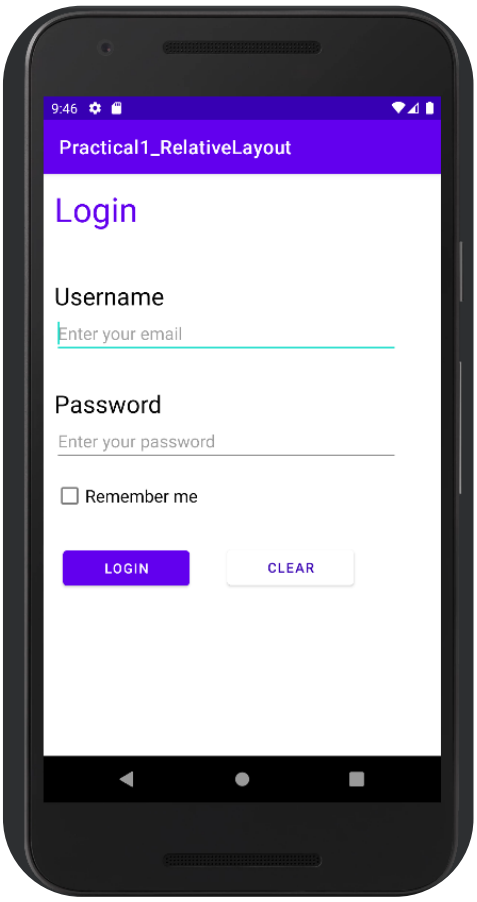
PRACTICAL 1

AIM: Design Login activity and implement control events: UseEditText, Checkbox and Buttons.

- **activity_main.xml**



Layout: Relative Layout

Widgets:

TextView(text: "Login")
TextView(text: "Username")
EditText(Id: "@+id/et_username", Hint: "Enter your email")
TextView(text : "Password")
EditText(Id: "@+id/et_password ", Hint: "Enter your password")
CheckBox(text : "Remember me")
Button (Id: "@+id/btn_login", text: "LOGIN")
Button (Id: "@+id/btn_clear", text: "CLEAR")

- **MainActiviy.java**

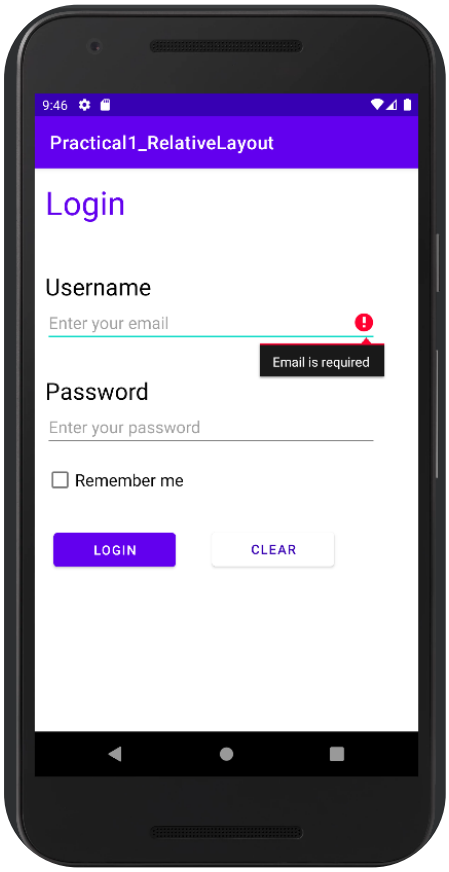
```
package com.example.practical1_relativelayout;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity<bProceed, bCancel> extends AppCompatActivity {

    Button bCancel, bProceed;
    EditText etEmail, etPassword;
    boolean isAllFieldsChecked = false;

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

        bProceed = findViewById(R.id.btn_login);
        bCancel = findViewById(R.id.btn_clear);

        etEmail = findViewById(R.id.et_username);
        etPassword = findViewById(R.id.et_password);

        bProceed.setOnClickListener(new View.OnClickListener(){
        public void onClick(View v) {
            isAllFieldsChecked = CheckAllFields();
            if (isAllFieldsChecked) {
                Intent i = new Intent(MainActivity.this,Welcome.class);
                startActivity(i);
            }
        }
    });

        //logic of clear button
        bCancel.setOnClickListener(new View.OnClickListener() {

        @Override
        public void onClick(View v) {
            MainActivity.this.finish();
            System.exit(0);
        }
    });
}

    //logic for validation
    private boolean CheckAllFields() {
        if (etEmail.length() == 0) {
```

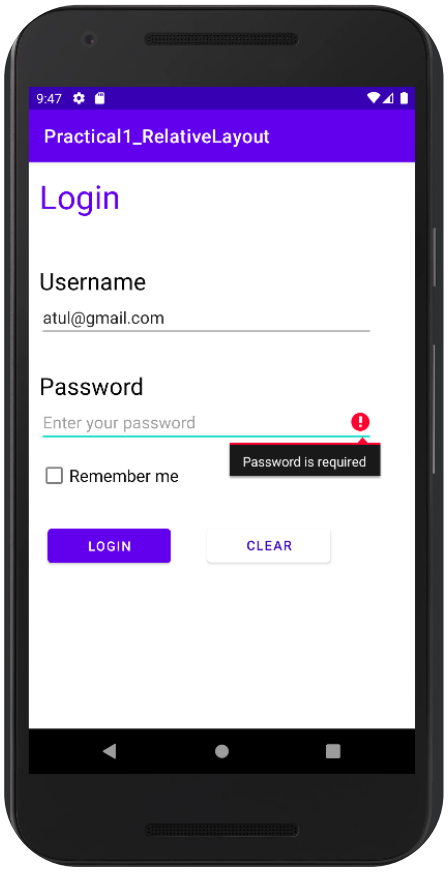
```
            etEmail.setError("Email is required");
            return false;
        }
        if (etPassword.length() == 0) {
            etPassword.setError("Password is required");
            return false;
        }
        else if (etPassword.length() < 8) {
            etPassword.setError("Password must be minimum 8 characters");
            return false;
        }
        return true;
    }
}
```

