1. LOGIN PAGE

AIM: Design a login form with username and password using linear layout and toast valid credentials

Date :

PROGRAM CODE

MainActivity.Java

```java
package com.example.loginapp;
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.Toast;

public class MainActivity extends AppCompatActivity {
    String strEmail,strPassword;
    EditText email,password;
    Button loginbtn;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        email = findViewById(R.id.editTextTextEmailAddress);
        password = findViewById(R.id.editTextTextPassword);
        loginbtn = findViewById(R.id.btn);
```
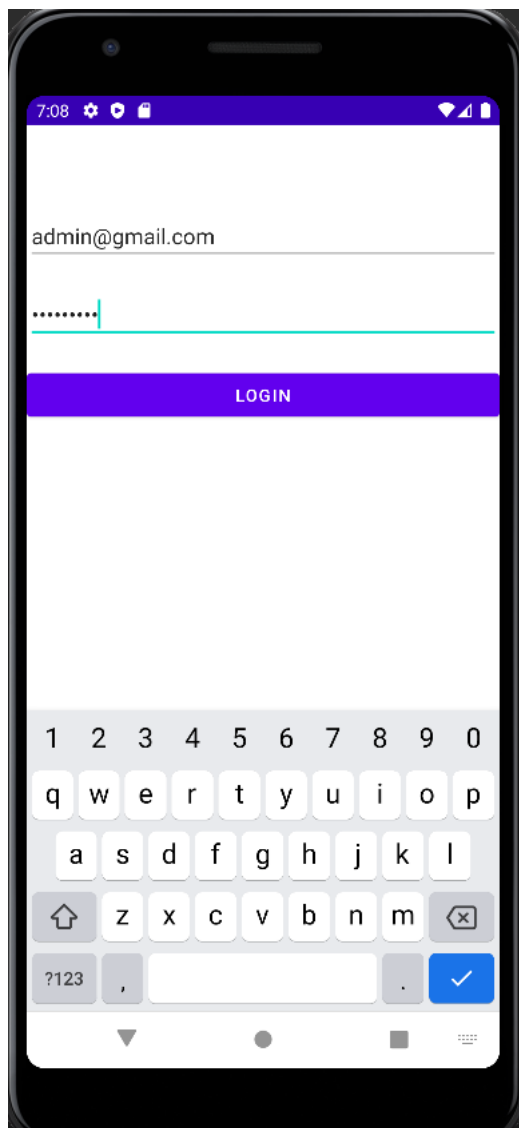
```java
loginbtn.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {


            strEmail=email.getText().toString();
            strPassword=password.getText().toString();


            if(strEmail.equals("admin@gmail.com") && strPassword.equals("admin123") )
            {
                startActivity(new Intent(MainActivity.this,HomePage.class));


                Toast.makeText(MainActivity.this, "Login Success",
Toast.LENGTH_SHORT).show();
            }
            else
            {
                Toast.makeText(MainActivity.this, "Login Failed",
Toast.LENGTH_SHORT).show();
            }


        }
    });


    }
}
```

