

Guru Nanak Khalsa College , Autonomous
Matunga, Mumbai - 400 019

Department Of Information Technology

APP DEVELOPMENT
&
CLOUD DATABASE

Name : Ragini Vishwakarma
Roll-No : 546

Class : TY BSC - IT

Semester : Sem - 5

INDEX

Sr.No	Practical	Date
1.	Introduction to Kotlin	17/07/2025
2.	Learning Basic Syntax	17/07/2025
3	Programs on Package, Functions and Variables	17/07/2025
4	Programs on Basic Input, Output and Comments	17/07/2025
5	Programs on Basic Data Types, Type Checking and Type Casting	17/07/2025
6	Programs on Conditions and Loops	17/07/2025

7	Various Online Quiz on Kotlin	17/07/2025
8	Introduction to Android, Android OS, Developer Resources, Android Software Stack, Android Core Components	17/07/2025
9	Setting up Android Studio IDE, Creating an AVD, Setting up USB Debugging mode, Executing a Simple "Hello World" program	15/07/2025
10	Programming Resources Android Resources: (Color, Theme, String, Drawable, Dimension, Image)	15/07/2025
11	Programming Activities and fragments Activity Life Cycle, Activity methods, Multiple Activities, Life Cycle of fragments and multiple fragments.	
12	Programs related to different Layouts Linear, Relative, Absolute, Constraint Layout	22/07/2025 29/07/2025
13	Programming UI elements AppBar, Fragments, UI Components	
14	Programming menus, dialog, dialog fragments	
15	Programs on Intents, Events, Listeners and Adapters: The Android Intent Class, Using Events and Event Listeners	
16	Android Manifest File, Creating a Splash Screen	

17	Programs on Services, notification and broadcast receivers	
18	Database Programming with SQLite	
19	Introduction to Firebase, Firebase Realtime Database, JSON structured data, Database configuration rules	
20	Add Firebase to your Android project	
21	Add Firebase services to your app	
22	Structure Your Database	
23	Read and Write Data on Android	

PRACTICAL NO 1

AIM : Introduction to Kotlin.

Practical No. 1

* Introduction to kotlin

- kotlin is a modern statically typed programming language developed by Jet Brain, the makers of IntelliJ IDEA
- kotlin was designed to be fully interoperable with Java and to solve some of the common problems faced by Java developers.
- It was officially announced as a first-class language for Android development by Google in 2017.

kotlin is concise, safe and expressive. It is used for a wide range of application development such as:

- Android apps
- web development (via kotlin / JS)
- Desktop apps
- Server-side application

Features of kotlin

i) Concise : Reduces boilerplate code

ii) Null Safety: Helps avoid NullPointerException error

iii) Interoperable: 100% compatible with existing Java code

v) Smart Casts and Type Inference: Reduces the need for explicit casting and typing

v) functional support: supports lambda function and higher-order function

v) modern Tooling: Supported in Android Studio and IntelliJ IDEA

Basic Structure of a Kotlin Program:

```
fun main () {
```

```
    println ("Hello, Kotlin!")
```

- fun: keyword to declare a function

- main (): Entry point of the program

- println (): prints the output followed by a new line.

PRACTICAL NO 2

AIM : Learning Basic Syntax

Practical No 2

* Learning Basic Syntax

1] Variable Declaration

- val : Immutable variable

- var : Mutable variable

- Example :

val Country = "India" // Immutable

val year = 2025 // mutable

2) Type Inference.

No need to specify the type

val name = "Ragini" // Automatically a String

val age = 19 // Automatically an Int

3] Explicit Type Declaration

val pi : Double = 3.14

4] String Templates

Insert variables directly into string using \$ symbol

val name = "Ragini"

println("My Name is \$name")

5] Comments

- single-line comment : // This is a Comment

- multi-line comment :

```
/*  
This is a  
Comment  
*/
```

6] Print Statement

- `println()`: Output on the same line

- `println()`: Output on the new line.

7] Arithmetic Operations

```
val a=10
```

```
val b=5
```

```
println("sum : $ (a+b) ")
```

8] Boolean and Comparison

```
val x=10
```

```
val y=20
```

```
println(x>y) // false
```

```
println(y<x) // true
```

PRACTICAL NO 3

AIM: Program on Package, Function and Variables

Guru Nanak Khalsa College (Autonomous)
Roll No. 546 Date : _____ Page No. _____

Practical No. 3

* Program on Package, function, & variables

1) package
packages are used to group related classes & functions
package mypackage
fun main () {
 println("This is inside the package named
 mypackage")
}

Output:
This is inside the package named "mypackage"

2) functions

fun greet (name: String) {
 println("Hello, \$name! Welcome to Kotlin")
}
fun main () {
 greet ("Ragini")
}

Output:
Hello, Ragini! Welcome to Kotlin

3) Variables

```
fun main() {
```

```
    val pi = 3.14
```

```
    var name = "Ragini"
```

```
    println("name : $name, PI : $pi")
```

```
    name = "Java"
```

```
    println("Now name is changed to : $name")
```

```
}
```

Output :

name : Ragini , PI : 3.14

Now name is changed to : Java.

PRACTICAL NO 4

AIM: Program on Basic Input, Output and Comments

Practical No-4

* Program on Basic Input, Output & Comments

TJ Basic Input & Output

```
fun main () {  
    println ("Enter your name : ")  
    val name = readln ()  
    println ("Welcome , $ name ! ")
```

Output :

Enter your name:

Ragni

Welcome, Ragini!

2) Single - line & multi - line Comments

fun main () {

(1 This is a single-line comment

```
printf ("Hello world!")
```

14

This is multi-line

Comment

16

pointIn("kotlin")

3

PRACTICAL NO 5

AIM: Program on Basic Data Types, Type Checking

and Type Casting

Guru Nanak Khalsa College (Autonomous)

Roll No. 546 Date : _____ Page No. _____

Practical No. 5

* Program on Basic Data Types, Type checking, and Type Casting.

1) Data Types

```
fun main() {
    val name : String = "Ragini"
    val age : Int = 19
    val height : Double = 5.1
    val isStudent : Boolean = true
```

```
    println("Name : $name")
    println("Age : $age")
```

}

Output:-

Name: Ragini
Age: 19

2) Type checking

```
fun main() {
    val x = 20
    if (x is Int) {
        println("x is an Integer")
    }
}
```

3] Type Casting

```
fun main () {
```

```
    val a = 10
```

```
    val b = a.toDouble
```

```
    println ("Original : $a")
```

```
    println ("After Casting : $b")
```

```
}
```

Output:

Original : 10

After Casting : 10.0

PRACTICAL NO 6

AIM: Programs on Conditions and Loops

Guru Nanak Khalsa College (Autonomous)

Roll No. 566 Date : _____ Page No. _____

Practical NO 6

* Program on conditions and loops

1) Using if - else

```
fun main () {  
    val number = 5  
    if (number % 2 == 0) {  
        println("The number is even")  
    } else {  
        println("The number is odd")  
    }  
}
```

2) Using when

```
fun main () {  
    val day = 3  
    when (day) {  
        1 → println("Monday")  
        2 → println("Tuesday")  
        3 → println("Wednesday")  
        else → println("Invalid day")  
    }  
}
```

3] Using for loop

```
fun main () {  
    for (i in 1..5) {  
        print "\n (" Number : $i )"  
    }  
}
```

4] Using while loop

```
fun main () {  
    var i = 1  
    while (i <= 3) {  
        print "\n (" value : $i )"  
        i++  
    }  
}
```

5] Using do-while loop

```
fun main () {  
    var i = 1  
    do {  
        print "\n (" printed atleast once : $i )"  
        i++  
    } while (i <= 2)  
}
```

PRACTICAL NO 7

AIM: Various Online Quiz on kotlin

PRACTICAL NO 8

AIM: Introduction to Android, Android OS Developer Resources, Android Software Stack, Android Core Components

Practical 8

- * Introduction to Android, Android OS, Developers Resources, Android Software Stack, Android Core Components

1] Introduction to Android

Android is a open - source operating system developed by Google, designed primarily for mobile devices such as smartphone and tablets. Based on the Linux kernel, Android provides a rich application framework that allows developer to create innovative apps and games for mobile devices in Java, Kotlin or C++.

key features :

- Open - Source and Customizable
- Support 2D & 3D graphics
- Optimized for battery and performance
- Rich multimedia support
- Multi - tasking and Multi - touch
- Large developer community and app ecosystem

2] Android OS :

Android OS is layered system that includes:
• A Linux - based kernel.

- Native Library written in C/C++
- A runtime environment (Android runtime, or ART)
- Application framework in Java
- User Interface Components

3) Developer Resources:

Android development is supported by rich resources provided by Google and the Open-Source Community.

→ Tools

- Android Studio - official IDE for Android Development
- SDK (Software Development Kit) - Tools and APIs for Android app
- AVD (Android Virtual Device) - Emulator to test apps
- Gradle - Build System
- Firebase - Backend Service like DB, real-time analytics
- Material Design - UI/UX guidelines

4) Android Software Stack:

Android Architecture is structured in layers. This is also called as the Android Software Stack.

Diagram :

Application (Top layer)

Application framework

Android Runtime + Native Libraries

HAC (Hardware Abstraction Layer)

(Inner Kernel (Base layer))

5] Android Core Components :

i) Activities :

- Represents : A single screen with a user interface.
- Example : Login Screen, Home Screen
- Life Cycle : On Create(), On Start(), On Resume()

ii) Services :

- Run in the background without UI
- Used for long-running operations like playing music or downloading files

iii) Broadcast Receivers :

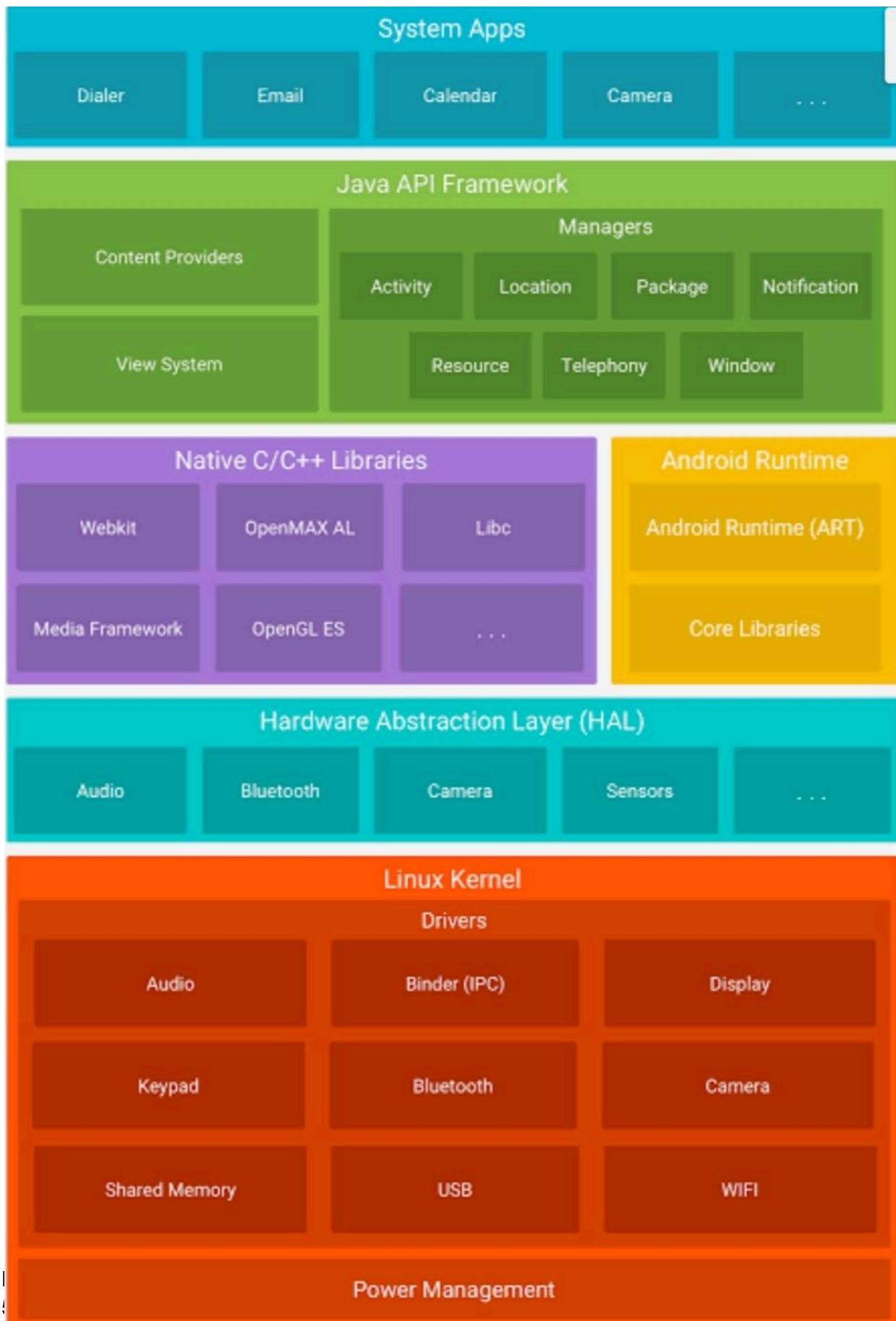
- Respond to system-wide broadcast announcements.
- Example : Battery low, SMS received with Connected.