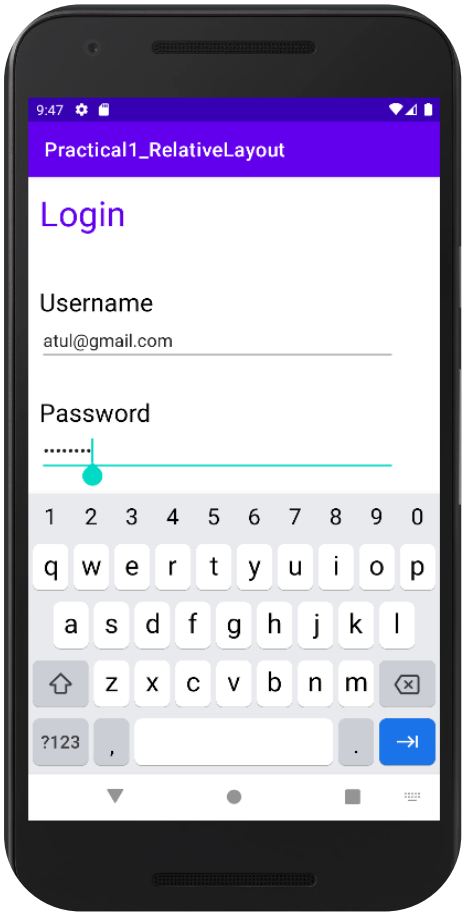
- **Welcome.java**

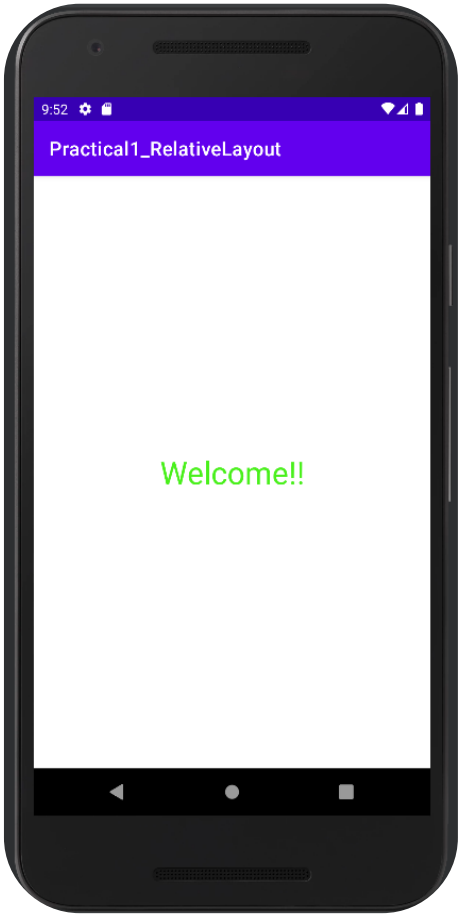
```
package com.example.practical2_linearlayout;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;

public class Welcome extends AppCompatActivity {

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

Output:


9:46
Practical1_RelativeLayout
Login
Username
Enter your email
Email is required
Password
Enter your password
Remember me
LOGIN
CLEAR


9:47
Practical1_RelativeLayout
Login
Username
atul@gmail.com
Password
Enter your password
Password is required
Remember me
LOGIN
CLEAR


9:47
Practical1_RelativeLayout
Login
Username
atul@gmail.com
Password

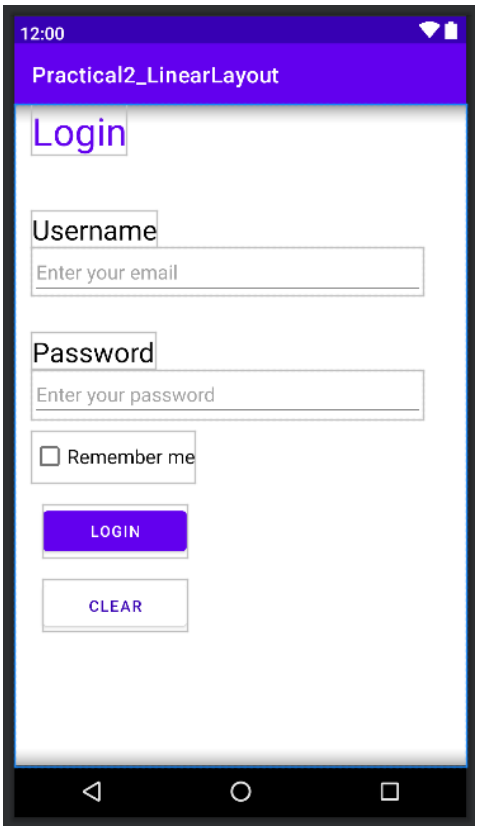

9:52
Practical1_RelativeLayout
Welcome!!

PRACTICAL 2

AIM: Implement Practical 1 using following layouts:

1. Linear Layout 2. Relative Layout 3. Table Layout

- **activity_main.xml**

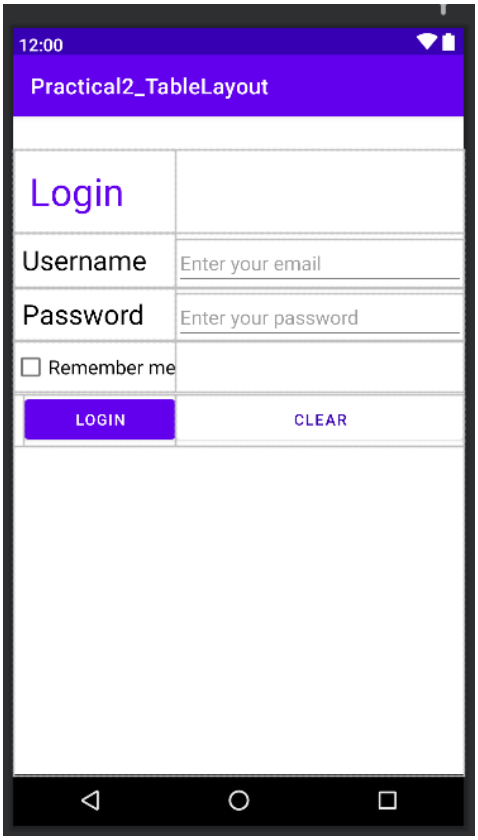


Layout: Linear Layout(orientation:"vertical")

Widgets:

TextView(text: "Login")
TextView(text: "Username")
EditText(Id: "@+id/et_username", Hint: "Enter your email")
TextView(text : "Password")
EditText(Id: "@+id/et_password ", Hint: "Enter your password")
CheckBox(text : "Remember me")
Button (Id: "@+id/btn_login", text: "LOGIN")
Button (Id: "@+id/btn_clear", text: "CLEAR")

- **activity_main.xml**



Layout: TableLayout

Widgets:

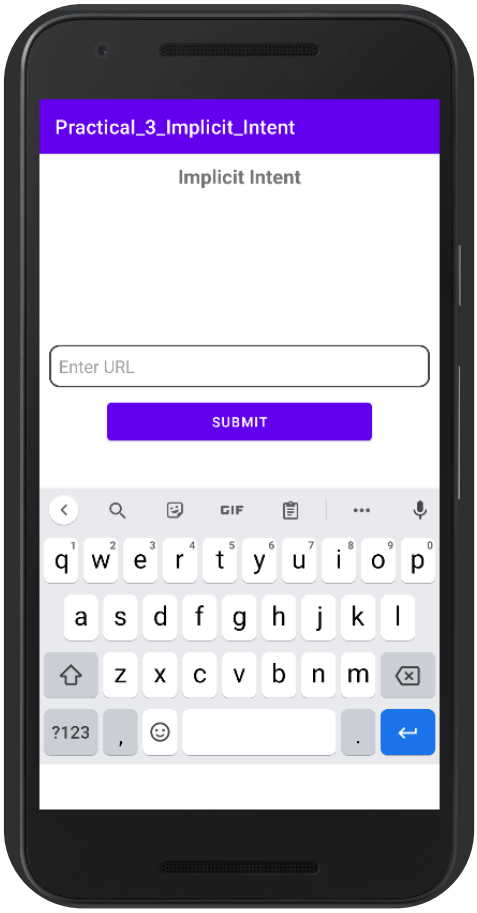
TextView(text: "Login")
TextView(text: "Username")
EditText(Id: "@+id/et_username", Hint: "Enter your email")
TextView(text : "Password")
EditText(Id: "@+id/et_password ", Hint: "Enter your password")
CheckBox(text : "Remember me")
Button (Id: "@+id/btn_login", text: "LOGIN")
Button (Id: "@+id/btn_clear", text: "CLEAR")

PRACTICAL 3

AIM: Create Activities & implement following: Implicit intent, Explicit Intent, StartActivityForResult.

❖ Implicit intent

- **activity_main.xml**



Layout: Linear Layout (Orientaion: vertical)

Widgets:

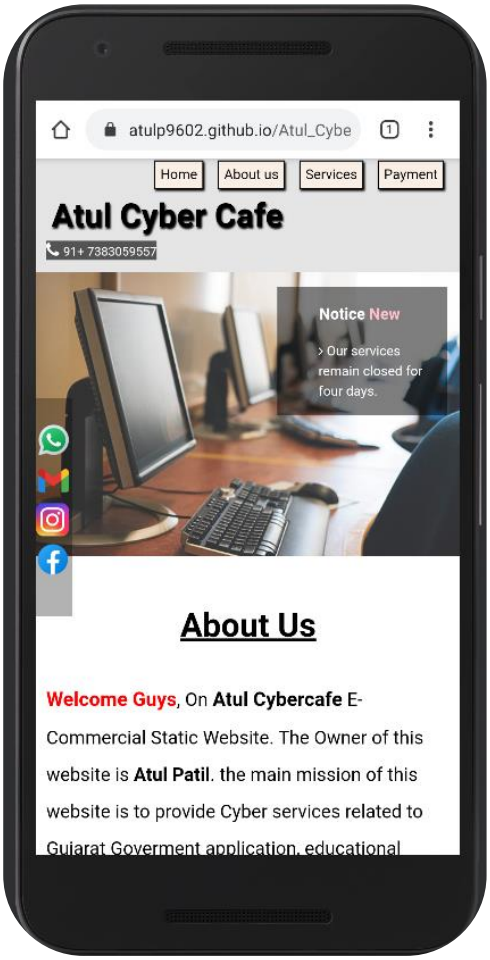
TextView(text: "Login")
TextView(text: "Username")
EditText(Id: "@+id/et_username", Hint: "Enter your email")
TextView(text : "Password")
EditText(Id: "@+id/et_password ", Hint: "Enter your password")
CheckBox(text : "Remember me")
Button (Id: "@+id/btn_login", text: "LOGIN")
Button (Id: "@+id/btn_clear", text: "CLEAR")

- **MainActivity.java**

```
package com.example.practical_3_implicit_intent;
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.EditText;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        EditText editText;
        Button button;
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        button = findViewById(R.id.btn);
        editText = (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);
            }

        });