ActivityMain.xml

```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"
```
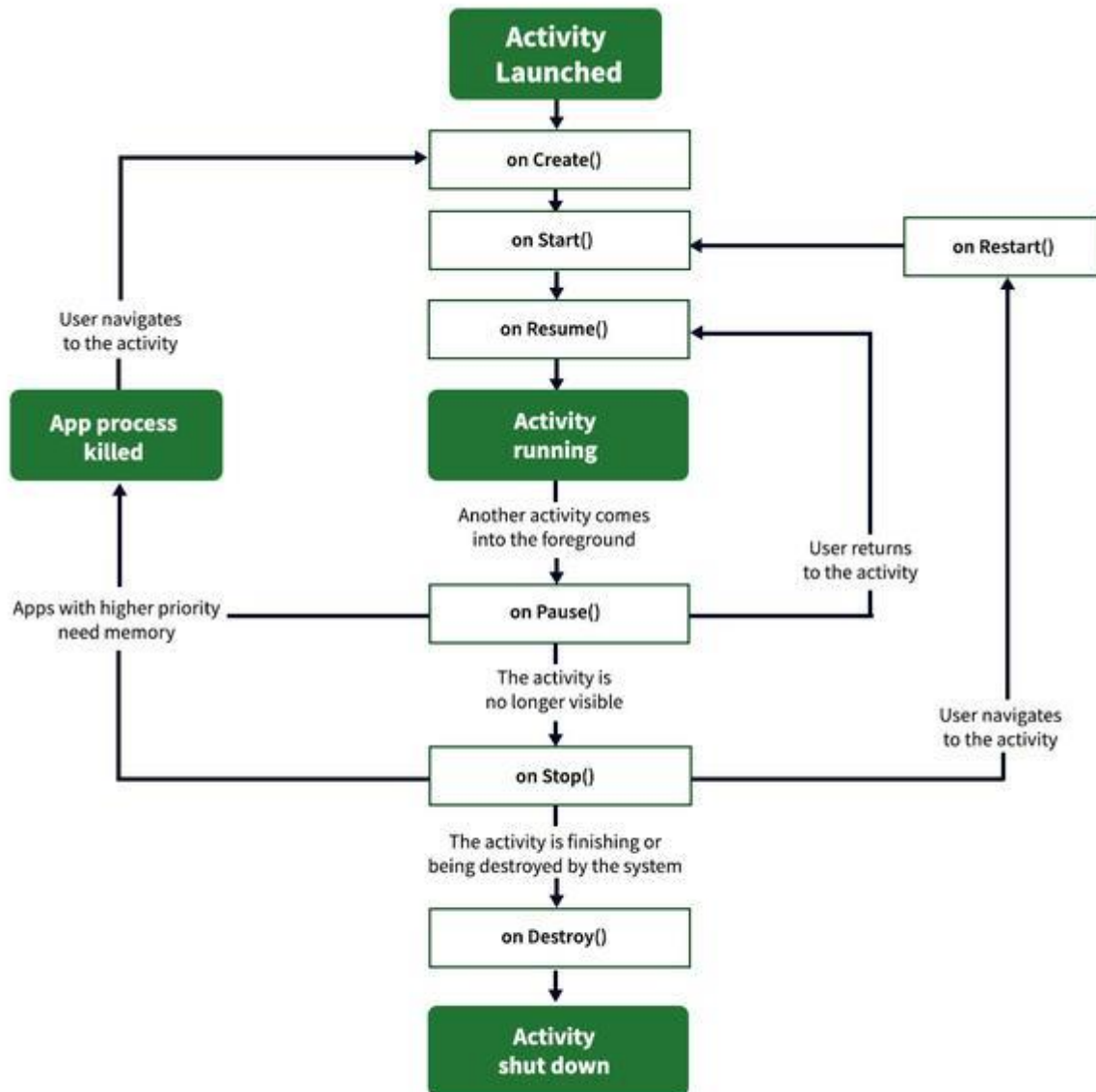
```
android:layout_width="match_parent"
  android:layout_height="match_parent"
  tools:context=".MainActivity"
  android:orientation="vertical">
  <EditText
    android:id="@+id/editTextTextEmailAddress"
    android:layout_width="match_parent"
    android:layout_marginTop="70dp"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textEmailAddress"
    android:hint="enter email"/>

  <EditText
    android:layout_marginTop="20dp"
    android:id="@+id/editTextTextPassword"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPassword"
    android:hint="enter password"/>

  <Button
    android:id="@+id/btn"
    android:text="Login"
    android:layout_marginTop="20dp"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"/>

</LinearLayout>
```

RESULT: The program is executed and output is verified

Activity Launched

on Create()

on Start()

on Resume()

Activity running

on Pause()

on Stop()

on Destroy()

Activity shut down

App process killed

on Restart()

User navigates to the activity

Another activity comes into the foreground

User returns to the activity

Apps with higher priority need memory

The activity is no longer visible

User navigates to the activity

The activity is finishing or being destroyed by the system

Activity Lifecycle in Android

2. ACTIVITY LIFE CYCLE

AIM: Write a program to demonstrate activity lifecycle.

Date :

PROGRAM CODE

MainActivity.Java

```java
import android.app.Activity;

import android.os.Bundle;

import android.util.Log;

public class MainActivity extends Activity {

 @Override

protected void onCreate(Bundle savedInstanceState) {

            super.onCreate(savedInstanceState);

            setContentView(R.layout.activity_main);

             Log.d("lifecycle","onCreate invoked");

}

@Override

protected void onStart() {

            super.onStart();

            Log.d("lifecycle","onStart invoked");

}

@Override
```

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```java
protected void onResume() {

        super.onResume();

        Log.d("lifecycle","onResume invoked");

    }
@Override

protected void onPause() {

super.onPause();

Log.d("lifecycle","onPause invoked");

}
@Override

protected void onStop() {

        super.onStop();

        Log.d("lifecycle","onStop invoked");

}
@Override

protected void onRestart() {

        super.onRestart();

        Log.d("lifecycle","onRestart invoked");

}
@Override

protected void onDestroy() {

        super.onDestroy();

        Log.d("lifecycle","onDestroy invoked");

}
}
```

ActivityMain.xml

```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.activitylifecycle.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" />