v) Content Provider :

- manage shared app data
- enables data access between application

v) Content Resourcer : [optimal component]

- Not a separate Component but includes:
 - Drawable (image)
 - Layout (UI)
 - Value (string, color)

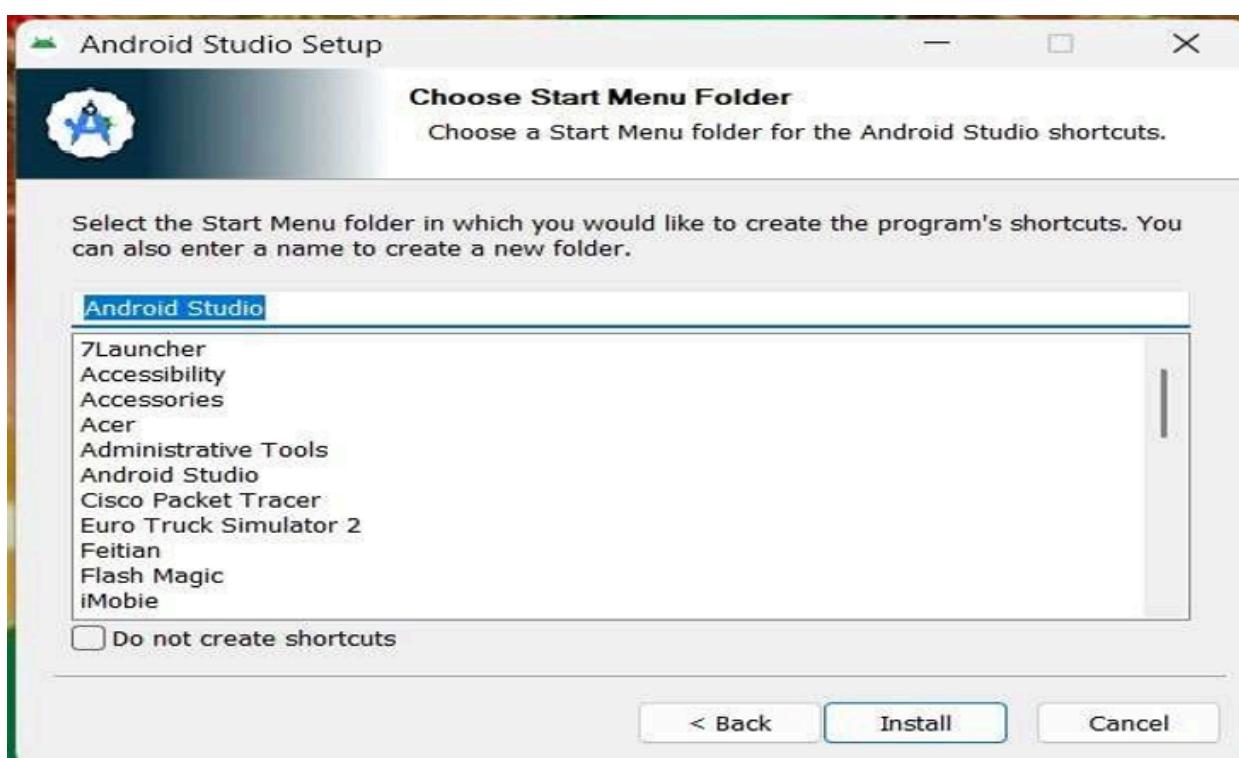


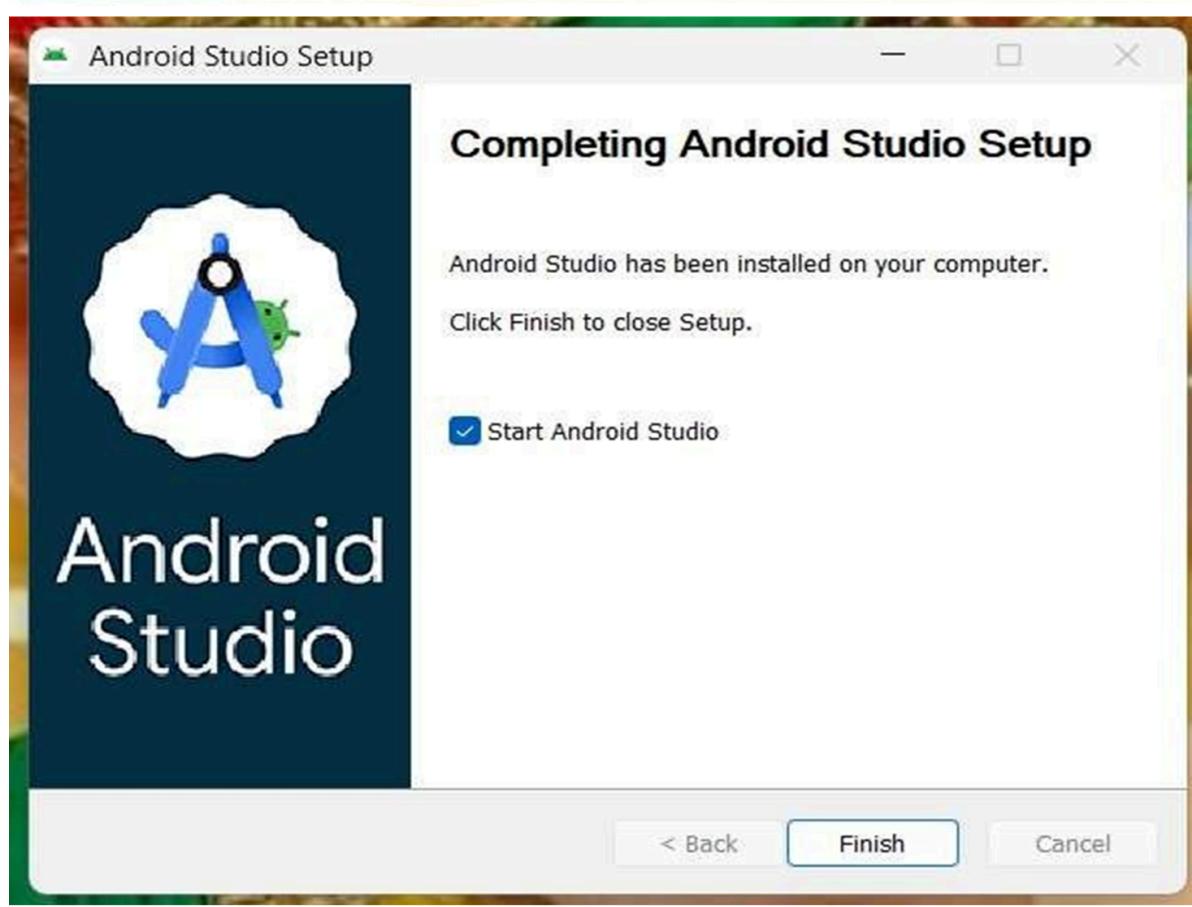
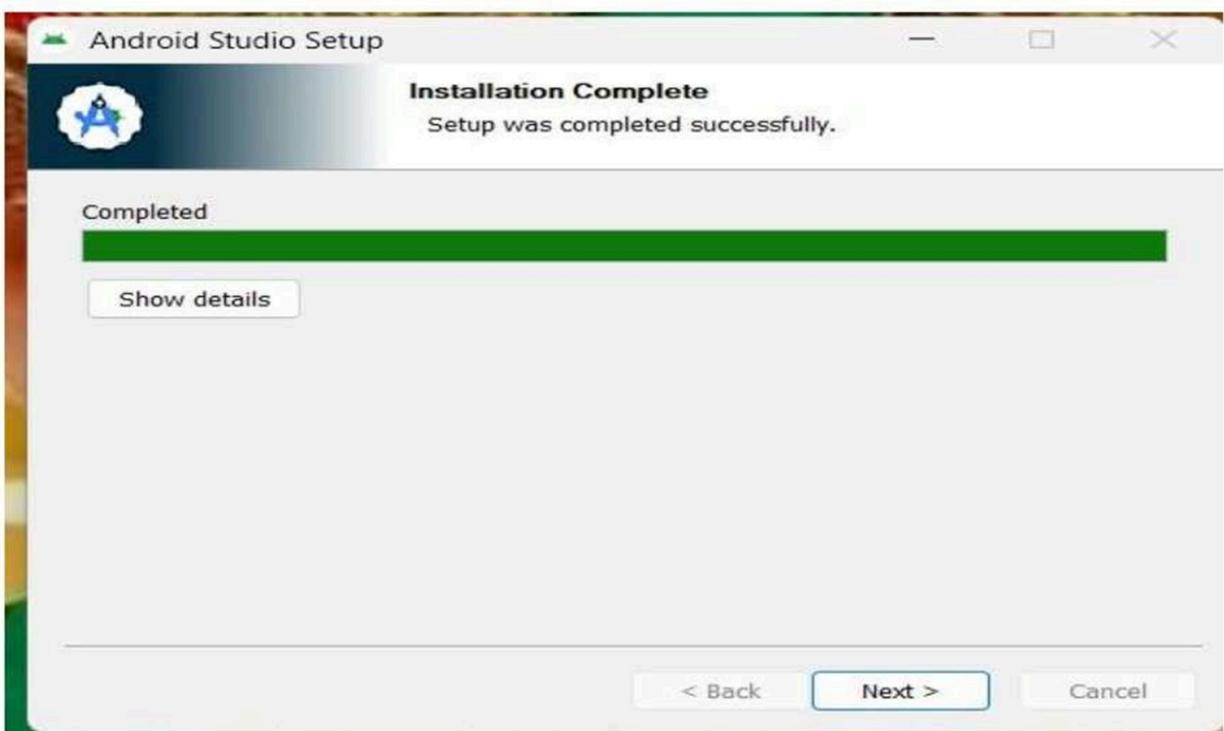
PRACTICAL NO 9

