MOVE
SLIDE

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```
<?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"
    android:padding="20dp"
    android:gravity="center">

    <EditText
        android:id="@+id/username"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Username"
        android:padding="10dp"
        android:background="@android:drawable/editbox_background"
        android:inputType="text"/>

    <EditText
        android:id="@+id/password"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Password"
        android:padding="10dp"
        android:background="@android:drawable/editbox_background"
        android:inputType="textPassword"
        android:layout_marginTop="10dp"/>

    <Button
        android:id="@+id/loginButton"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Login"
        android:layout_marginTop="20dp"
        android:backgroundTint="@android:color/holo_blue_dark"
        android:textColor="@android:color/white"/>

</LinearLayout>
package com.example.loginapp;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    EditText username, password;
    Button loginButton;
```

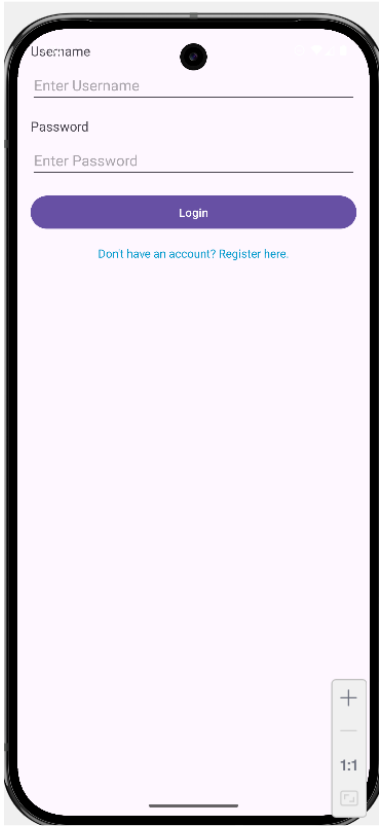
```
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        username = findViewById(R.id.username);
        password = findViewById(R.id.password);
        loginButton = findViewById(R.id.loginButton);

        loginButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String user = username.getText().toString().trim();
                String pass = password.getText().toString().trim();

