

Experiment 06

Write a program to implement new activity using explicit intent and implicit intent.

Learning Objective: Student should be able to write a program to implement new activity using explicit intent and implicit intent in Android Studio.

Tools: Android Studio

Theory:

Android Studio:

Android Studio is the official integrated development environment (IDE) for Android application development. Every project in Android Studio has one or more modalities with source code and resource files. These modalities include Android app modules, Library modules, and Google App Engine modules. It is an open source software platform and operating system for mobile devices which is based on the Linux kernel. It allows writing managed code in the Java language and Kotlin language. Android apps are built as a combination of components that can be invoked individually. For example, an activity is a type of app component that provides a user interface (UI). The “main” activity starts when the user taps the application’s icon. One can also direct the user to an activity from elsewhere, such as from a notification or even from a different app. Other components, such as broadcast receivers and services, allow the application to perform background tasks without a UI. Intent is a messaging object which passes between components like services, content providers, activities etc. Normally the startActivity() method is used for invoking any activity.

Intent Classification

There are two types of intents:

- **Implicit Intent:**
Using implicit Intent, components can’t be specified. An action to be performed is declared by implicit intent. Then the android operating system will filter out components which will respond to the action.
- **Explicit Intent:**
Using explicit intent any other component can be specified. In other words, the targeted component is specified by explicit intent. So only the specified target component will be invoked.

Implementation:

MainActivity.java

```
package com.example.ps_exp_6;                                import android.widget.TextView;

import                                                       import java.net.URL;
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 {
    private EditText Name;
    private EditText Password;
    private TextView Info;
    private Button Sign;
    private Button Exit;
```

```
@Override
protected void onCreate(Bundle
savedInstanceState) {
    super.onCreate(savedInstanceState);

    setContentView(R.layout.activity_main);
    Name = (EditText)
    findViewById(R.id.editTextTextPersonName);
    Password = (EditText)
    findViewById(R.id.editTextTextPersonName2);
    Sign = (Button)
    findViewById(R.id.button2);
    Sign.setOnClickListener(new
    View.OnClickListener() {
        @Override
        public void onClick(View view) {
```

```
Intent intent = new
Intent(MainActivity.this, Post_Login.class);
startActivity(intent);
    }
});
Exit = (Button)
findViewById(R.id.button4);
Exit.setOnClickListener(new
View.OnClickListener() {
    @Override
    public void onClick(View view) {
        Uri url =
        Uri.parse("https://www.google.com");
        Intent intent2 = new
        Intent(Intent.ACTION_VIEW, url);
        startActivity(intent2);
    }
});
}
```

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
```

```
xmlns:app="http://schemas.android.com/apk/res-auto"
```

```
xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
```

```
<EditText
```

```
    android:id="@+id/editTextTextPersonName"
    android:layout_width="297dp"
    android:layout_height="51dp"
    android:layout_marginStart="57dp"
    android:layout_marginTop="43dp"
```

```
    android:ems="10"
    android:inputType="textPersonName"
    android:text="Enter Username"
    android:textColor="#314E45"
    android:textSize="20sp"
```

```
    app:layout_constraintStart_toStartOf="parent"
```

```
    app:layout_constraintTop_toBottomOf="@+id/textView4" />
```

```
<EditText
```

```
    android:id="@+id/editTextTextPersonName2"
    android:layout_width="297dp"
    android:layout_height="51dp"
    android:layout_marginStart="57dp"
    android:layout_marginTop="40dp"
    android:ems="10"
    android:inputType="textPersonName"
    android:text="Password"
```

```

    android:textColor="#314E45"
    android:textSize="20sp"

app:layout_constraintStart_toStartOf="parent"

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

<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="105dp"
    android:layout_marginTop="30dp"
    android:backgroundTint="#314E45"
    android:text="Login"
    android:textSize="16sp"

app:layout_constraintStart_toStartOf="parent"

app:layout_constraintTop_toBottomOf="@+id/editTextTextPersonName2" />

<Button
    android:id="@+id/button4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="28dp"
    android:layout_marginTop="75dp"
    android:backgroundTint="#314E45"
    android:text="Exit"
    android:textSize="16sp"

app:layout_constraintStart_toStartOf="parent"

app:layout_constraintTop_toTopOf="parent" />

<Button
    android:id="@+id/button2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="30dp"
    android:layout_marginTop="30dp"
    android:backgroundTint="@color/white"

    android:text="Sign Up"
    android:textColor="#314E45"
    android:textSize="16sp"

app:layout_constraintStart_toEndOf="@+id/button"

app:layout_constraintTop_toBottomOf="@+id/editTextTextPersonName2"
    app:strokeColor="#314E45"
    app:strokeWidth="5px" />