</android.support.constraint.ConstraintLayout>
```

RESULT: The program is executed and output is verified

OUTPUT:
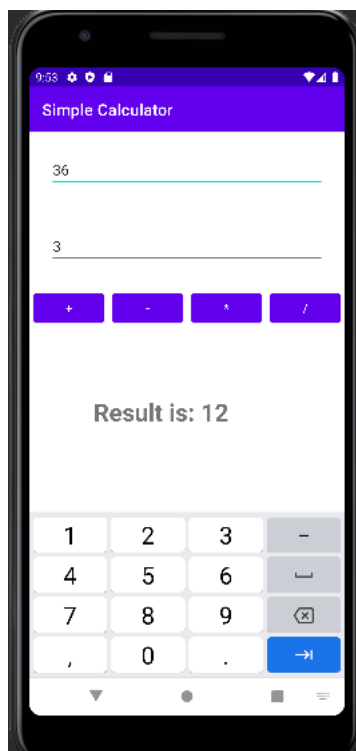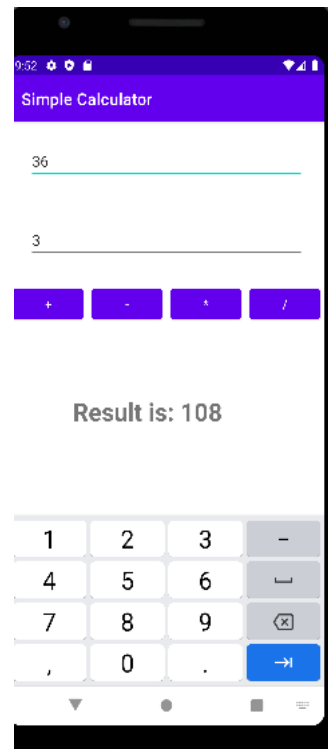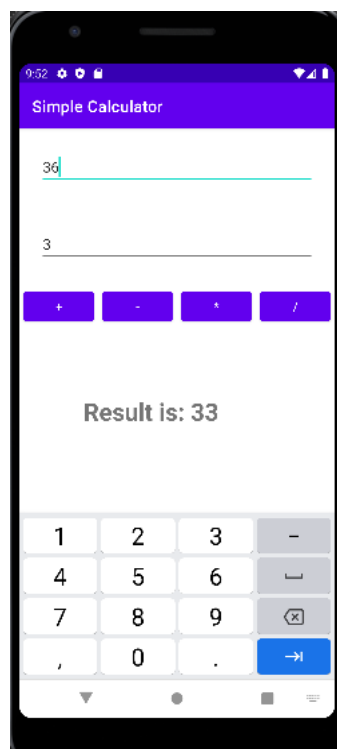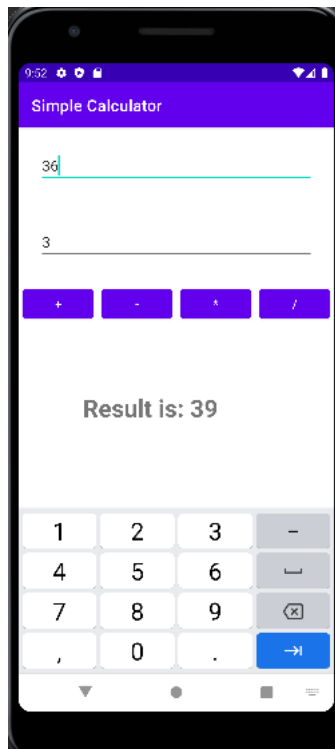
3. SIMPLE CALCULATOR

AIM: Implement basic arithmetic operation of a simple calculator

Date:

PROGRAM CODE

MainActivity.Java

```java
package com.example.simplecalculator;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.os.TestLooperManager;

import android.text.Editable;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.TextView;

import android.widget.Toast;

import java.net.Inet4Address;


public class MainActivity extends AppCompatActivity {
    String result;
    int firstNum;
    int secondNum;
    EditText num1,num2;
    TextView resultTx;
    Button btnAdd,btnSub,btnMul,btnDiv;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
```

```java
setContentView(R.layout.activity_main);
  num1 = findViewById(R.id.etnum1);

  num2 = findViewById(R.id.etnum2);

  resultTx = findViewById(R.id.txtResult);

  btnAdd = findViewById(R.id.btnAdd);

  btnSub = findViewById(R.id.btnMinus);

  btnMul = findViewById(R.id.btnMul);

  btnDiv = findViewById(R.id.btnDiv);

  btnAdd.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View view)

    {

      numFinder();

      result = String.valueOf(firstNum+secondNum);

      resultTx.setText("Result is: " +result);