                if (user.equals("admin") && pass.equals("1234")) {
                    Toast.makeText(MainActivity.this, "Login Successful", Toast.LENGTH_SHORT).show();
                } else {
                    Toast.makeText(MainActivity.this, "Login Unsuccessful",
Toast.LENGTH_SHORT).show();
                }
            }
        });
    }
}
```

OutPuts :



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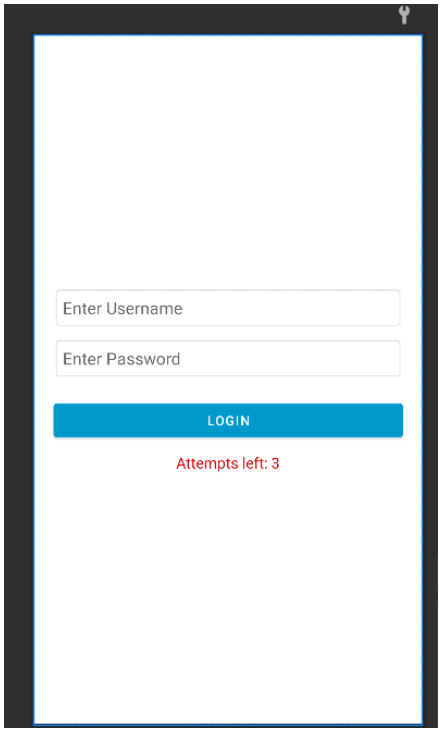
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="20dp"
    android:gravity="center">

    <EditText
        android:id="@+id/username"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter Username"
        android:padding="10dp"
        android:background="@android:drawable/editbox_background"
        android:inputType="text"/>

    <EditText
        android:id="@+id/password"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter Password"
        android:padding="10dp"
        android:background="@android:drawable/editbox_background"
        android:inputType="textPassword"
        android:layout_marginTop="10dp"/>

    <Button
        android:id="@+id/loginButton"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Login"
        android:layout_marginTop="20dp"
        android:backgroundTint="@android:color/holo_blue_dark"
        android:textColor="@android:color/white"/>

    <TextView
        android:id="@+id/attemptsLeft"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Attempts left: 3"
        android:textSize="16sp"
        android:layout_marginTop="10dp"
        android:textColor="@android:color/holo_red_dark"/>

</LinearLayout>
```

```
package com.example.loginvalidation;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    EditText username, password;
    Button loginButton;
    TextView attemptsLeft;
    int attempts = 3; // Max login attempts allowed

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

        username = findViewById(R.id.username);
        password = findViewById(R.id.password);
        loginButton = findViewById(R.id.loginButton);
        attemptsLeft = findViewById(R.id.attemptsLeft);

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

    private void validateLogin() {
        String user = username.getText().toString().trim();
        String pass = password.getText().toString().trim();

        // Check for empty fields
        if (user.isEmpty() || pass.isEmpty()) {
            Toast.makeText(this, "Fields cannot be empty!", Toast.LENGTH_SHORT).show();
            return;
        }

        // Username length validation
        if (user.length() < 4) {
            Toast.makeText(this, "Username must be at least 4 characters!",
Toast.LENGTH_SHORT).show();
            return;
        }
```

```
        // Password length validation
        if (pass.length() < 6) {
            Toast.makeText(this, "Password must be at least 6 characters!",
Toast.LENGTH_SHORT).show();
            return;
        }

        // Hardcoded valid credentials
        if (user.equals("admin") && pass.equals("123456")) {
            Toast.makeText(this, "Login Successful", Toast.LENGTH_SHORT).show();
            attempts = 3; // Reset attempts on success
            attemptsLeft.setText("Attempts left: 3");
        } else {
            attempts--;
            if (attempts == 0) {
                loginButton.setEnabled(false);
                Toast.makeText(this, "Account Locked! Too many failed attempts.",
Toast.LENGTH_LONG).show();
            } else {
                Toast.makeText(this, "Login Unsuccessful! Attempts left: " + attempts,
Toast.LENGTH_SHORT).show();
                attemptsLeft.setText("Attempts left: " + attempts);
            }
        }
    }
}
```

Outputs :



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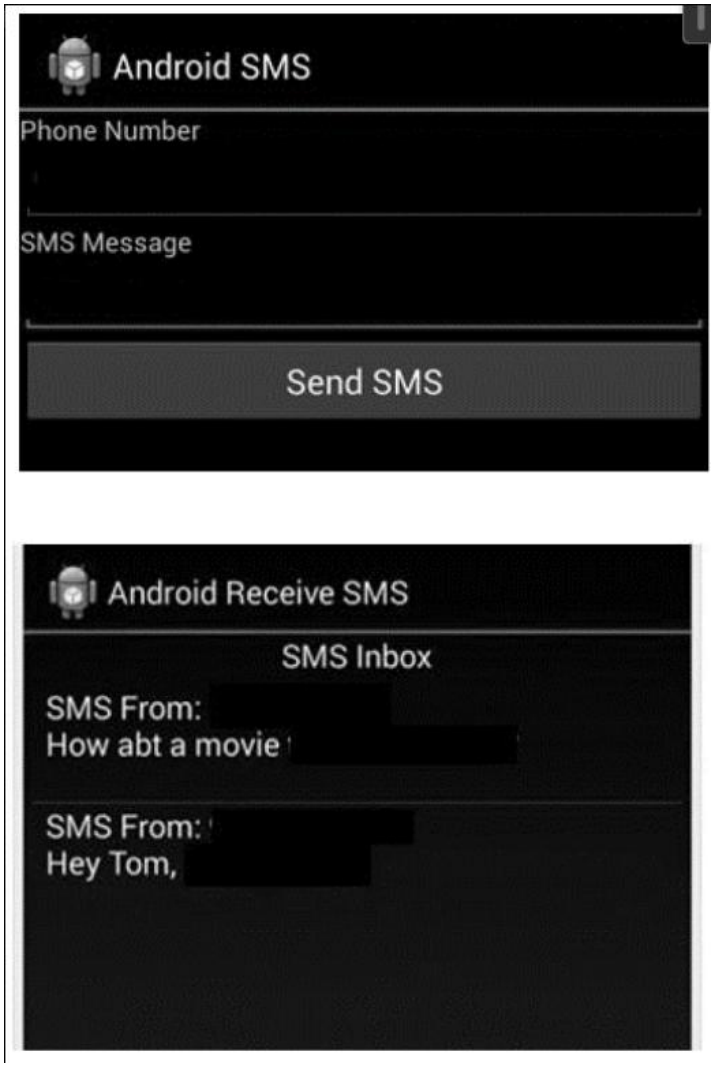
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="20dp">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Android SMS"
        android:textSize="20sp"
        android:textStyle="bold"
        android:layout_gravity="center"/>