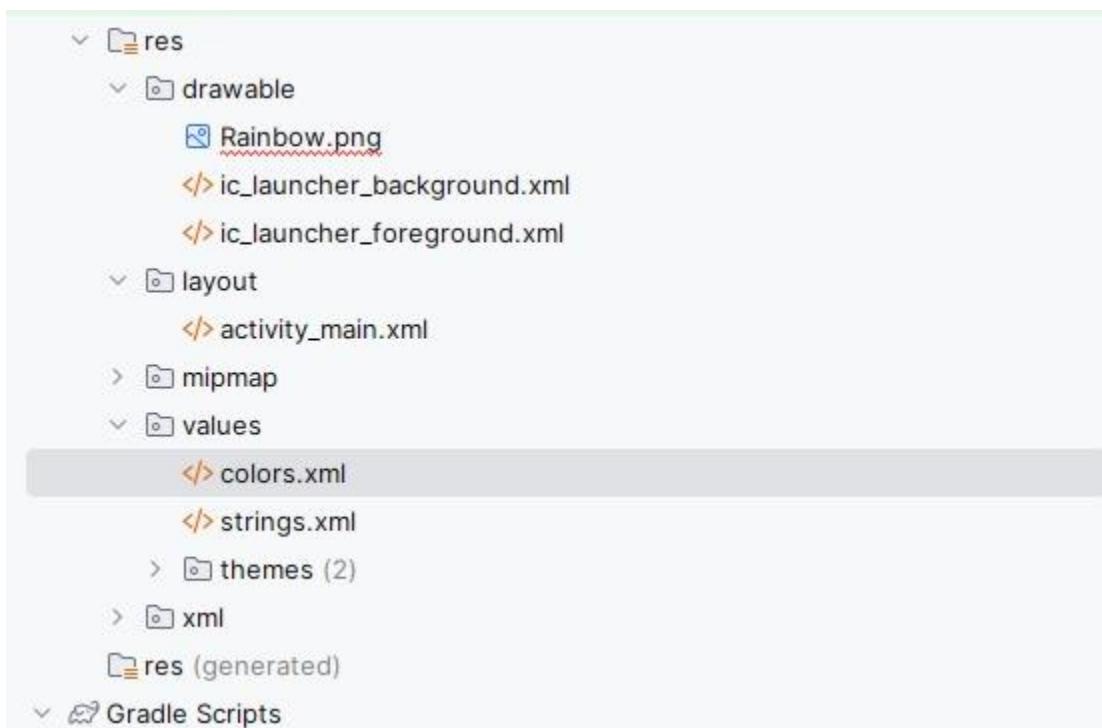
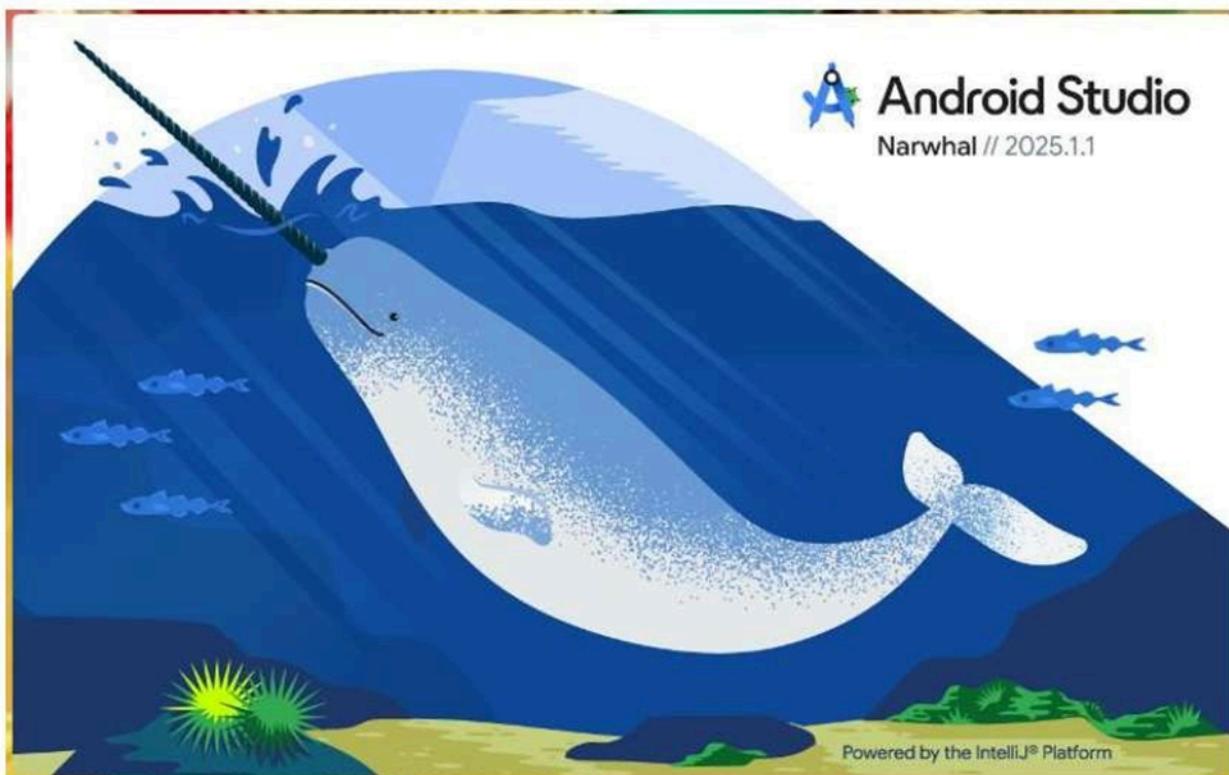
Aim: Setting up Android Studio IDE,Creating An AVD, Setting up USB Debugging mode, Executing a Simple "Hello World" program











```

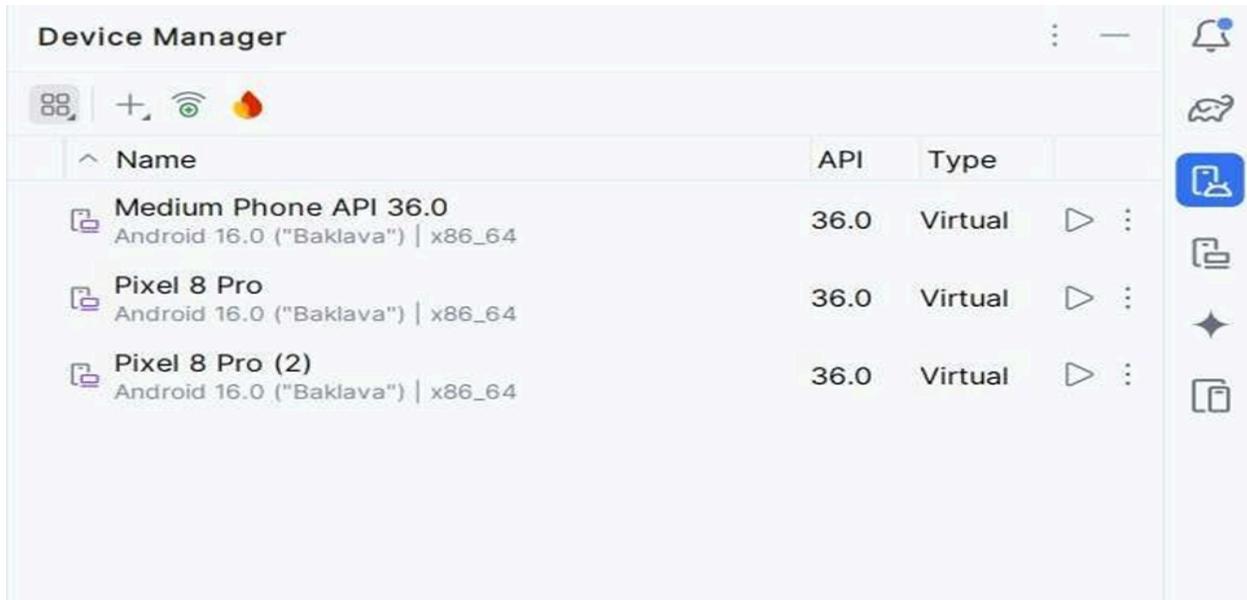
package com.example.ragini_546

import android.os.Bundle
import androidx.activity.enableEdgeToEdge
import androidx.appcompat.app.AppCompatActivity
import androidx.core.view.ViewCompat
import androidx.core.view.WindowInsetsCompat

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        enableEdgeToEdge()
        setContentView(R.layout.activity_main)
        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main)) { v, insets ->
            val systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars())
            v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom)
            insets
        }
    }
}

```

➤ Creating an AVD



Add Device

Form Factor

- Phone
- Tablet
- Wear OS
- Desktop
- TV
- Automotive

Show obsolete device profiles

Name	Play	API	Width	Height	Density
Small Phone	▶	24+	720	1280	320 dpi
Medium Phone	▶	24+	1080	2400	420 dpi
Resizable (Experimental)		34+	1080	2400	420 dpi
Pixel 9a	▶	35+	1080	2424	420 dpi
Pixel 9 Pro XL	▶	35+	1344	2992	480 dpi
Pixel 9 Pro Fold	▶	35+	2076	2152	390 dpi
Pixel 9 Pro	▶	35+	1280	2856	480 dpi
Pixel 9	▶	35+	1080	2424	420 dpi
Pixel 8a	▶	34+	1080	2400	420 dpi
Pixel 8 Pro	▶	34+	1344	2992	480 dpi
Pixel 8	▶	34+	1080	2400	420 dpi
Pixel Fold	▶	34+	2208	1840	420 dpi
Pixel 7a	▶	34+	1080	2400	420 dpi
Pixel 7 Pro	▶	33+	1440	3120	560 dpi
Pixel 7	▶	33+	1080	2400	420 dpi
Pixel 6a	▶	33+	1080	2400	420 dpi
Pixel 6 Pro		31+	1440	3120	560 dpi
Pixel 6		31+	1080	2400	420 dpi
Pixel 5		30+	1080	2340	440 dpi
Pixel 4a		30+	1080	2340	440 dpi
Pixel 4 XL		29+	1440	3040	560 dpi
Pixel 4		29+	1080	2280	440 dpi

New hardware profile... Import hardware profile... Cancel Previous Next Finish

Add Device

Configure virtual device

Device Additional settings

Name: Pixel 9

Select system image

Use the filters to help find the system image that you prefer. The combination of device profile and system image is only an approximation of the equivalent physical hardware.

API: API 36.0 "Baklava"; Android 16.0 Services: Google Play Store

System Image	API
Google Play Intel x86_64 Atom System Image	36.0
Pre-Release 16 KB Page Size Google Play Intel x86_64 Atom System Ima...	36.0

Show system images with SDK extensions

Show unsupported system images

Pixel 9

Device

OEM: Google
Supported API Levels: 35+
System Image
API Level: 36.0
Services: Google Play
ABI: x86_64
Translated ABI: arm64-v8a
Screen
Resolution: 1080 × 2424
Density: 420 dpi

Cancel Previous Next Finish

❖ Setting up USB Debugging Mode:

1. Device Name : Poco C3
2. Go to settings : Click on “About phone”
3. Tap 7 - 10 times on OS Version
4. Go Back to Main Setting Main Menu
5. Scroll down 6. Click on Additional Setting
7. Once Again Scroll & Click Developer Options
8. Scroll And Enable “USB Debugging”
9. Connect the mobile device using USB to device on which
10. Android Studio is installed
11. Select the Mobile device & Run the code
12. Output will be visible on the mobile device

5:42



Settings

Search settings

About phone >

System apps updater >

Security status >

Wi-Fi IT >

Bluetooth Off >

Mobile networks >

Portable hotspot Off >

VPN >

Xiaomi HyperOS

1.0.11.0.UCVINXM

Device name

Redmi 12C >

Storage

53.6 GB / 64 GB >

OS version

1.0.11.0.UCVINXM

Android Version

14 UP1A.231005.007

Android security update

2025-06-01

Device name Redmi 12C >

Storage 53.6 GB / 64 GB >

OS version 1.0.11.0.UCVINXM

Android Version 14 UP1A.231005.007

Android security update 2025-06-01

Detailed info and specs >

Back up and restore >

Factory reset >



You are now a developer!