    }

}
```

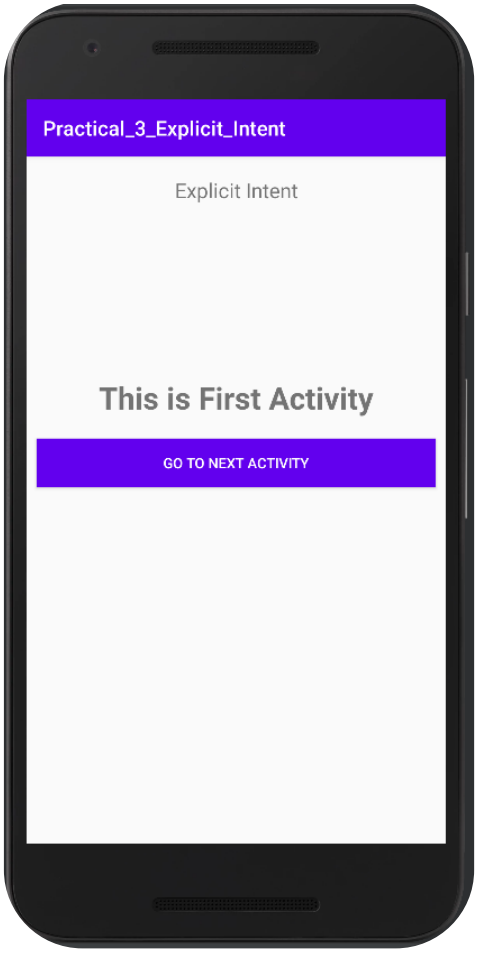
- **Output:**


Practical_3_Implicit_Intent
Implicit Intent
https://atulp9602.github.io/Atul_Cybercafe/
SUBMIT


atulp9602.github.io/Atul_Cybe
Home
About us
Services
Payment
Atul Cyber Cafe
91+ 7383059557
Notice New
› Our services remain closed for four days.
About Us
Welcome Guys, On Atul Cybercafe E-Commercial Static Website. The Owner of this website is Atul Patil. the main mission of this website is to provide Cyber services related to Gujarat Goverment application, educational

❖ Explicit Intent

- **activity_main.xml**



Layout: Linear Layout (Orientation: Vertical)

Widgets:

TextView (text: "Explicit Intent ")
TextView (text: "This is First Activity")
Button (id: "@+id/btn", text: "go to next activity ")

- **activity_second2.xml**

Layout: Linear Layout (Orientation: vertical)