    <EditText
        android:id="@+id/phoneNumber"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Phone Number"
        android:inputType="phone"
        android:padding="10dp"
        android:layout_marginTop="10dp"/>

    <EditText
        android:id="@+id/smsMessage"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="SMS Message"
        android:inputType="text"
        android:padding="10dp"
        android:layout_marginTop="10dp"/>

    <Button
        android:id="@+id/sendSmsButton"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Send SMS"
        android:layout_marginTop="20dp"
        android:backgroundTint="@android:color/holo_blue_dark"
        android:textColor="@android:color/white"/>

</LinearLayout>
```

```
package com.example.sendsms;

import android.Manifest;
import android.content.pm.PackageManager;
import android.os.Bundle;
import android.telephony.SmsManager;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.ActivityCompat;
import androidx.core.content.ContextCompat;

public class MainActivity extends AppCompatActivity {
    EditText phoneNumber, smsMessage;
    Button sendSmsButton;
    private static final int SMS_PERMISSION_REQUEST_CODE = 1;

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

        phoneNumber = findViewById(R.id.phoneNumber);
        smsMessage = findViewById(R.id.smsMessage);
        sendSmsButton = findViewById(R.id.sendSmsButton);

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

        // Request SMS permission if not granted
        if (ContextCompat.checkSelfPermission(this, Manifest.permission.SEND_SMS) !=
PackageManager.PERMISSION_GRANTED) {
            ActivityCompat.requestPermissions(this, new String[]{Manifest.permission.SEND_SMS},
SMS_PERMISSION_REQUEST_CODE);
        }
    }

    private void sendSMS() {
        String phone = phoneNumber.getText().toString().trim();
        String message = smsMessage.getText().toString().trim();

        if (phone.isEmpty() || message.isEmpty()) {
            Toast.makeText(this, "Please enter phone number and message",
Toast.LENGTH_SHORT).show();
            return;
```