Demo mode

Quick settings developer tiles >

Debugging

USB debugging

Debug mode when USB is connected



Revoke USB debugging authorisations >

Wireless debugging

Debug mode when Wi-Fi is connected



Install via USB

Allow installing apps via USB



Install via USB >

USB debugging (Security settings)

Allow granting permissions and simulating
input via USB debugging

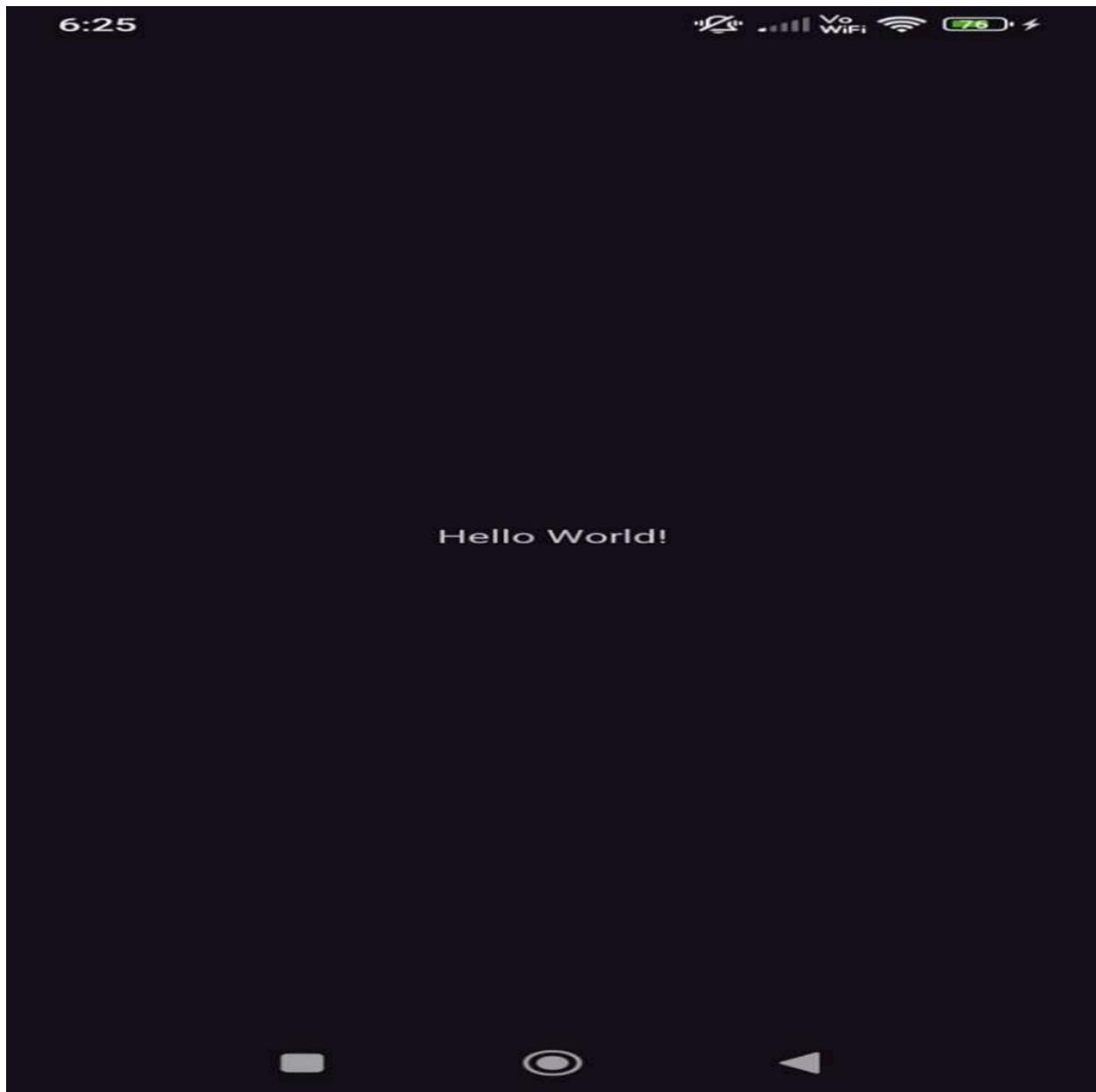


Disable adb authorisation timeout

Disable automatic revocation of adb
authorisations for systems that have not
reconnected within the default (seven days)
or user-configured (minimum one day)



❖ Executing a Simple "Hello World" Program



Practical No 10

Aim : Programming Resources Android Resources: (Color, Theme, String, Drawable, Dimension, Image)

➤ Activity File

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_height="match_parent"
    android:layout_width="match_parent"
    android:orientation="vertical"
    >
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/String1"
        android:textSize="25sp"
        android:textColor="@color/Red"/>
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/String2"
        android:textSize="25sp"
        android:textColor="@color/Orange"/>
    <TextView
```

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="@string/String3"
    android:textSize="25sp"
    android:textColor="@color/Yellow"/>
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="@string/String4"
    android:textSize="25sp"
    android:textColor="@color/Green"/>
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="@string/String5"
    android:textSize="25sp"
    android:textColor="@color/Blue"/>
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="@string/String6"
    android:textSize="25sp"
    android:textColor="@color/indigo"/>
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="@string/String7"
    android:textSize="25sp"
    android:textColor="@color/violet"/>
<ImageView
    android:layout_width="200dp"
    android:layout_height="200dp"
    android:src="@drawable/Rainbow"/>
</LinearLayout>
```

➤ Color File

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <color name="Red">#FF0000</color>
    <color name="Orange">#FF7f00</color>
    <color name="Yellow">#FFFF00</color>
    <color name="Green">#00ff00</color>
    <color name="Blue">#0000ff</color>
    <color name="indigo">#4b0082</color>
    <color name="violet">#8f00ff</color>
</resources>
```

➤ String File

```
<resources>
    <string name="app_name">Ragini_546</string>
    <string name="String1">red</string>
    <string name="String2">orange</string>
    <string name="String3">yellow</string>
    <string name="String4">green</string>
    <string name="String5">blue</string>
    <string name="String6">indigo</string>
    <string name="String7">violet</string>
</resources>
```

➤ File Directory

The screenshot shows the Android Studio interface. On the left is the Project Navigational Drawer, which includes sections for Android (app, manifests, kotlin+java, res, values, themes, xml), Gradle Scripts, and other icons. The main area displays the XML code for activity_main.xml. The code defines a ConstraintLayout with various views like ImageView, TextView, and EditText.

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

    <ImageView
        android:id="@+id/imageView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="72dp"
        android:layout_marginBottom="124dp"
        app:layout_constraintBottom_toTopOf="@+id/editTextText"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        tools:srcCompat="@tools:sample/avatars" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="32dp"
        android:text="Usernanme"
        android:textAppearance="@style/TextAppearance.AppCompat.Body2"
        app:layout_constraintBaseline_toBaselineOf="@+id/editTextText"
        app:layout_constraintStart_toStartOf="parent" />

    <EditText
        android:id="@+id/editTextText"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="32dp"
        android:background="@color/colorPrimaryDark"
        android:fontFamily="sans-serif"
        android:padding="10dp"
        android:text="Enter your name"
        android:textColor="#fff"
        android:textSize="16sp"
        android:typeface="normal"
        android:layout_marginTop="16dp"
        android:layout_marginBottom="16dp"
        android:imeOptions="actionNext"
        android:inputType="text"
        android:maxLength="10" />

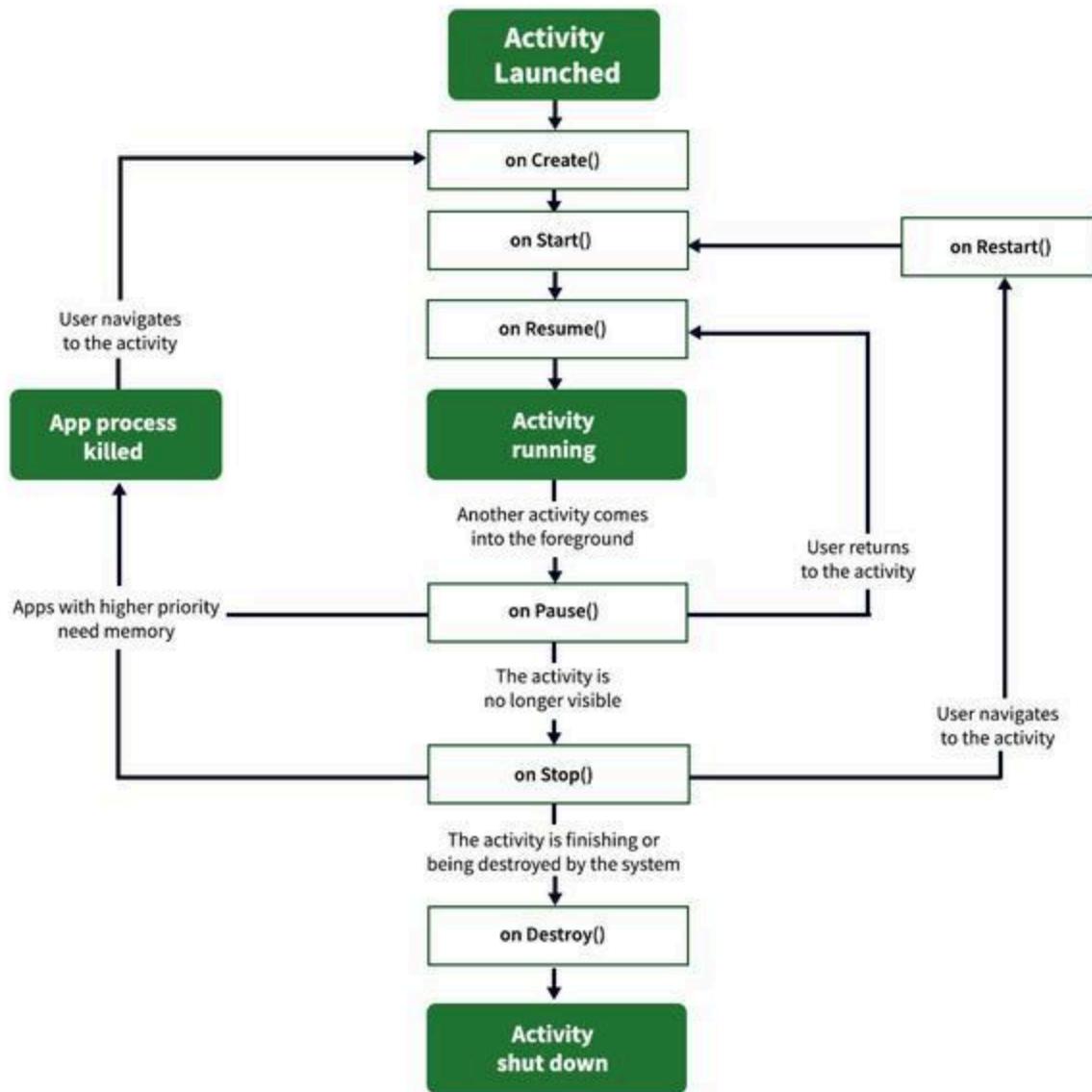
```

Output:



PRACTICAL NO:- 11

AIM: Programming Activities And Fragments Activity Life Cycle,
Activity Methods, Multiple Activities, Life Cycle Of Fragments
And Multiple Fragments



Activity Lifecycle in Android

A)

Main activity.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:orientation="vertical"
    android:gravity="center">

    <TextView
        android:id="@+id/txt1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Multiple Activity"
        android:textSize="30sp">
    </TextView>

    <TextView
        android:id="@+id/txt2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="This is First Activity"
        android:textSize="30sp">
    </TextView>

    <Button
```

```
    android:id="@+id	btn1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Submit"
    android:textSize="30sp">
</Button>
</LinearLayout>
```

Main activity.kt

```
package com.example.myapplication1

import com.example.anjali482.R
import android.content.Intent
import android.os.Bundle
import android.widget.Button
import androidx.activity.enableEdgeToEdge
import androidx.appcompat.app.AppCompatActivity

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        enableEdgeToEdge()
        setContentView(R.layout.activity_main)

        val btn1 = findViewById<Button>(R.id.btn1)
```

```
    btn1.setOnClickListener { val intent = Intent(this,  
SecondActivity::class.java)  
        startActivity(intent)}  
    }  
}
```

Second activity.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:orientation="vertical"  
    android:gravity="center">  
  
<TextView  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Multiple Activity"  
    android:textSize="30sp">  
</TextView>  
  
<TextView  
    android:id="@+id/txt1"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="This is second Activity"  
    android:textSize="30sp">
```

```
</TextView>
<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Go Back"
/>
</LinearLayout>
```

Second activity.kt

```
package com.example.myapplication1
```

```
import com.example.anjali482.R
import android.os.Bundle
import androidx.activity.enableEdgeToEdge
import androidx.appcompat.app.AppCompatActivity
import androidx.core.view.ViewCompat
import androidx.core.view.WindowInsetsCompat
```

```
class SecondActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        enableEdgeToEdge()
        setContentView(R.layout.activity_second)
```