Widgets:

TextView (text: "This is Second Activity")
Button (id: "@+id/btn2", text: "got to previous activity")

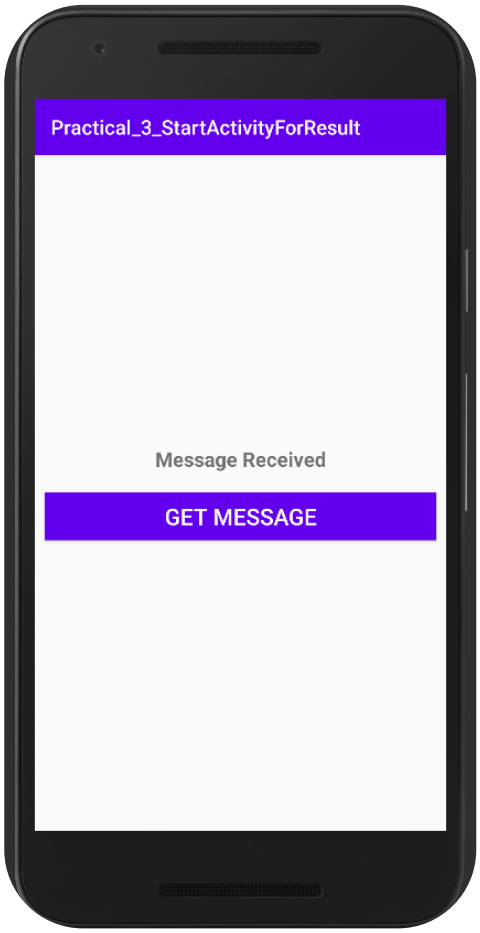
- **MainActivity.java**

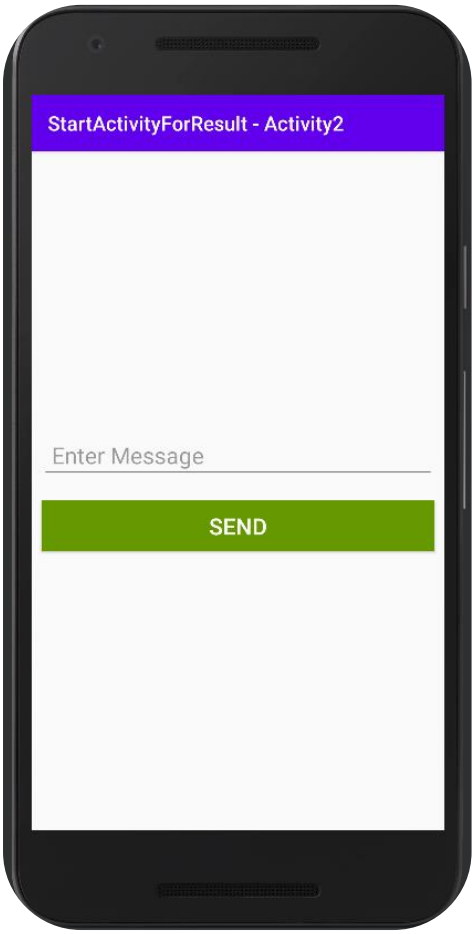
```
package com.example.practical_3_explicit_intent;
import android.content.Intent;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button btn = findViewById(R.id.btn);
        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent intent = new Intent(getApplicationContext(),SecondActivity.class);
                startActivity(intent);
            }
        });
    }
}
```

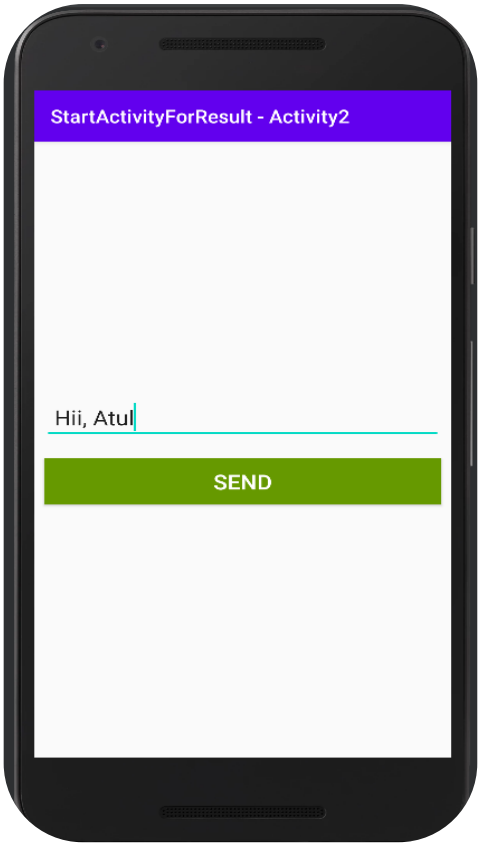
- **SecondActivity.java**

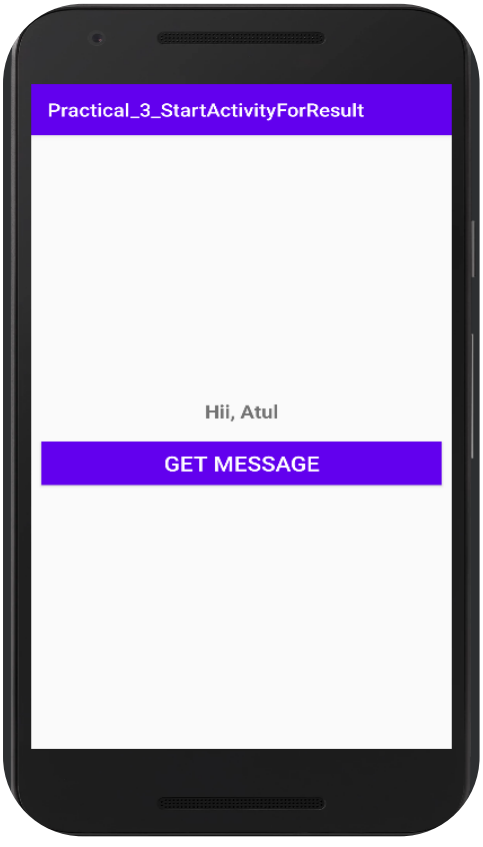
```
package com.example.practical_3_explicit_intent;
import android.content.Intent;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