```
        }

        try {
            SmsManager smsManager = SmsManager.getDefault();
            smsManager.sendTextMessage(phone, null, message, null, null);
            Toast.makeText(this, "SMS Sent Successfully!", Toast.LENGTH_SHORT).show();
        } catch (Exception e) {
            Toast.makeText(this, "SMS Sending Failed!", Toast.LENGTH_SHORT).show();
            e.printStackTrace();
        }
    }
}
```

Output:



Pr-30

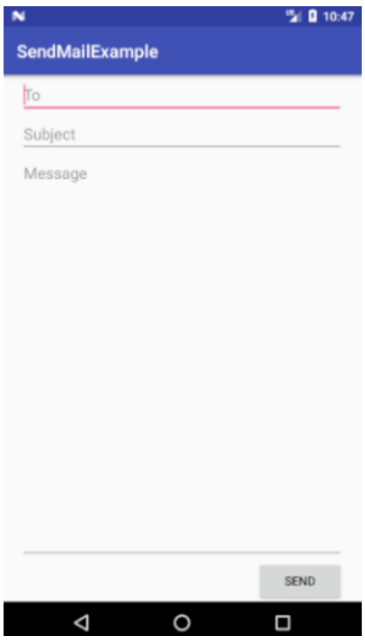
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
   android:layout_width="match_parent"
   android:layout_height="match_parent"
   android:paddingLeft="20dp"
   android:paddingRight="20dp"
   android:orientation="vertical" >
   <EditText
      android:id="@+id/txtTo"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:hint="To"/>
   <EditText
      android:id="@+id/txtSub"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:hint="Subject"/>
   <EditText
      android:id="@+id/txtMsg"
      android:layout_width="match_parent"
      android:layout_height="0dp"
      android:layout_weight="1"
      android:gravity="top"
      android:hint="Message"/>
   <Button
      android:layout_width="100dp"
      android:layout_height="wrap_content"
      android:layout_gravity="right"
      android:text="Send"
      android:id="@+id/btnSend"/>
</LinearLayout>
```

```
package com.tutlane.sendmailexample;
import android.content.Intent;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

   private EditText eTo;
   private EditText eSubject;
   private EditText eMsg;
   private Button btn;
   @Override
   protected void onCreate(Bundle savedInstanceState) {
```

```
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        eTo = (EditText)findViewById(R.id.txtTo);
        eSubject = (EditText)findViewById(R.id.txtSub);
        eMsg = (EditText)findViewById(R.id.txtMsg);
        btn = (Button)findViewById(R.id.btnSend);
        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent it = new Intent(Intent.ACTION_SEND);
                it.putExtra(Intent.EXTRA_EMAIL, new String[]{eTo.getText().toString()});
                it.putExtra(Intent.EXTRA_SUBJECT,eSubject.getText().toString());
                it.putExtra(Intent.EXTRA_TEXT,eMsg.getText());
                it.setType("message/rfc822");
                startActivity(Intent.createChooser(it,"Choose Mail App"));
            }
        });
    }
}
```

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android" package="com.tutlane.send
mailexample">
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
                <action android:name="android.intent.action.SEND"/>
                <category android:name="android.intent.category.DEFAULT"/>
                <data android:mimeType="message/rfc822"/>
            </intent-filter>
        </activity>
    </application>
</manifest>
```



r-31

1. Write a program to locate user's current location.

Java

```
package com.example.maps1;
import androidx.annotation.NonNull;
import androidx.core.app.ActivityCompat;
import androidx.fragment.app.FragmentActivity;
import android.Manifest;
import android.content.pm.PackageManager;
import android.graphics.Color;
import android.location.Geocoder;
import android.location.Location;
import android.os.Bundle;
import android.util.Log;
import android.widget.Toast;
import com.google.android.gms.location.FusedLocationProviderClient;
import com.google.android.gms.location.LocationServices;
import com.google.android.gms.maps.CameraUpdateFactory;
import com.google.android.gms.maps.GoogleMap;
import com.google.android.gms.maps.OnMapReadyCallback;
import com.google.android.gms.maps.SupportMapFragment;
import com.google.android.gms.maps.UiSettings;
import com.google.android.gms.maps.model.LatLng;
import com.google.android.gms.maps.model.MarkerOptions;
import com.google.android.gms.maps.model.Polyline;
import com.google.android.gms.maps.model.PolylineOptions;
import com.google.android.gms.tasks.OnSuccessListener;
public class MapsActivity extends FragmentActivity implements
OnMapReadyCallback {
private GoogleMap mMap;
Geocoder geocoder;
public void onRequestPermissionsResult(int requestCode,@NonNull String[] permissions,
@NonNull int[] grantResults)
{
super.onRequestPermissionsResult(requestCode, permissions,grantResults);
if (requestCode == 101) {
// Checking whether user granted the permission or not.
if (grantResults.length > 0 && grantResults[0] ==PackageManager.PERMISSION_GRANTED)
{
// Showing the toast message
Toast.makeText(this, "Location Permission Granted",Toast.LENGTH_SHORT).show();
}
else {
Toast.makeText(this, "LocationCamera Permission Denied",Toast.LENGTH_SHORT).show();
}}}
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_maps);
// Obtain the SupportMapFragment and get notified when the map is ready to be used.
```