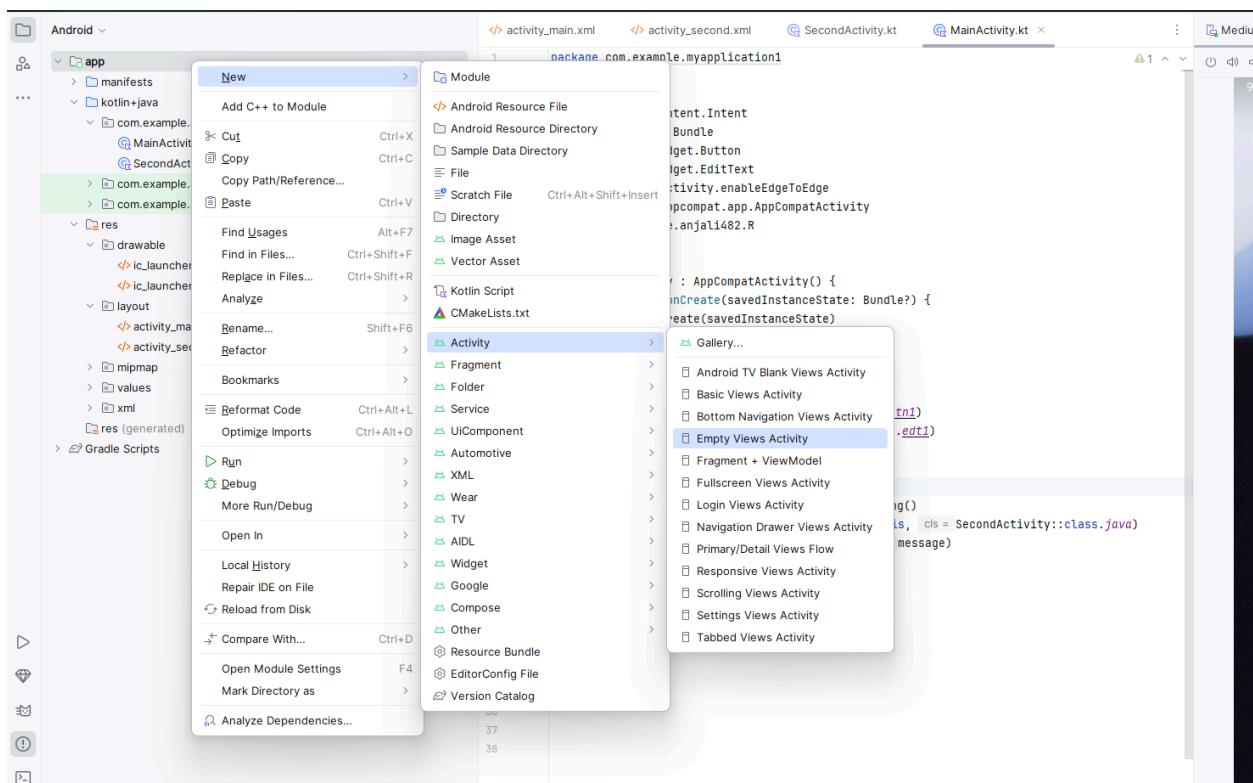
```
        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main)) { v, insets ->
```

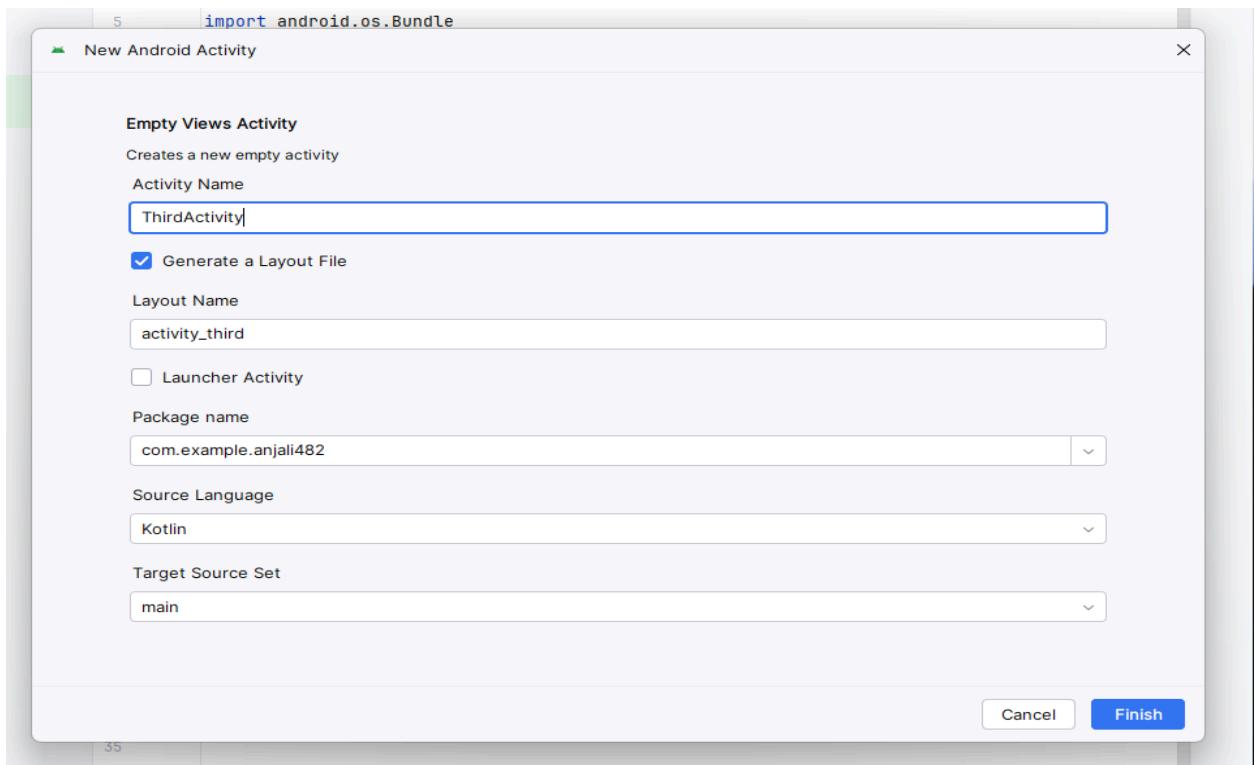
```

    val systemBars =
        insets.getInsets(WindowInsetsCompat.Type.systemBars())
        v.setPadding(systemBars.left, systemBars.top, systemBars.right,
        systemBars.bottom)
    insets
}

}
}
}

```





Output:

Multiple Activity
This is First Activity

Submit

Multiple Activity
This is second Activity

Go Back

11 b)

Mainactivity.kt

package com.example.myapplication1

```
import android.content.Intent
import android.os.Bundle
import android.widget.Button
import androidx.appcompat.app.AppCompatActivity

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)

        val btn1 = findViewById<Button>(R.id.btn1)
        btn1.setOnClickListener {
            val intent = Intent(this, ThirdActivity::class.java)
            startActivity(intent)
        }
    }
}
```

Secondactivity.kt

```
package com.example.myapplication1
```

```
import android.os.Bundle
import android.util.Log
import androidx.activity.enableEdgeToEdge
import androidx.appcompat.app.AppCompatActivity
```

```
class ThirdActivity : AppCompatActivity() {  
    val tag = "Activity Lifecycle"  
    override fun onCreate(savedInstanceState: Bundle?) {  
        super.onCreate(savedInstanceState)  
        enableEdgeToEdge()  
        setContentView(R.layout.activity_third)  
        Log.d(tag, "onCreateAnjali")}  
    override fun onStart() {  
        super.onStart()  
        Log.d(tag, "onStartAnjali")}  
    override fun onResume() {  
        super.onResume()  
        Log.d(tag, "onResumeAnjali")}  
    override fun onPause() {  
        super.onPause()  
        Log.d(tag, "onPauseAnjali")}  
    override fun onStop() {  
        super.onStop()  
        Log.d(tag, "onStopAnjali")}  
    override fun onDestroy() {  
        super.onDestroy()  
        Log.d(tag, "onDestroyAnjali")  
    }  
}
```

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:orientation="vertical"
    android:gravity="center">
```

```
<TextView
    android:id="@+id/txt1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="This is First Activity"
    android:textSize="30sp">
</TextView>
```

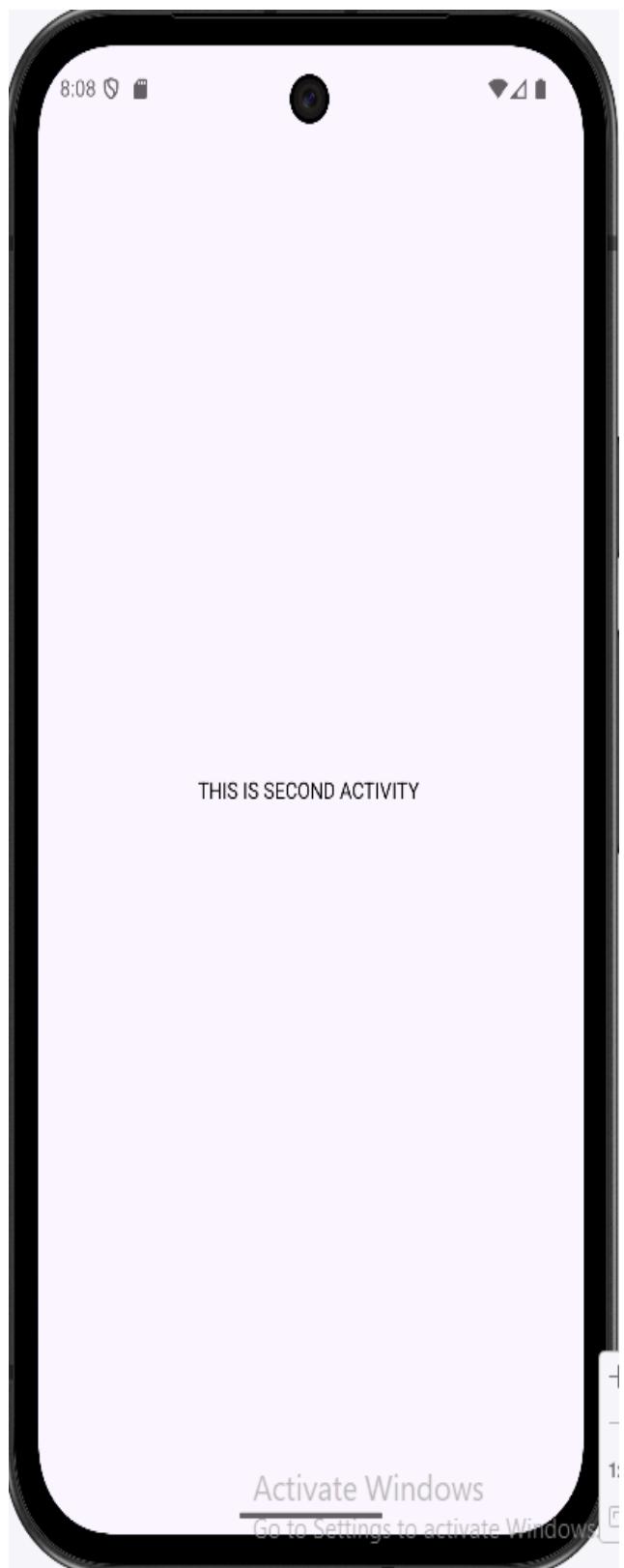
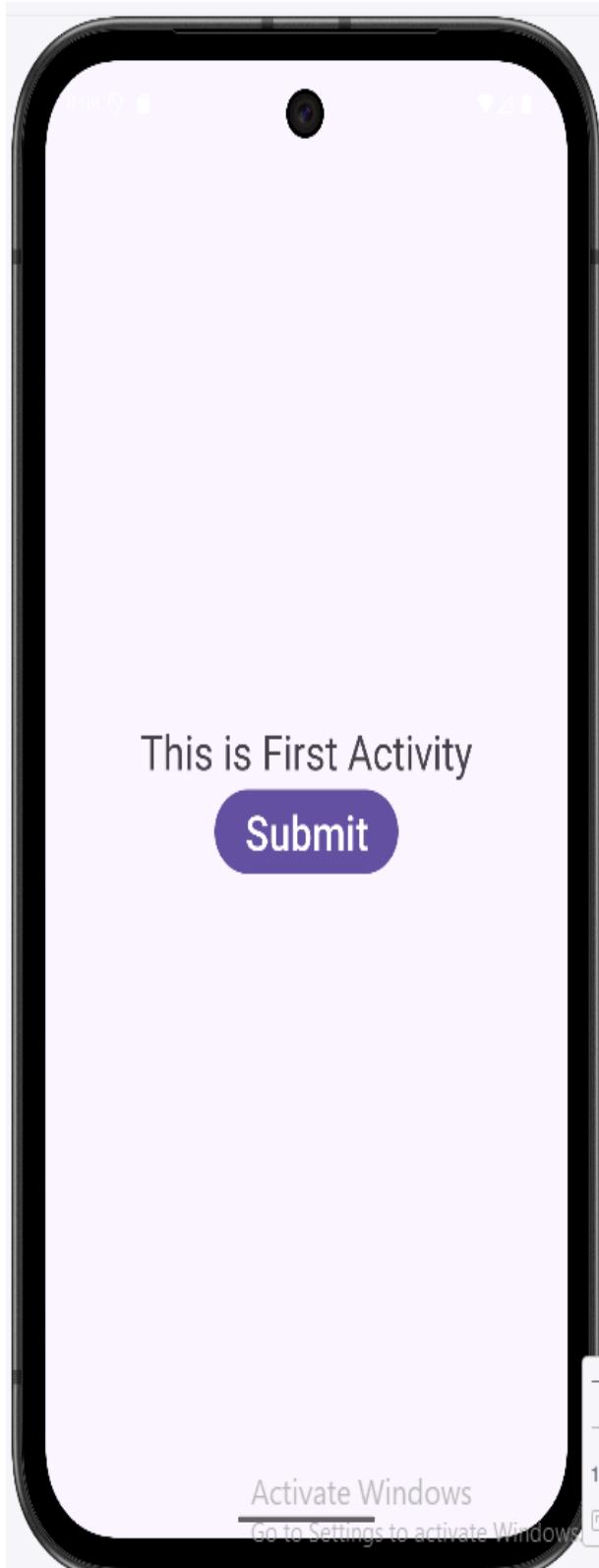
```
<Button
    android:id="@+id	btn1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Submit"
    android:textSize="30sp">
</Button>
</LinearLayout>
```

SecondActivity.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"
    >
<TextView
    android:id="@+id/txt1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="THIS IS SECOND ACTIVITY "
    android:textColor="@color/black"
    />
</LinearLayout>
```