public class SecondActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_second2);
        Button btn2 = findViewById(R.id.btn2);
        btn2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent intent = new Intent(getApplicationContext(), MainActivity.class);
                startActivity(intent);
            }
        });
    }}
```

- **Output:**


Practical_3_StartActivityForResult
Message Received
GET MESSAGE


StartActivityForResult - Activity2
Enter Message
SEND


StartActivityForResult - Activity2
Hii, Atul
SEND


Practical_3_StartActivityForResult
Hii, Atul
GET MESSAGE

PRACTICAL 4

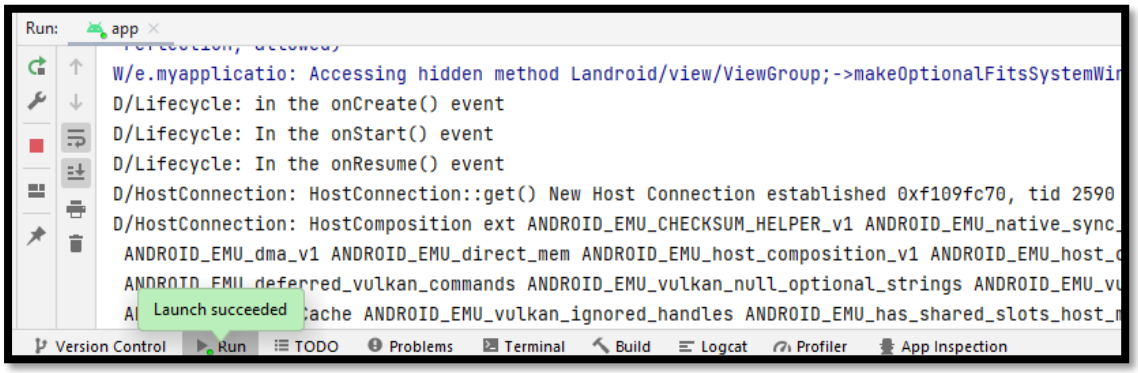
AIM: Implement Activity Lifecycle and State Callbacks.

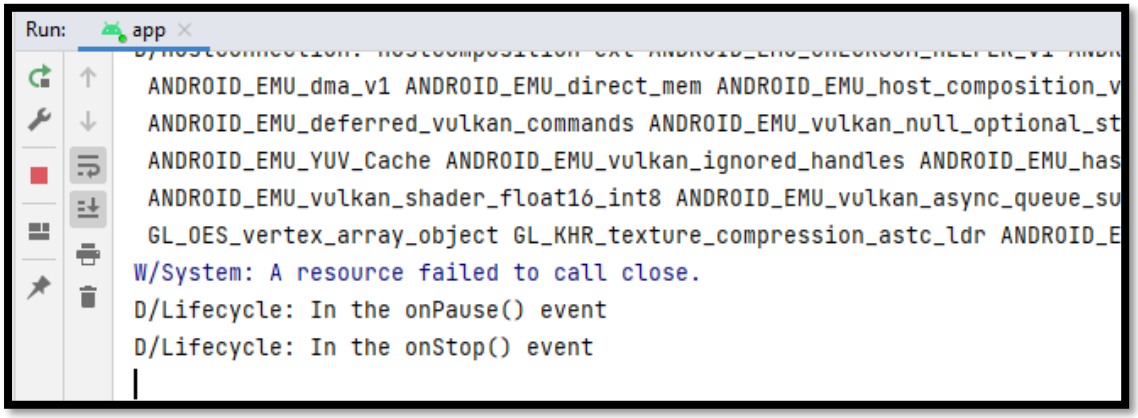
- **MainActivity.java**

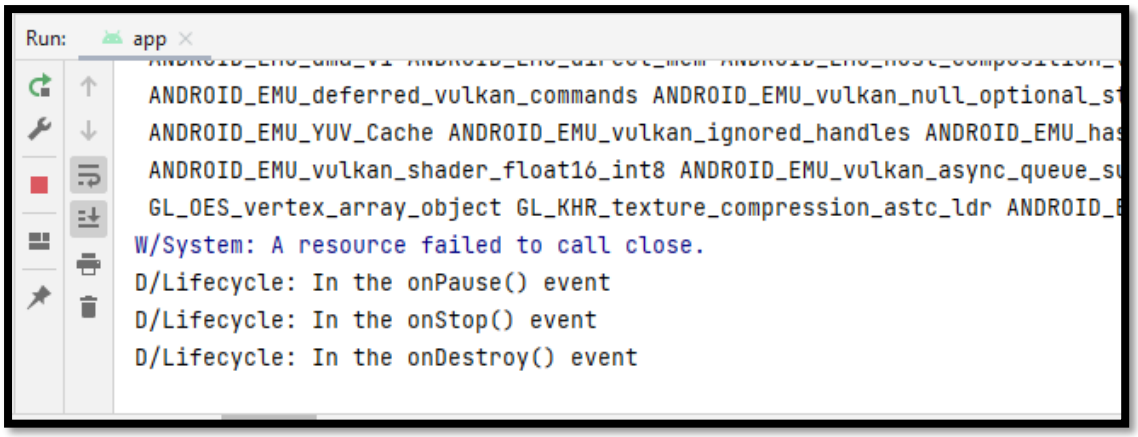
```
package com.example.myapplication;
import android.os.Bundle;
import androidx.appcompat.app.AppCompatActivity;
import android.util.Log;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {
   String tag = "Lifecycle";