```
SupportMapFragment mapFragment = (SupportMapFragment)getSupportFragmentManager()
.findFragmentById(R.id.map);
mapFragment.getMapAsync(this);
}
@Override
public void onMapReady(GoogleMap googleMap) {
mMap = googleMap;
mMap.setMapType(GoogleMap.MAP_TYPE_NORMAL);
if (ActivityCompat.checkSelfPermission(this,Manifest.permission.ACCESS_FINE_LOCATION) !=
PackageManager.PERMISSION_GRANTED)
{
ActivityCompat.requestPermissions(this, new String[]
{ Manifest.permission.ACCESS_FINE_LOCATION }, 101);
return;
} //Enable Current Location
mMap.setMyLocationEnabled(true);
//settings
UiSettings mapUI= googleMap.getUiSettings();
mapUI.setAllGesturesEnabled(true);
mapUI.setMyLocationButtonEnabled(true);
mapUI.setCompassEnabled(true);
}}
```

Outputs :

Pr-32

Que – Write a program to draw a route between two locations.
activity_main.xml

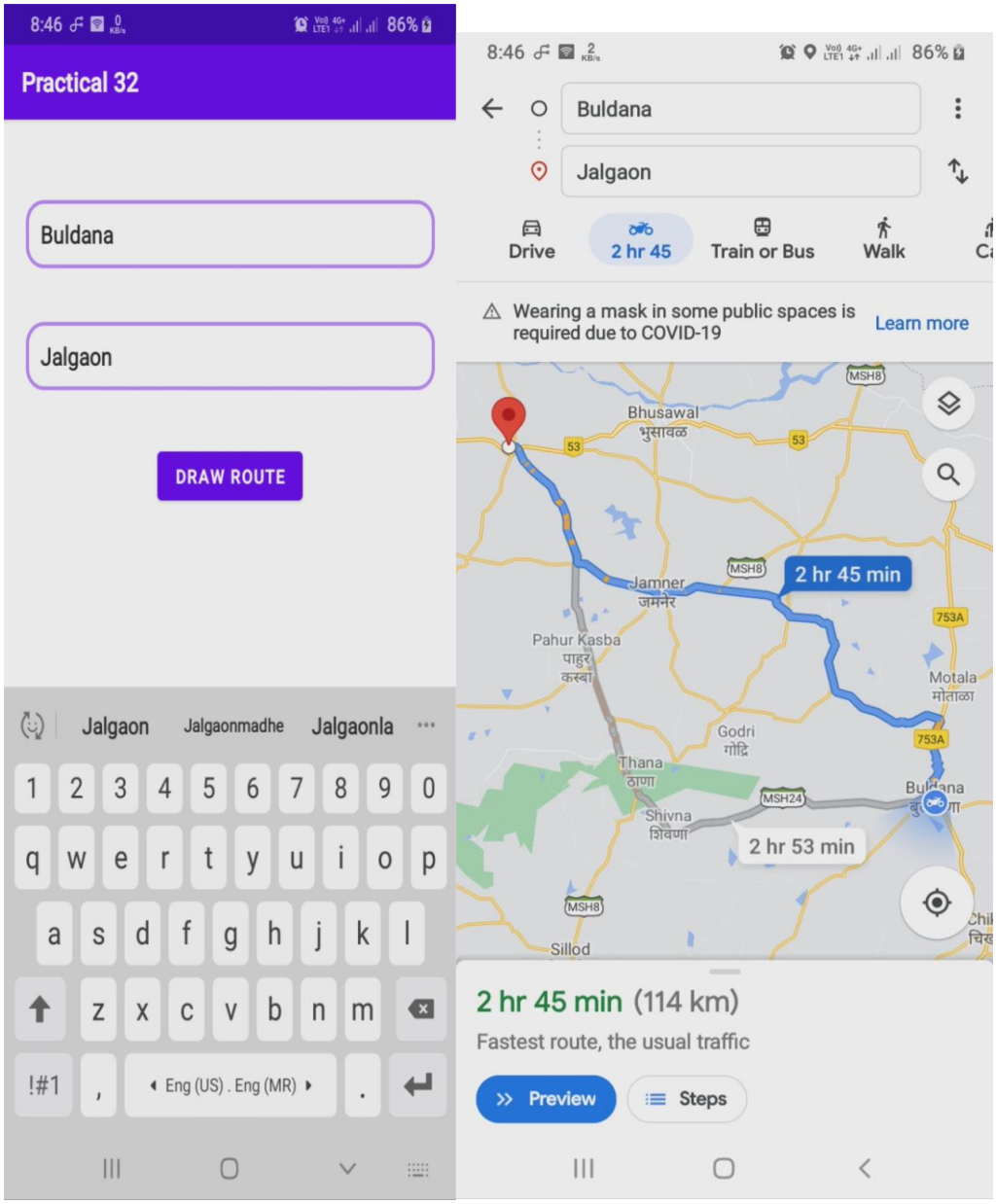
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".MainActivity"
android:orientation="vertical"
android:layout_margin="20dp">
<EditText
android:layout_marginTop="40dp"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:id="@+id/et_source"
android:hint="Enter Source Location"
android:padding="13dp"
android:background="@drawable/input"/>
<EditText
android:layout_marginTop="40dp"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:id="@+id/et_destination"
android:hint="Enter Destination Location"
android:padding="13dp"
android:background="@drawable/input"/>
<Button
android:layout_marginTop="40dp"
android:layout_gravity="center"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:id="@+id/track"
android:text="Draw Route"/>
</LinearLayout>
```