Output:



```
Pixel 9a (emulator-5554) Android 16, API 36.0 ▾ ▾ package:mine anjali| X C ⌂
-----
----- PROCESS STARTED (11055) for package com.example.myapplication1 -----
2025-09-09 08:08:33.075 11055-11055 Activity Lifecycle com.example.myapplication1 D onCreateAnjali
2025-09-09 08:08:33.076 11055-11055 Activity Lifecycle com.example.myapplication1 D onStartAnjali
2025-09-09 08:08:33.078 11055-11055 Activity Lifecycle com.example.myapplication1 D onResumeAnjali
2025-09-09 08:09:25.978 11055-11055 Activity Lifecycle com.example.myapplication1 D onStopAnjali
2025-09-09 08:09:25.979 11055-11055 Activity Lifecycle com.example.myapplication1 D onDestroyAnjali

-----
----- PROCESS STARTED (11055) for package com.example.myapplication1 -----
2025-09-09 08:08:33.075 11055-11055 Activity Lifecycle com.example.myapplication1 D onCreateAnjali
2025-09-09 08:08:33.076 11055-11055 Activity Lifecycle com.example.myapplication1 D onStartAnjali
2025-09-09 08:08:33.078 11055-11055 Activity Lifecycle com.example.myapplication1 D onResumeAnjali
2025-09-09 08:09:25.978 11055-11055 Activity Lifecycle com.example.myapplication1 D onStopAnjali
2025-09-09 08:09:25.979 11055-11055 Activity Lifecycle com.example.myapplication1 D onDestroyAnjali
```

Practical No : 12

i) Linear Layout Horizontal

CODE :

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

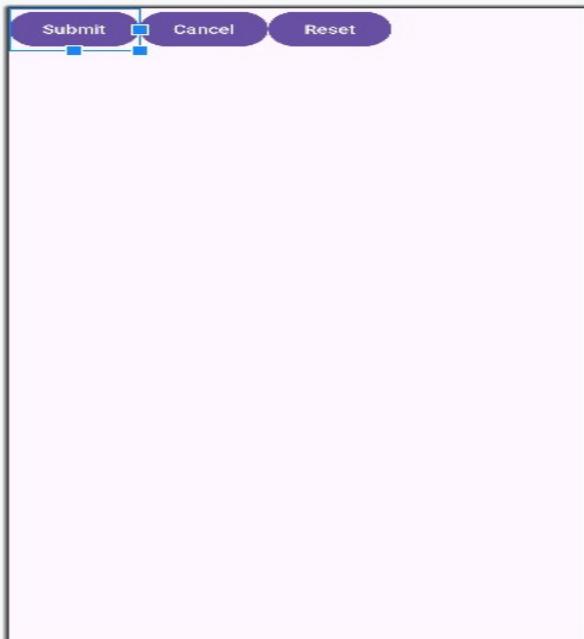
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Submit" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Cancel"
        />

    <Button
```

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Reset"
/>
</LinearLayout>
```

output



ii) Linear Layout Vertical

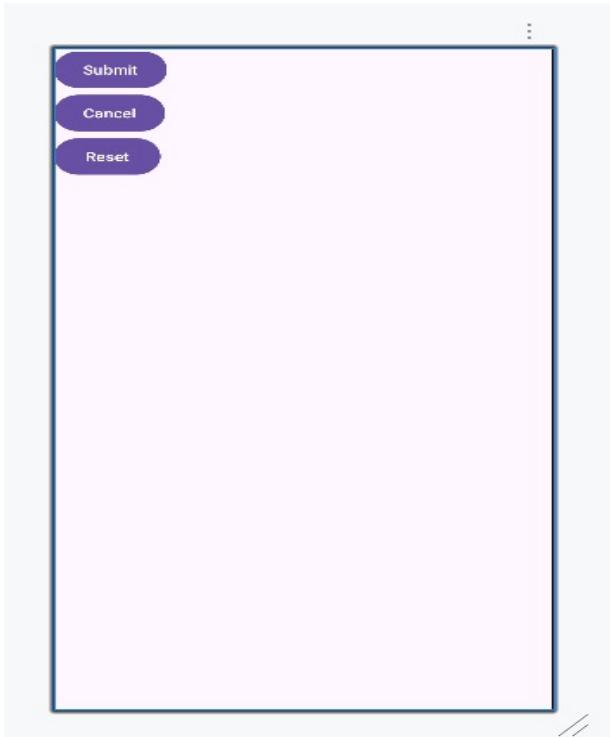
CODE :

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

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Submit" />

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Cancel"
/>
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Reset"
/>
</LinearLayout>
```

Output:



iii) Linear Layout Weight :

CODE :

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_height="match_parent"
    android:layout_width="match_parent"
    android:orientation="vertical"
    android:weightSum="10"
    >

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="RAGINI546"
        android:layout_weight="2"
        />

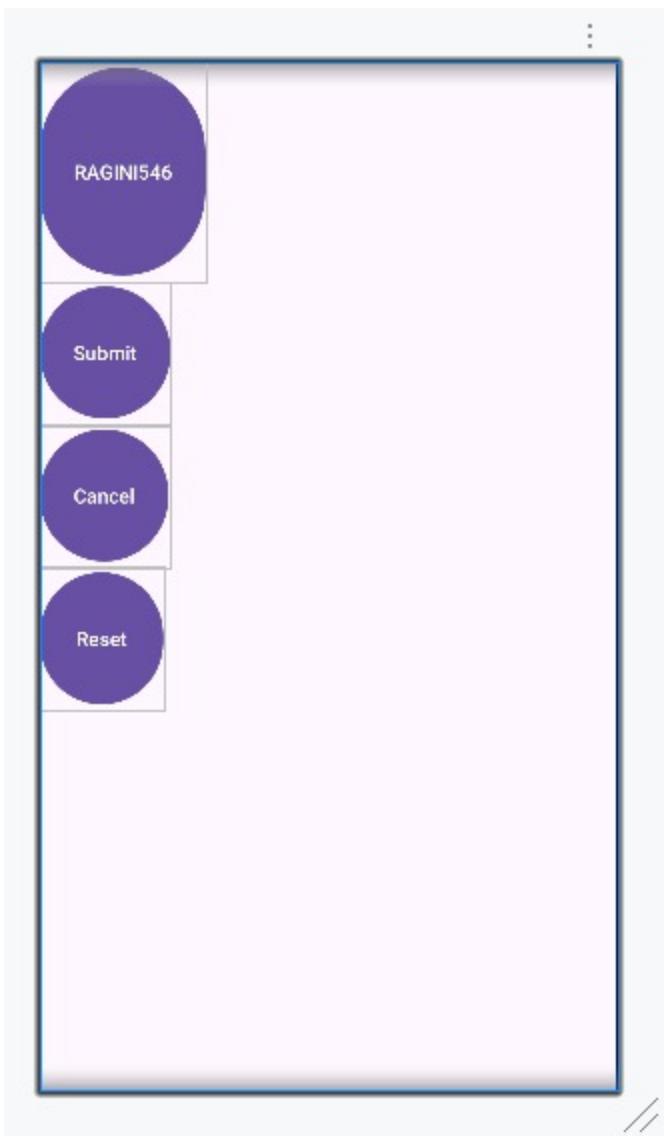
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Submit"
        android:layout_weight="1"
        />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Cancel"
        android:layout_weight="1"
        />

    <Button
        android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
    android:text="Reset"
    android:layout_weight="1"
</LinearLayout>
```

Output:



iV) Linear Layout With Sum Weight :

CODE :

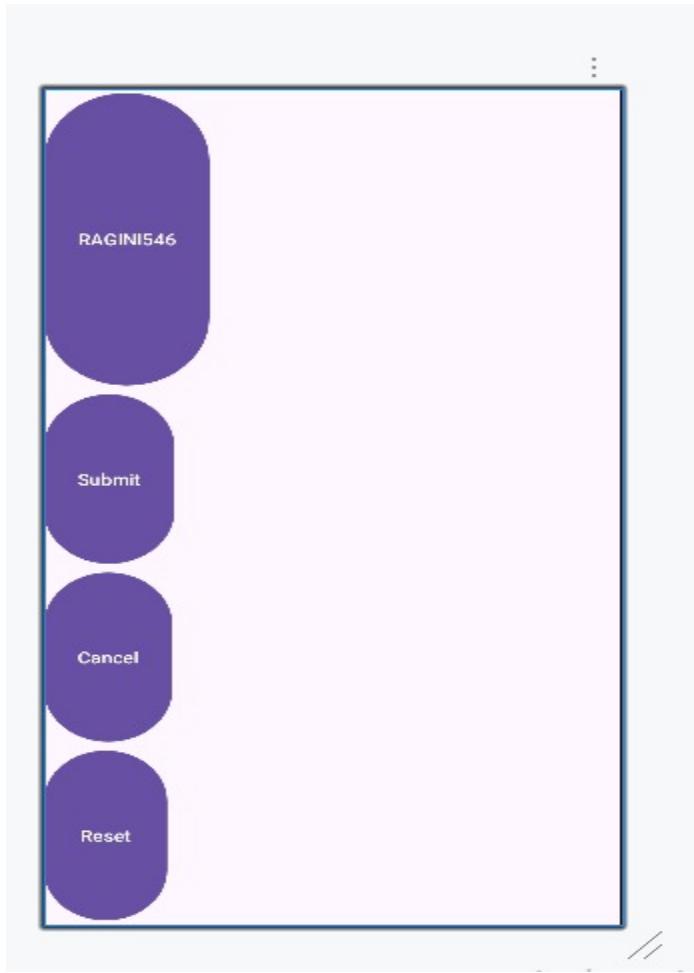
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_height="match_parent"
```

```
    android:layout_width="match_parent"
    android:orientation="vertical"
    >