    }

  });

  btnSub.setOnClickListener(new View.OnClickListener() {

      @Override

      public void onClick(View view)

      {

        numFinder();

        result = String.valueOf(firstNum-secondNum);


        resultTx.setText("Result is: " +result);

      }

  });
```

```java
btnMul.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view)
    {
        numFinder();
        result = String.valueOf(firstNum*secondNum);


        resultTx.setText("Result is: " +result);
    }
});



btnDiv.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view)
    {
        numFinder();
        result = String.valueOf(firstNum/secondNum);
        resultTx.setText("Result is: " +result);
    }
});



}

protected void numFinder()
{
    firstNum = Integer.parseInt(num1.getText().toString());
    secondNum = Integer.parseInt(num2.getText().toString());
```

}}

ActivityMain.xml

```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">

    <EditText
        android:id="@+id/etnum1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="enter first number"
        android:layout_margin="25dp"
        android:inputType="number"
        />

    <EditText
        android:id="@+id/etnum2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="enter second number"
        android:layout_margin="25dp"
        android:inputType="number"
        />


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

    <Button
        android:id="@+id/btnAdd"
        android:text="+"
        android:layout_margin="5dp"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        />
    <Button
```

```xml
 android:id="@+id/btnMinus"
        android:text="-"
        android:layout_margin="5dp"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        />
    <Button
        android:id="@+id/btnMul"
        android:text="*"
        android:layout_margin="5dp"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        />
    <Button
        android:id="@+id/btnDiv"
        android:text="/"
        android:layout_margin="5dp"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        />

  </LinearLayout>

  <TextView
    android:id="@+id/txtResult"
    android:layout_margin="80dp"
    android:textSize="30dp"
    android:textStyle="bold"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />


</LinearLayout>
```

RESULT: The program is executed and output is verified

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OUTPUT :
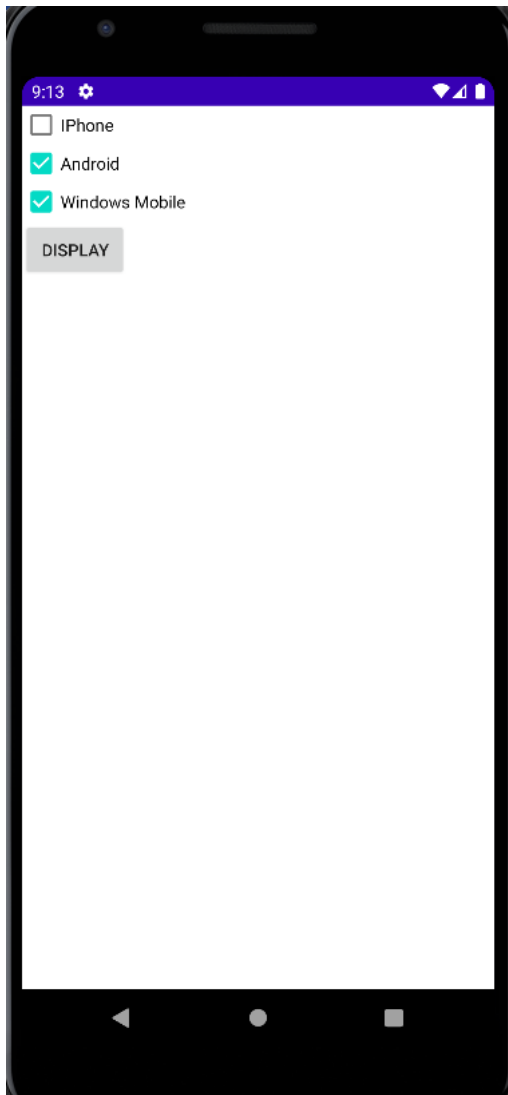
4. CHECKBOX

AIM: Write a program to demonstrate checkbox

Date:

PROGRAM CODE

MainActivity.Java

```java
package com.example.check;

import android.app.Activity;

import android.os.Bundle;

import android.view.View;

import android.view.View.OnClickListener;

import android.widget.Button;

import android.widget.CheckBox;

import android.widget.Toast;

public class MainActivity extends Activity {


  private CheckBox chkIos, chkAndroid, chkWindows;

  private Button btnDisplay;


  @Override

  public void onCreate(Bundle savedInstanceState) {

    super.onCreate(savedInstanceState);
```

```java
setContentView(R.layout.activity_main);

    addListenerOnChkIos();

    addListenerOnButton();