   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);
      Log.d(tag,"in the onCreate() event");
      TextView text = (TextView)findViewById(R.id.text_view_id);
   }
   public void onStart(){
      super.onStart();
      Log.d(tag,"In the onStart() event");
   }
   public void onRestart(){
      super.onRestart();
      Log.d(tag,"In the onRestart() event");
   }
   public void onResume(){
      super.onResume();
      Log.d(tag,"In the onResume() event");
   }
   public void onPause(){
      super.onPause();
      Log.d(tag,"In the onPause() event");
   }
   public void onStop(){
      super.onStop();
      Log.d(tag,"In the onStop() event");
   }
   public void onDestroy(){
      super.onDestroy();
      Log.d(tag,"In the onDestroy() event");
   }
}
```

- **Output:**

- **Output (Logcat of entire activity life cycle):**



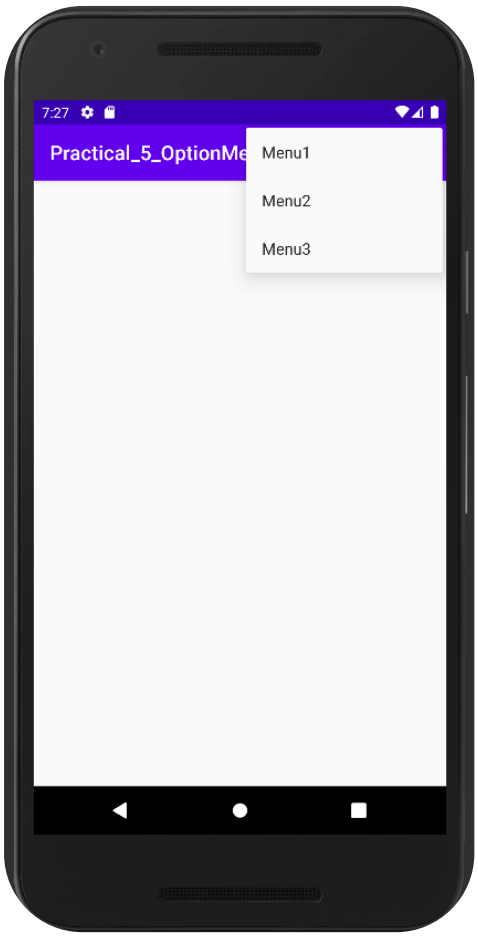


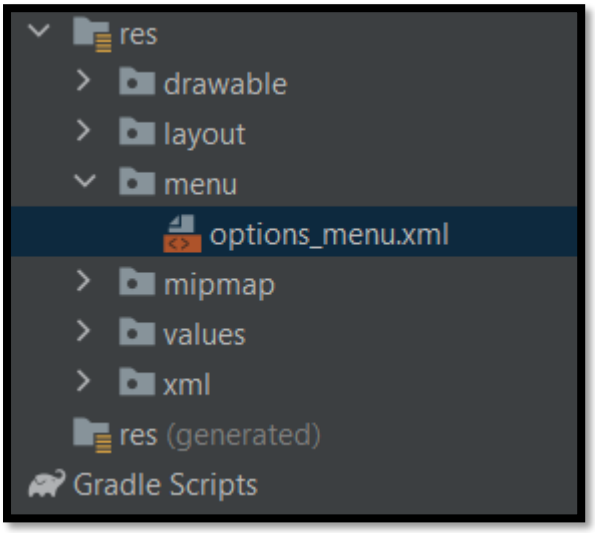

Run:
app
ANDROID_EMU_deferred_vulkan_commands ANDROID_EMU_vulkan_null_optional_st
ANDROID_EMU_YUV_Cache ANDROID_EMU_vulkan_ignored_handles ANDROID_EMU_has
ANDROID_EMU_vulkan_shader_float16_int8 ANDROID_EMU_vulkan_async_queue_su
GL_OES_vertex_array_object GL_KHR_texture_compression_astc_ldr ANDROID_E
W/System: A resource failed to call close.
D/Lifecycle: In the onPause() event
D/Lifecycle: In the onStop() event
D/Lifecycle: In the onDestroy() event

PRACTICAL 5

AIM: Use an Options Menu.

- **options_menu.xml**





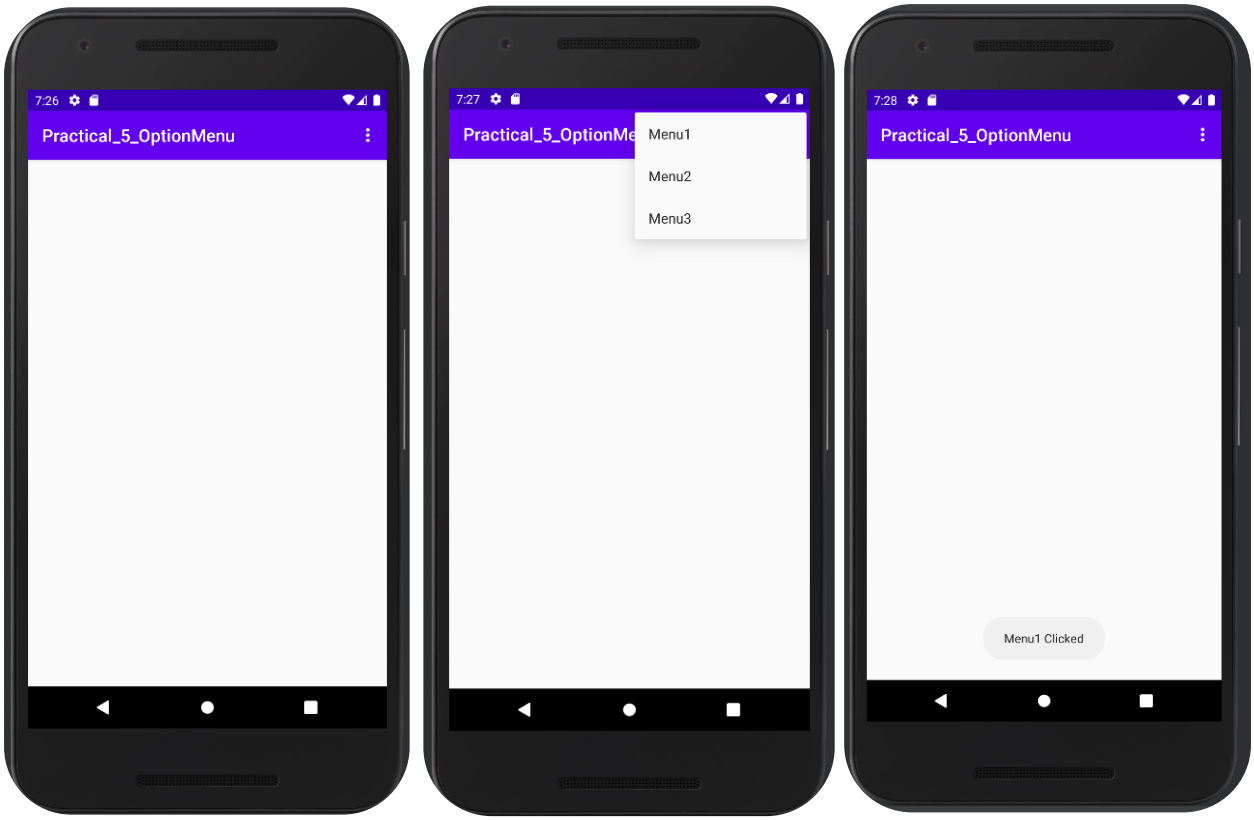
menus:

menu1 (Id: @+id/menu1, Title: Menu1)
menu2 (Id: @+id/ menu2, Title: Menu2)
menu3 (Id: @+id/ menu3, Title: Menu3)

- **MainActivity.java**