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="RAGINI546"
        android:layout_weight="2"
    />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Submit"
        android:layout_weight="1"
    />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Cancel"
        android:layout_weight="1"
    />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Reset"
        android:layout_weight="1"
    />
</LinearLayout>
```

Output:



v) Nested Linear Layout :

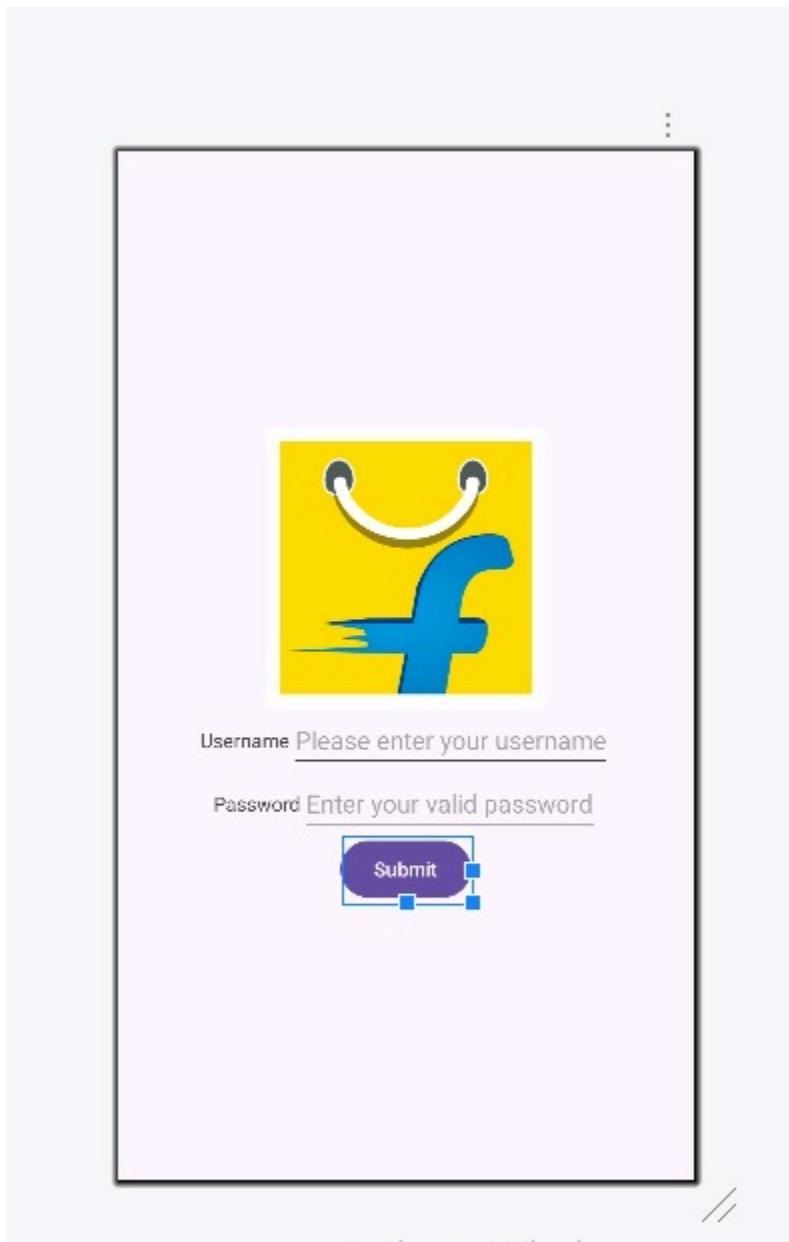
CODE :

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

```
    android:layout_width="200dp"
    android:layout_height="200dp"
    android:scaleType="fitCenter"
    android:src="@drawable/flipkart"
/>
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:gravity="center"
/>
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Username"/>
<EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:hint="Please enter your username"/>
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:gravity="center"
/>
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Password"/>
<EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:hint="Enter your valid password"/>
```

```
<Button  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Submit"  
    android:layout_weight="0"/>  
</LinearLayout>
```

Output:



Vi) Absolute Layout:

CODE :

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

    <ImageView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_x="-7dp"
        android:layout_y="-99dp"
        android:src="@drawable/flipkart" />

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_x="60dp"
        android:layout_y="425dp"
        android:text="Username" />

    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_x="140dp"
        android:layout_y="404dp"
        android:hint="Pls enter your username" />

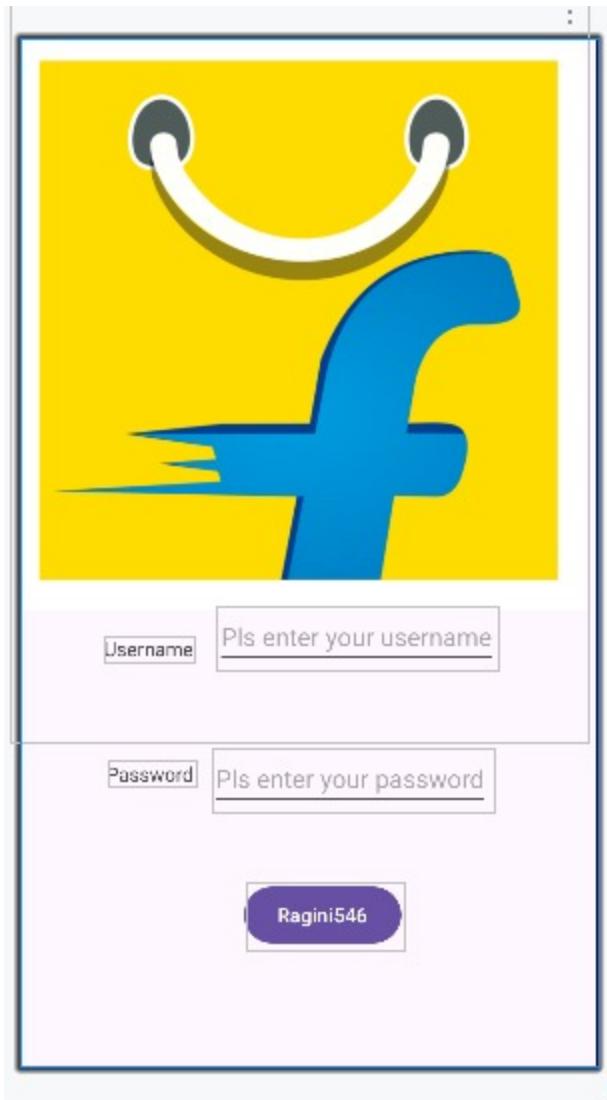
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```
    android:layout_x="62dp"
    android:layout_y="514dp"
    android:text="Password" />

<EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_x="136dp"
    android:layout_y="505dp"
    android:hint="Pls enter your password" />

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_x="160dp"
    android:layout_y="600dp"
    android:text="Ragini546" />
```

Output:



Relative layout

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    >
    <Button
        android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
    android:text="btn-1"
    android:layout_alignParentTop="true"
    android:layout_alignParentLeft="true"/>
```

```
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="btn-2"
    android:layout_alignParentTop="true"
    android:layout_alignParentRight="true"/>
```

```
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="btn-3"
    android:layout_alignParentBottom="true"
    android:layout_alignParentLeft="true"/>
```

```
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="btn-4"
    android:layout_alignParentBottom="true"
    android:layout_alignParentRight="true"/>
```

```
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="btn-5"
    android:layout_alignParentTop="true"
```

```
    android:layout_centerHorizontal="true"/>

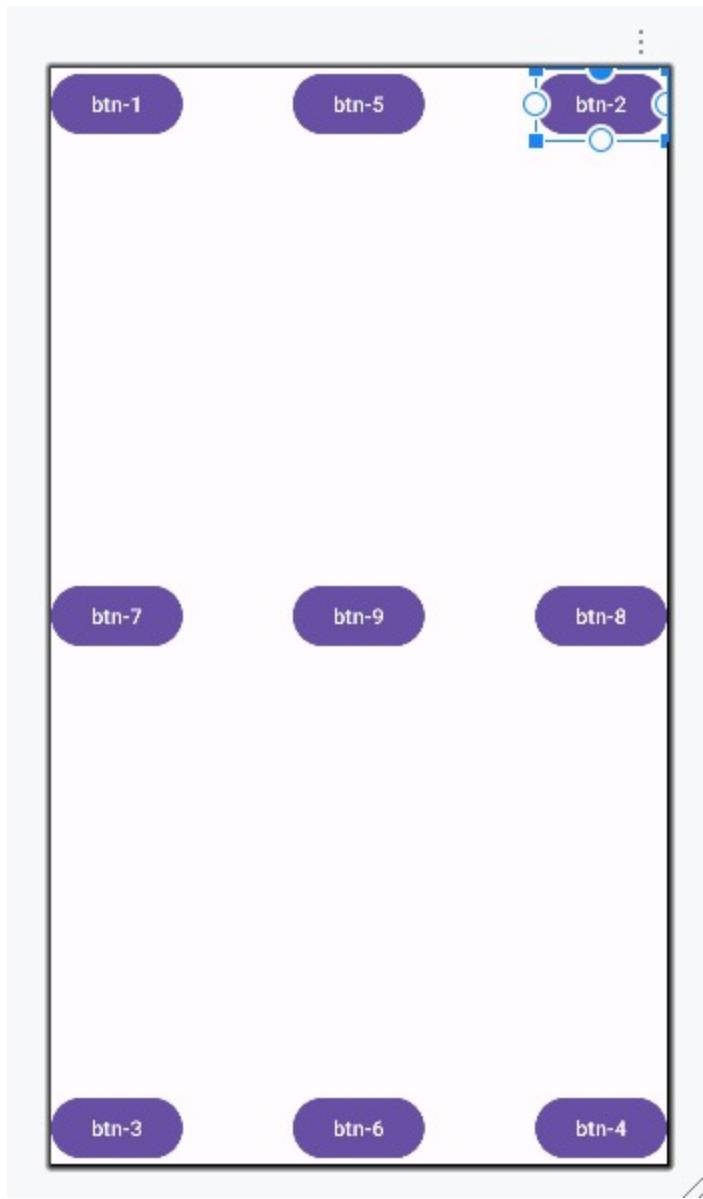
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="btn-6"
    android:layout_alignParentBottom="true"
    android:layout_centerHorizontal="true"/>

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="btn-7"
    android:layout_alignParentLeft="true"
    android:layout_centerVertical="true"/>

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="btn-8"
    android:layout_alignParentRight="true"
    android:layout_centerVertical="true"/>

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="btn-9"
    android:layout_centerHorizontal="true"
    android:layout_centerVertical="true"/>

</RelativeLayout>
```



```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
```

```
    android:layout_height="match_parent"
    >
    <Button
        android:id="@+id/b0"
        android:layout_width="200dp"
        android:layout_height="100dp"
        android:text="Submit"
        android:textSize="26dp"
        android:layout_centerInParent="true" />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/b1"
        android:layout_above="@+id/b0"
        android:layout_alignLeft="@+id/b0"
        android:text="btn 1"
        android:textSize="19dp" />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/b2"
        android:layout_above="@+id/b0"
        android:layout_alignRight="@+id/b0"
        android:text="btn 2"
        android:textSize="19dp" />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/b3"
        android:layout_below="@+id/b0"
        android:layout_alignLeft="@+id/b0"
```

```
    android:text="btn 3"
    android:textSize="19dp" />
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/b4"
    android:layout_below="@+id/b0"
    android:layout_alignRight="@+id/b0"
    android:text="btn 4"
    android:textSize="19dp" />

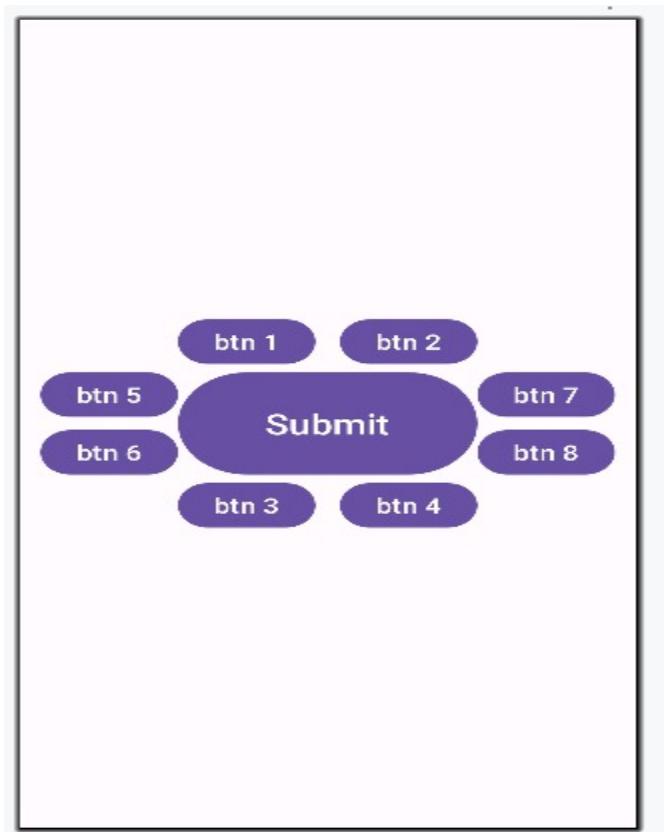
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/b5"
    android:layout_alignTop="@+id/b0"
    android:layout_toLeftOf="@+id/b0"
    android:text="btn 5"
    android:textSize="19dp" />