}
public void addListenerOnChkIos() {


    chkIos = (CheckBox) findViewById(R.id.chkIos);


    chkIos.setOnClickListener(new OnClickListener() {


        @Override
        public void onClick(View v) {
            //is chkIos checked?
            if (((CheckBox) v).isChecked()) {
                Toast.makeText(MainActivity.this,
                    "Bro, try Android :)", Toast.LENGTH_LONG).show();
            }
        }
    });


}
```

```java
public void addListenerOnButton() {

    chkIos = (CheckBox) findViewById(R.id.chkIos);

    chkAndroid = (CheckBox) findViewById(R.id.chkAndroid);

    chkWindows = (CheckBox) findViewById(R.id.chkWindows);

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


    btnDisplay.setOnClickListener(new OnClickListener() {


        //Run when button is clicked
        @Override
        public void onClick(View v) {


            StringBuffer result = new StringBuffer();

            result.append("IPhone check : ").append(chkIos.isChecked());

            result.append("\nAndroid check : ").append(chkAndroid.isChecked());

            result.append("\nWindows Mobile check :").append(chkWindows.isChecked());


            Toast.makeText(MainActivity.this, result.toString(),

                Toast.LENGTH_LONG).show();


        }

    });

  }
}
```

ActivityMain.xml

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

    <CheckBox
        android:id="@+id/chkIos"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/chk_ios" />

    <CheckBox
        android:id="@+id/chkAndroid"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/chk_android"
        android:checked="true" />

    <CheckBox
        android:id="@+id/chkWindows"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/chk_windows" />

    <Button
        android:id="@+id/btnDisplay"
        android:layout_width="wrap_content"
```

```
  android:layout_height="wrap_content"

    android:text="@string/btn_display" />


</LinearLayout>
```

RESULT: The program is executed and output is verified

OUTPUT :

Select your Subject ?

○ DBMS

○ C/C++ Programming

○ Data Structure

○ Algorithms

[CLEAR]   [SUBMIT]

5. RADIO BUTTON

AIM: Write a program to demonstrate radio button

Date:

PROGRAM CODE

MainActivity.Java

```java
import android.support.v7.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.RadioButton;

import android.widget.RadioGroup;

import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

        // Define the object for Radio Group,

        // Submit and Clear buttons

        private RadioGroup radioGroup;

        Button submit, clear;

        @Override

        protected void onCreate(Bundle savedInstanceState)

        {

                super.onCreate(savedInstanceState);

                setContentView(R.layout.activity_main);
```

```java
// Bind the components to their respective objects

        // by assigning their IDs

        // with the help of findViewById() method

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

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

        radioGroup = (RadioGroup)findViewById(R.id.groupradio);


        // Uncheck or reset the radio buttons initially

        radioGroup.clearCheck();


        // Add the Listener to the RadioGroup

        radioGroup.setOnCheckedChangeListener(

            new RadioGroup

                    .OnCheckedChangeListener() {

                        @Override


                        // The flow will come here when

                        // any of the radio buttons in the radioGroup

                        // has been clicked


                        // Check which radio button has been clicked

                        public void onCheckedChanged(RadioGroup group,

                                                                    int
checkedId)

                                    {
```

```java
                // Get the selected Radio Button

                                        RadioButton

                                                radioButton

                                                = (RadioButton)group

                                                        .findViewById(checkedId);

                        }

                });


        // Add the Listener to the Submit Button

        submit.setOnClickListener(new View.OnClickListener() {

                @Override

                public void onClick(View v)

                {

                        // When submit button is clicked,

                        // Ge the Radio Button which is set

                        // If no Radio Button is set, -1 will be returned

                        int selectedId = radioGroup.getCheckedRadioButtonId();

                        if (selectedId == -1) {

                                Toast.makeText(MainActivity.this,

                                                "No answer has been selected",

                                                Toast.LENGTH_SHORT)

                                        .show();

                        }
```

```
else {

            RadioButton radioButton

                = (RadioButton)radioGroup

                    .findViewById(selectedId);


            // Now display the value of selected item

            // by the Toast message

            Toast.makeText(MainActivity.this,

                    radioButton.getText(),

                    Toast.LENGTH_SHORT)

                .show();

        }

    }

});
// Add the Listener to the Submit Button

clear.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View v)

    {

        // Clear RadioGroup

        // i.e. reset all the Radio Buttons

        radioGroup.clearCheck();

    }
```

```
        });

        }

}
```

ActivityMain.xml

```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">


        <TextView

                android:layout_width="wrap_content"

                android:layout_height="wrap_content"

                android:text="Select your Subject ?"

                android:textStyle="bold"

                android:layout_marginLeft="10dp"

                android:textSize="20sp"/>

        <!-- add RadioGroup which contain the many RadioButton-->

        <RadioGroup

                android:layout_marginTop="50dp"

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