```
package com.example.practical_5_optionmenu;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

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

   @Override
   public boolean onCreateOptionsMenu(Menu menu) {
      getMenuInflater().inflate(R.menu.options_menu, menu);
      return true;
   }

   @Override
   public boolean onOptionsItemSelected(MenuItem item) {
      Toast.makeText(this, "Selected Item: " +item.getTitle(),
Toast.LENGTH_SHORT).show();
      switch (item.getItemId()) {
         case R.id.menu1:
            Toast.makeText(this, "Menu1 Clicked", Toast.LENGTH_LONG).show();
            return true;
         case R.id.menu2:
            Toast.makeText(this, "Menu2 Clicked", Toast.LENGTH_LONG).show();
            return true;
         case R.id.menu3:
            Toast.makeText(this, "Menu3 Clicked", Toast.LENGTH_LONG).show();
            return true;
         default:
            return super.onOptionsItemSelected(item);
      }
   }
}
```

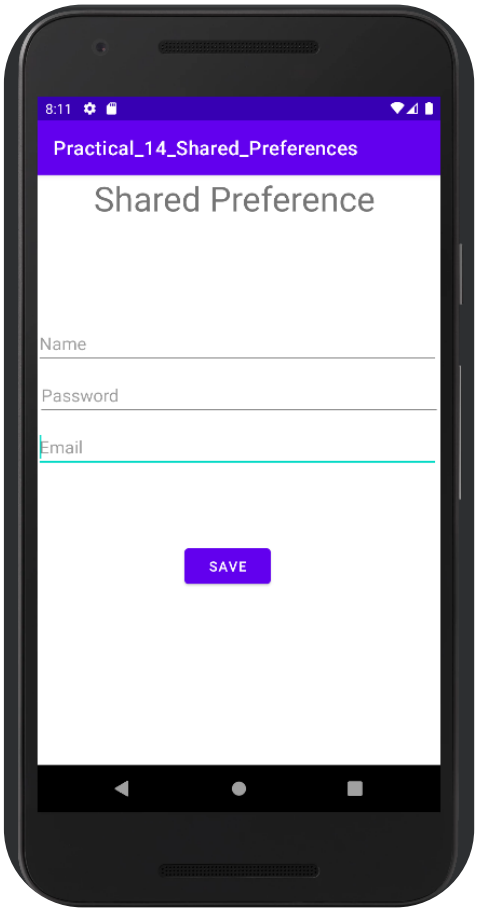
- **Output:**


7:26
Practical_5_OptionMenu
7:27
Practical_5_OptionMe
Menu1
Menu2
Menu3
7:28
Practical_5_OptionMenu
Menu1 Clicked

PRACTICAL 14

AIM: Implement Get and Save User Preferences.

- **activity_main.xml**



Layout: Relative Layout

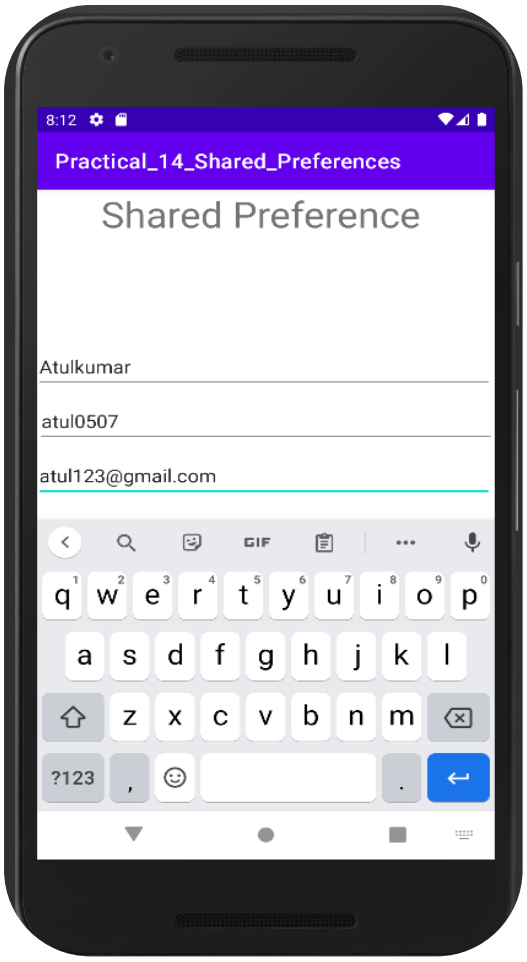
Widgets:

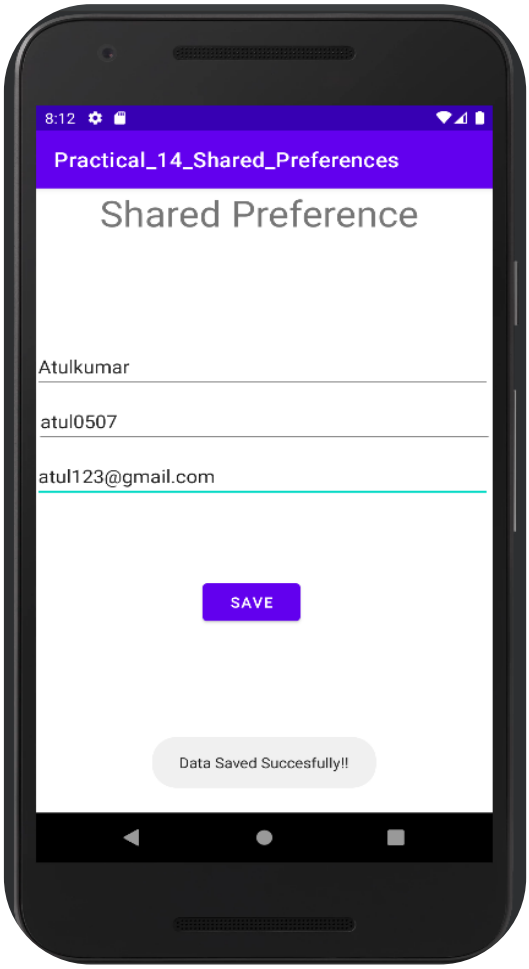
TextView
EditText (Id: "@+id/editText", Hint: "Name")
EditText (Id: "@+id/ editText2", Hint: "Password")
EditText (Id: "@+id/ editText3", Hint: "Email")
Button (Id: "@+id/button", text: "Save")

- **MainActivity.java**

```
package com.example.practical_14_shared_preferences;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Context;
import android.content.SharedPreferences;
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 ed1,ed2,ed3;
   Button b1;
   public static final String MyPREFERENCES = "MyPrefs" ;
   public static final String Name = "nameKey";
   public static final String Phone = "phoneKey";
   public static final String Email = "emailKey";
   SharedPreferences sharedpreferences;

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

      ed1=(EditText)findViewById(R.id.editText);
      ed2=(EditText)findViewById(R.id.editText2);
      ed3=(EditText)findViewById(R.id.editText3);
      b1=(Button)findViewById(R.id.button);
      sharedpreferences = getSharedPreferences(MyPREFERENCES,
Context.MODE_PRIVATE);

      b1.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View v) {
            String n  = ed1.getText().toString();
            String ph  = ed2.getText().toString();
            String e  = ed3.getText().toString();

            SharedPreferences.Editor editor = sharedpreferences.edit();
            editor.putString(Name, n);
            editor.putString(Phone, ph);
            editor.putString(Email, e);
            editor.commit();
            Toast.makeText(MainActivity.this,"Data Saved
Succesfully!!",Toast.LENGTH_LONG).show();
         }
      });
   }
```

- **Output:**





Shared Preferences Data Format