<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="140dp"
    android:layout_marginTop="26dp"
    android:text="Forgot Password?"
    android:textSize="16sp"

app:layout_constraintStart_toStartOf="parent"

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

<TextView
    android:id="@+id/textView6"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="129dp"
    android:layout_marginTop="28dp"
    android:text="Remaining Attempts: "
    android:textSize="16sp"

app:layout_constraintStart_toStartOf="parent"

app:layout_constraintTop_toBottomOf="@+id/textView2" />

<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"

```

```
android:layout_marginStart="172dp"
android:layout_marginTop="141dp"
android:text="Welcome"
android:textColor="#314E45"
android:textSize="16sp"
```

```
app:layout_constraintStart_toStartOf="parent"
```

```
app:layout_constraintTop_toTopOf="parent" />
```

```
<TextView
    android:id="@+id/textView4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="58dp"
```

Post_Login.java

```
package com.example.ps_exp_6;

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 Post_Login extends
AppCompatActivity {
    private EditText UserN;
    private EditText Name;
    private EditText Email;
    private EditText Password;
    private EditText CPassword;
    private Button Login;

    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
```

after_login.xml

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

```
android:layout_marginTop="11dp"
android:text="Please Fill the details given
below to login"
android:textColor="#314E45"
android:textSize="16sp"
```

```
app:layout_constraintStart_toStartOf="parent"
```

```
app:layout_constraintTop_toBottomOf="@+id/t
extView3" />
```

```
</androidx.constraintlayout.widget.ConstraintLa
yout>
```

```
setContentView(R.layout.after_login);
    UserN = (EditText)
findViewById(R.id.editTextTextPersonName);
    Name = (EditText)
findViewById(R.id.editTextTextPersonName2);
    Email = (EditText)
findViewById(R.id.editTextTextPersonName9);
    Password = (EditText)
findViewById(R.id.editTextTextPersonName7);
    CPassword = (EditText)
findViewById(R.id.editTextTextPersonName8);
    Login = (Button)
findViewById(R.id.button2);
    Login.setOnClickListener(new
View.OnClickListener() {
        @Override
        public void onClick(View view) {
            Intent intent = new
Intent(Post_Login.this, MainActivity.class);
            startActivity(intent);
        }
    });
}
```

```
<androidx.constraintlayout.widget.ConstraintLa
yout
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">
```

```
<androidx.constraintlayout.widget.ConstraintLa
yout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
```

```
<EditText
```

```
android:id="@+id/editTextTextPersonName"
    android:layout_width="297dp"
    android:layout_height="51dp"
    android:layout_marginStart="57dp"
    android:layout_marginTop="43dp"
    android:ems="10"
    android:inputType="textPersonName"
    android:text="Enter Username"
    android:textColor="#314E45"
    android:textSize="20sp"
```

```
app:layout_constraintStart_toStartOf="parent"
```

```
app:layout_constraintTop_toBottomOf="@+id/t
extView4" />
```

```
<EditText
```

```
android:id="@+id/editTextTextPersonName2"
    android:layout_width="297dp"
    android:layout_height="51dp"
    android:layout_marginStart="56dp"
    android:layout_marginTop="12dp"
```

```
android:ems="10"
    android:inputType="textPersonName"
    android:text="Enter Full Name"
    android:textColor="#314E45"
    android:textSize="20sp"
```

```
app:layout_constraintStart_toStartOf="parent"
```

```
app:layout_constraintTop_toBottomOf="@+id/e
ditTextTextPersonName" />
```

```
<EditText
```

```
android:id="@+id/editTextTextPersonName9"
    android:layout_width="297dp"
    android:layout_height="51dp"
    android:layout_marginStart="56dp"
    android:layout_marginTop="84dp"
    android:ems="10"
    android:inputType="textPersonName"
    android:text="Enter Email"
    android:textColor="#314E45"
    android:textSize="20sp"
```

```
app:layout_constraintStart_toStartOf="parent"
```

```
app:layout_constraintTop_toBottomOf="@+id/e
ditTextTextPersonName" />
```

```
<EditText
```

```
android:id="@+id/editTextTextPersonName7"
    android:layout_width="297dp"
    android:layout_height="51dp"
    android:layout_marginStart="56dp"
    android:layout_marginTop="144dp"
    android:ems="10"
    android:inputType="textPersonName"
    android:text="Enter Password"
    android:textColor="#314E45"
    android:textSize="20sp"
```