MainActivity.java

```
package co6i.micro.project.shantanu.practical32;
import androidx.appcompat.app.AppCompatActivity;
import android.content.ActivityNotFoundException;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
EditText source, destination;
Button track;
```

```
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
source = findViewById(R.id.et_source);
destination = findViewById(R.id.et_destination);
track = findViewById(R.id.track);
track.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
String sSource = source.getText().toString();
String sDestination = destination.getText().toString();
if(sSource.equals("") && sDestination.equals("")){
Toast.makeText(MainActivity.this,"Enter Both
Location",Toast.LENGTH_SHORT).show();
}
else{
DisplayTrack(sSource,sDestination);
}
}
});
}
private void DisplayTrack(String sSource, String sDestination) {
try {
Uri uri =
Uri.parse("https://www.google.co.in/maps/dir/"+sSource+"/"+sDestination);
Intent intent = new Intent(Intent.ACTION_VIEW,uri);
intent.setPackage("com.google.android.apps.maps");
intent.setFlags(Intent.FLAG_ACTIVITY_NEW_TASK);
// This Flag Only Starts an Activity in a new Task If it's not previously started
startActivity(intent);
}
catch (ActivityNotFoundException e){
Uri uri =
Uri.parse("https://play.google.com/store/apps/details?id=com.google.android.apps
.maps");
Intent intent = new Intent(Intent.ACTION_VIEW,uri);
intent.setFlags(Intent.FLAG_ACTIVITY_NEW_TASK);
startActivity(intent);
}
}
}
```

OUTPUT:


8:46
86%
Practical 32
Buldana
Jalgaon
DRAW ROUTE
Jalgaon
Jalgaonmadhe
Jalgaonla
1 2 3 4 5 6 7 8 9 0
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
!#1
Eng (US) . Eng (MR)
8:46
86%
Buldana
Jalgaon
Drive
2 hr 45
Train or Bus
Walk
Wearing a mask in some public spaces is required due to COVID-19
Learn more
Bhusawal
भुसावळ
Jamner
जामनेर
Pahur Kasba
पाहुर कसबा
Godri
गोद्रि
Thana
ठाणा
Shivna
शिवणा
Motala
मोताळा
Sillod
2 hr 45 min
2 hr 53 min
MSH8
MSH24
53
753A
2 hr 45 min (114 km)
Fastest route, the usual traffic
Preview
Steps