```
android:layout_marginLeft="10dp"

                android:layout_width="fill_parent"

                android:layout_height="wrap_content">


                <!-- In RadioGroup create the 1 Radio Button-->

                <!-- like this we will add some more Radio Button-->

                <RadioButton

                        android:layout_width="fill_parent"

                        android:layout_height="wrap_content"

                        android:id="@+id/radia_id1"

                        android:text="DBMS"

                        android:textSize="20sp"/>


                <RadioButton

                        android:layout_width="fill_parent"

                        android:layout_height="wrap_content"

                        android:id="@+id/radia_id2"

                        android:text="C/C++ Programming"

                        android:textSize="20sp"/>

                <RadioButton

                        android:layout_width="fill_parent"

                        android:layout_height="wrap_content"

                        android:id="@+id/radia_id3"

                        android:text="Data Structure"

                        android:textSize="20sp"/>
```

```xml
            <RadioButton

                    android:layout_width="fill_parent"

                    android:layout_height="wrap_content"

                    android:id="@+id/radia_id4"

                    android:text="Algorithms"

                    android:textSize="20sp"/>

        </RadioGroup>


        <!-- add button For Submit the Selected item-->

        <Button

                android:layout_width="wrap_content"

                android:layout_height="wrap_content"

                android:text="Submit"

                android:id="@+id/submit"

                android:textStyle="bold"

                android:textSize="20sp"

                android:layout_marginTop="200dp"

                android:layout_marginLeft="180dp"

                />

        <!-- add clear button for clear the selected item-->

        <Button

                android:layout_width="wrap_content"

                android:layout_height="wrap_content"

                android:text="Clear"

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

```
android:textSize="20sp"

            android:textStyle="bold"

            android:layout_marginTop="200dp"

            android:layout_marginLeft="20dp"

            />
</RelativeLayout>
```
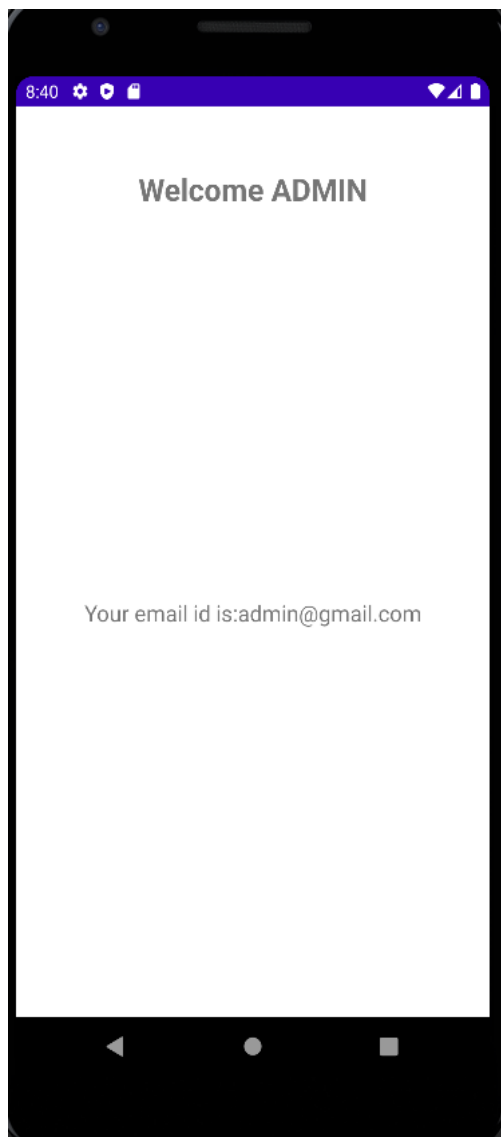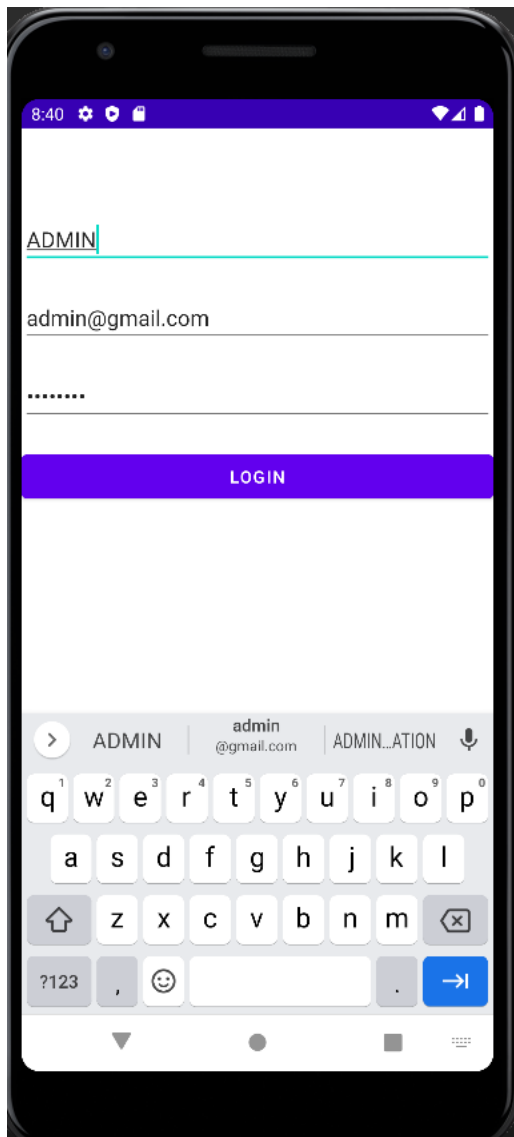
RESULT: The program is executed and output is verified