```
app:layout_constraintStart_toStartOf="parent"
```



```
app:layout_constraintTop_toBottomOf="@+id/editTextTextPersonName" />
```

```
<EditText
```

```
    android:id="@+id/editTextTextPersonName8"
    android:layout_width="297dp"
    android:layout_height="51dp"
    android:layout_marginStart="56dp"
    android:layout_marginTop="208dp"
    android:ems="10"
    android:inputType="textPersonName"
    android:text="Confirm Password"
    android:textColor="#314E45"
    android:textSize="20sp"
```

```
app:layout_constraintStart_toStartOf="parent"
```

```
app:layout_constraintTop_toBottomOf="@+id/editTextTextPersonName" />
```

```
<Button
```

```
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="76dp"
    android:layout_marginTop="25dp"
    android:backgroundTint="#314E45"
    android:text="Sign Up"
    android:textSize="16sp"
```

```
app:layout_constraintStart_toStartOf="parent"
```

```
app:layout_constraintTop_toBottomOf="@+id/editTextTextPersonName8" />
```

```
<Button
```

```
    android:id="@+id/button2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="48dp"
    android:layout_marginTop="25dp"
    android:backgroundTint="@color/white"
```

```
    android:text="Login"
    android:textColor="#314E45"
    android:textSize="16sp"
```

```
app:layout_constraintStart_toEndOf="@+id/button"
```

```
app:layout_constraintTop_toBottomOf="@+id/editTextTextPersonName8"
    app:strokeColor="#314E45"
    app:strokeWidth="5px" />
```

```
<TextView
```

```
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="172dp"
    android:layout_marginTop="141dp"
    android:text="Welcome"
    android:textColor="#314E45"
    android:textSize="16sp"
```

```
app:layout_constraintStart_toStartOf="parent"
```

```
app:layout_constraintTop_toTopOf="parent" />
```

```
<TextView
```

```
    android:id="@+id/textView4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="48dp"
    android:layout_marginTop="12dp"
    android:text="Please Fill the details given below to register"
    android:textColor="#314E45"
    android:textSize="16sp"
```

```
app:layout_constraintStart_toStartOf="parent"
```

```
app:layout_constraintTop_toBottomOf="@+id/textView3" />
```

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

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

Design:

Implicit Intent:

EXIT

Welcome

Please Fill the details given below to login

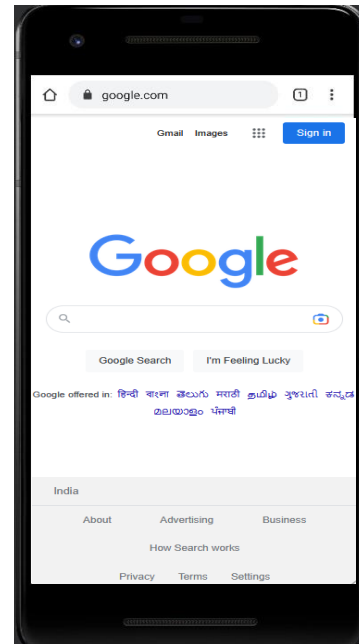
Enter Username

Password

LOGIN SIGN UP

Forgot Password?

Remaining Attempts:



Explicit Intent:

EXIT

Welcome

Please Fill the details given below to login

Enter Username

Password

LOGIN SIGN UP

Forgot Password?

Remaining Attempts:

Welcome

Please Fill the details given below to register

Enter Username

Enter Full Name

Enter Email

Enter Password

Confirm Password

SIGN UP LOGIN

Result and Discussion: We successfully implemented a program to execute a program on Android Studio to create a Login Page which uses implicit and explicit intent to switch between pages.

Learning Outcomes: The student should have the ability to

LO1: explain what is meant by implicit and explicit intent.

LO2: execute a simple program to create pages to execute implicit and explicit intent.

Course Outcomes: Upon completion of the course students will be able to execute a simple programs illustrating implicit and explicit intents.

Conclusion: We understood the concept implicit and explicit intent and how they work in Android Studio. We also successfully executed a program to demonstrate the same. Several concepts related to Android Application Development were revised while performing this experiment.

For Faculty Use

Correction Parameters	Formative Assessment [40%]	Timely completion of Practical [40%]	Attendance / Learning Attitude [20%]	
Marks Obtained				