OUTPUT:

6. EXPLICIT INTENT

AIM: Develop and android application that passes data using explicit intent, while navigating from the first activity to the second activity

Date:

PROGRAM CODE

MainActivity.Java

```
package com.example.loginapp;


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.Toast;


public class MainActivity extends AppCompatActivity {

    String strName,strEmail,strPassword;

    EditText email,password,name;

    Button loginbtn;


    @Override

    protected void onCreate(Bundle savedInstanceState) {
```

```java
 super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);


    name = findViewById(R.id.editTextTextName);
    email = findViewById(R.id.editTextTextEmailAddress);
    password = findViewById(R.id.editTextTextPassword);
    loginbtn = findViewById(R.id.btn);




    loginbtn.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View view) {


        strName = name.getText().toString();
        strEmail=email.getText().toString();
        strPassword=password.getText().toString();


        if(strEmail.equals("admin@gmail.com") && strPassword.equals("admin123") )
        {
          Intent myFirstIntent = new Intent(MainActivity.this,HomePage.class);


          myFirstIntent.putExtra("username",strName);
          myFirstIntent.putExtra("useremail",strEmail);


          startActivity(myFirstIntent);
          Toast.makeText(MainActivity.this, "Login Success", Toast.LENGTH_SHORT).show();
        }
        else
```

```
    {

            Toast.makeText(MainActivity.this, "Login Failed", Toast.LENGTH_SHORT).show();

        }


    }
  });


}
}
```

HomePageJava

```
package com.example.loginapp;

import androidx.appcompat.app.AppCompatActivity;

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

public class HomePage extends AppCompatActivity {

  TextView welcomeBanner,emailBanner;
  String uname,email;

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


    uname = getIntent().getStringExtra("username");
    email = getIntent().getStringExtra("useremail");

    welcomeBanner = findViewById(R.id.welcomeBanner);
    emailBanner = findViewById(R.id.emailBanner);

    welcomeBanner.setText("Welcome "+uname);
    emailBanner.setText("Your email id is:"+email);

  }
}
```

Activity_home_page.xml

```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=".HomePage"
  android:orientation="vertical">

  <TextView
    android:layout_marginTop="50dp"
    android:textSize="25dp"
    android:textStyle="bold"
    android:id="@+id/welcomeBanner"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:gravity="center"
    android:text="WELCOME"
    android:textAllCaps="false"/>
  <TextView
    android:textSize="18dp"
    android:id="@+id/emailBanner"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:gravity="center"
    android:text="Your email is: "/>

</LinearLayout>
```

Activity_main.xml

```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">
```

```xml
    <EditText
        android:id="@+id/editTextTextName"
        android:layout_width="match_parent"
        android:layout_marginTop="70dp"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="text"
        android:hint="enter name"/>

    <EditText
        android:id="@+id/editTextTextEmailAddress"
        android:layout_width="match_parent"
        android:layout_marginTop="20dp"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textEmailAddress"
        android:hint="enter email"/>

    <EditText

        android:layout_marginTop="20dp"
        android:id="@+id/editTextTextPassword"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPassword"
        android:hint="enter password"/>

    <Button
        android:id="@+id/btn"
        android:text="Login"
        android:layout_marginTop="20dp"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"/>

</LinearLayout>
```
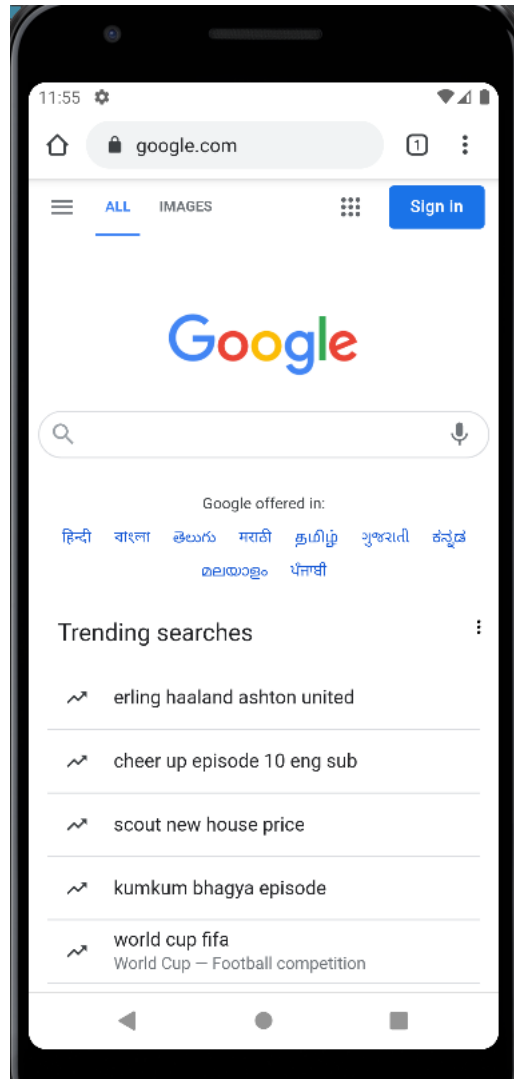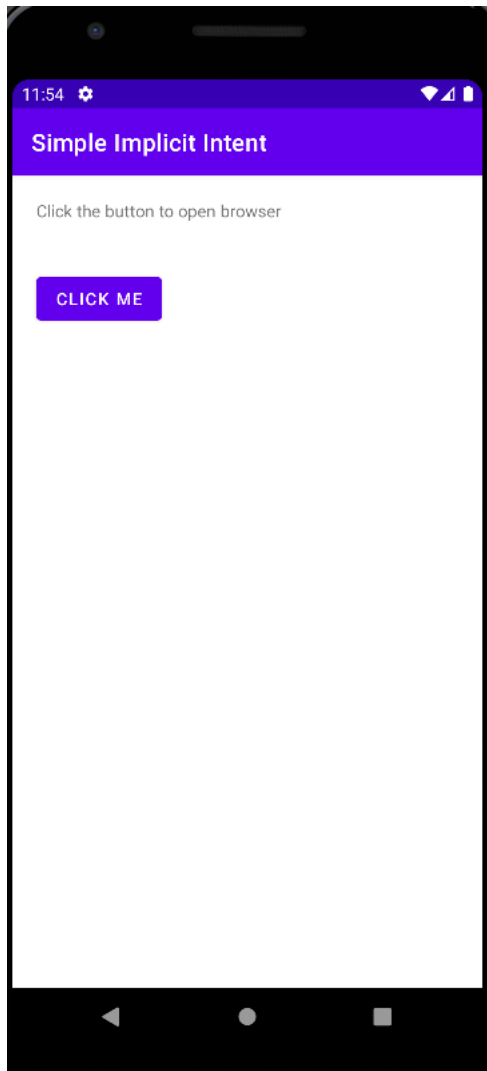
RESULT: The program is executed and output is verified

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OUTPUT :

7. IMPLICIT INTENT

AIM: Develop and android application that open the browser on a button click using implicit intent

Date:

PROGRAM CODE

MainActivity.Java

```java
package com.example.simpleimplicitintent;

import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity {

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


        btn = findViewById(R.id.btn);


        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {

                Toast.makeText(MainActivity.this, "opening browser..", Toast.LENGTH_SHORT).show();
                Intent myIntent = new Intent();

                myIntent.setAction(Intent.ACTION_VIEW);
```

```
    myIntent.setData(Uri.parse("https://google.com"));
          startActivity(myIntent);
        }
    });



  }
}
```

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">

    <TextView
      android:layout_margin="20dp"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Click the button to open browser"
      app:layout_constraintBottom_toBottomOf="parent"
      app:layout_constraintEnd_toEndOf="parent"
      app:layout_constraintStart_toStartOf="parent"
      app:layout_constraintTop_toTopOf="parent" />

    <Button
      android:layout_margin="20dp"
      android:gravity="center"
      android:id="@+id/btn"
      android:text="CLICK ME"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"/>
</LinearLayout>
```

RESULT: The program is executed and output is verified

Department of Computer Applications, CET.