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/b6"
    android:layout_alignBottom="@+id/b0"
    android:layout_toLeftOf="@+id/b0"
    android:text="btn 6"
    android:textSize="19dp" />

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/b7"
```

```

        android:layout_alignTop="@+id/b0"
        android:layout_toRightOf="@+id/b0"
        android:text="btn 7"
        android:textSize="19dp" />
<Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/b8"
        android:layout_alignBottom="@+id/b0"
        android:layout_toRightOf="@+id/b0"
        android:text="btn 8"
        android:textSize="19dp" />
</RelativeLayout>
```



Creating Sign up page using ‘RelativeLayout’.

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

```
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    >
<ImageView
    android:layout_width="100dp"
    android:layout_height="100dp"
    android:src="@drawable/instagram_icon"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="120dp"
    android:id="@+id/img"
    />

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Username : "
    android:textSize="22dp"
    android:layout_below="@+id/img"
    android:layout_marginTop="20dp"
    android:layout_marginLeft="50dp"
    android:id="@+id/name"
    />

<EditText
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_toRightOf="@+id/name"
    android:layout_alignBaseline="@+id/name"
    android:layout_marginRight="30dp"
    />
```

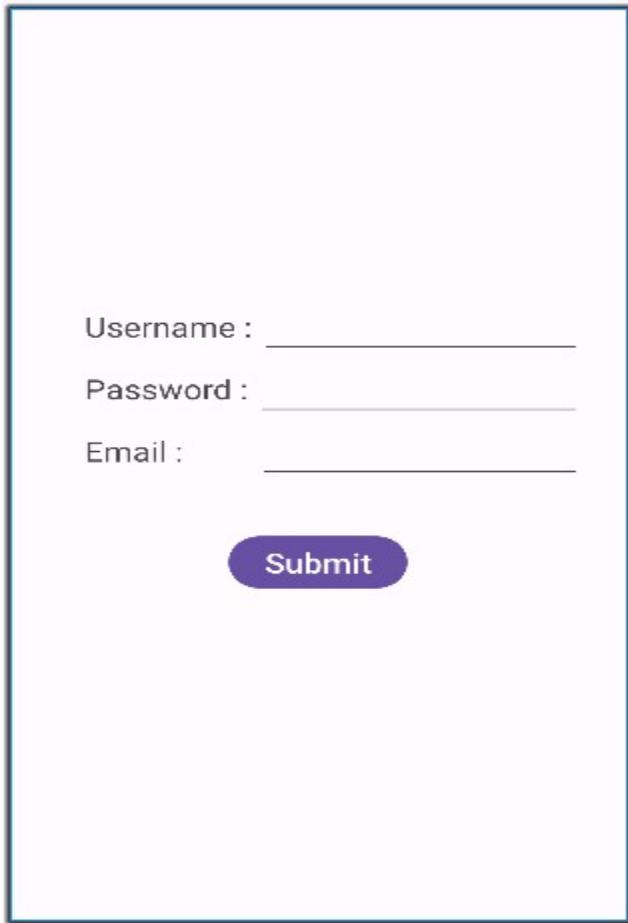
```
<TextView  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Password : "  
    android:textSize="22dp"  
    android:layout_below="@+id/name"  
    android:layout_marginTop="20dp"  
    android:layout_marginLeft="50dp"  
    android:id="@+id/pass"  
/>
```

```
<EditText  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:layout_toRightOf="@+id/pass"  
    android:layout_alignBaseline="@+id/pass"  
    android:layout_marginRight="30dp"  
/>
```

```
<TextView  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Email : "  
    android:textSize="22dp"  
    android:layout_below="@+id/pass"  
    android:layout_marginTop="20dp"  
    android:layout_marginLeft="50dp"  
    android:id="@+id/email"  
/>
```

```
<EditText  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:layout_toRightOf="@+id/email"  
    android:layout_alignBaseline="@+id/email"  
    android:layout_marginRight="30dp"  
    android:layout_marginLeft="45dp"  
/>
```

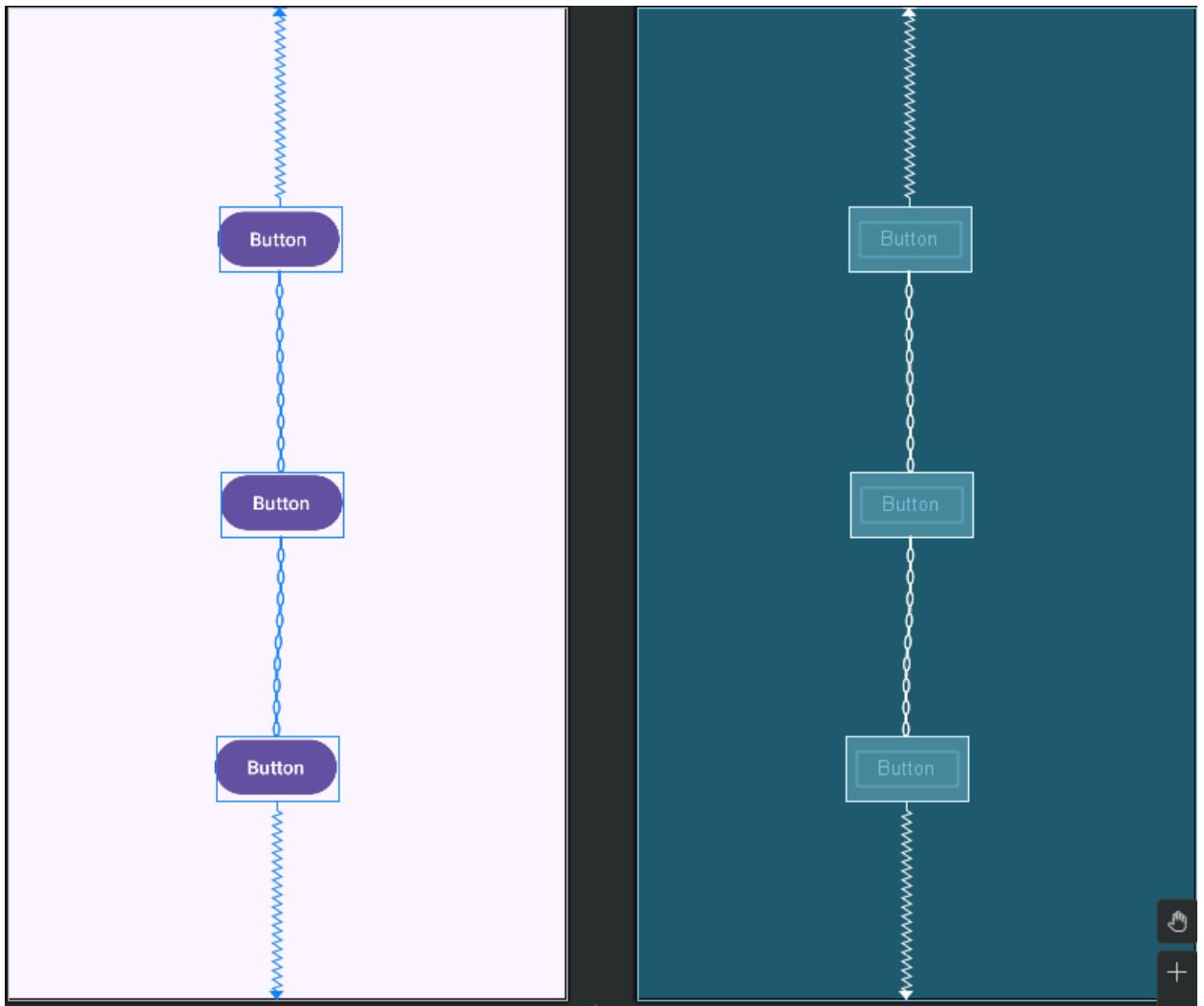
```
<Button  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:textSize="22dp"  
    android:text="Submit"  
    android:layout_centerHorizontal="true"  
    android:layout_below="@+id/email"  
    android:layout_marginTop="50dp"/>  
  
</RelativeLayout>
```



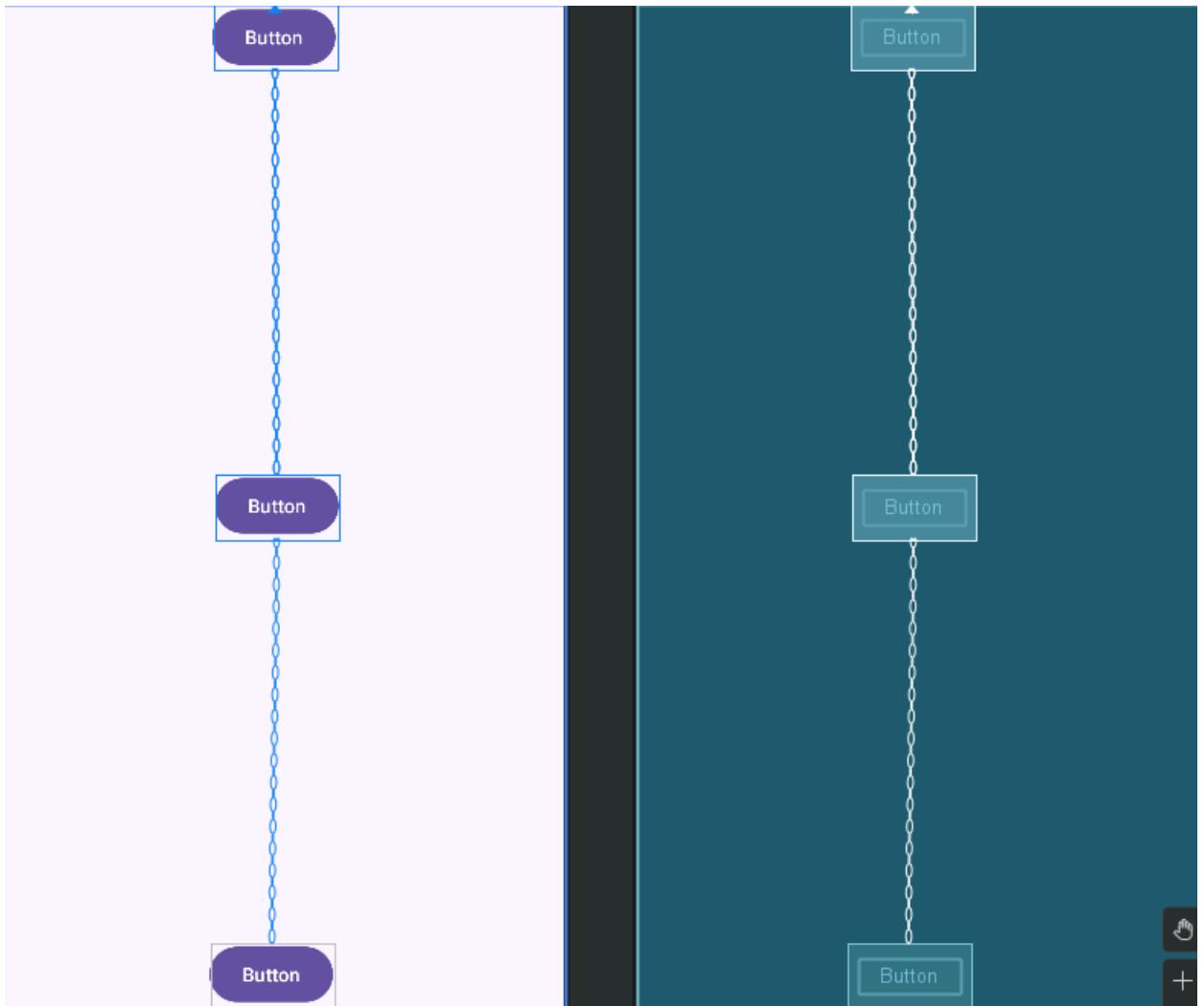
Constraint Layout: Adding 3 Buttons & Performing Horizontal Chains, Vertical Chains (Spread, Inside Spread, Packed)

1] Vertical

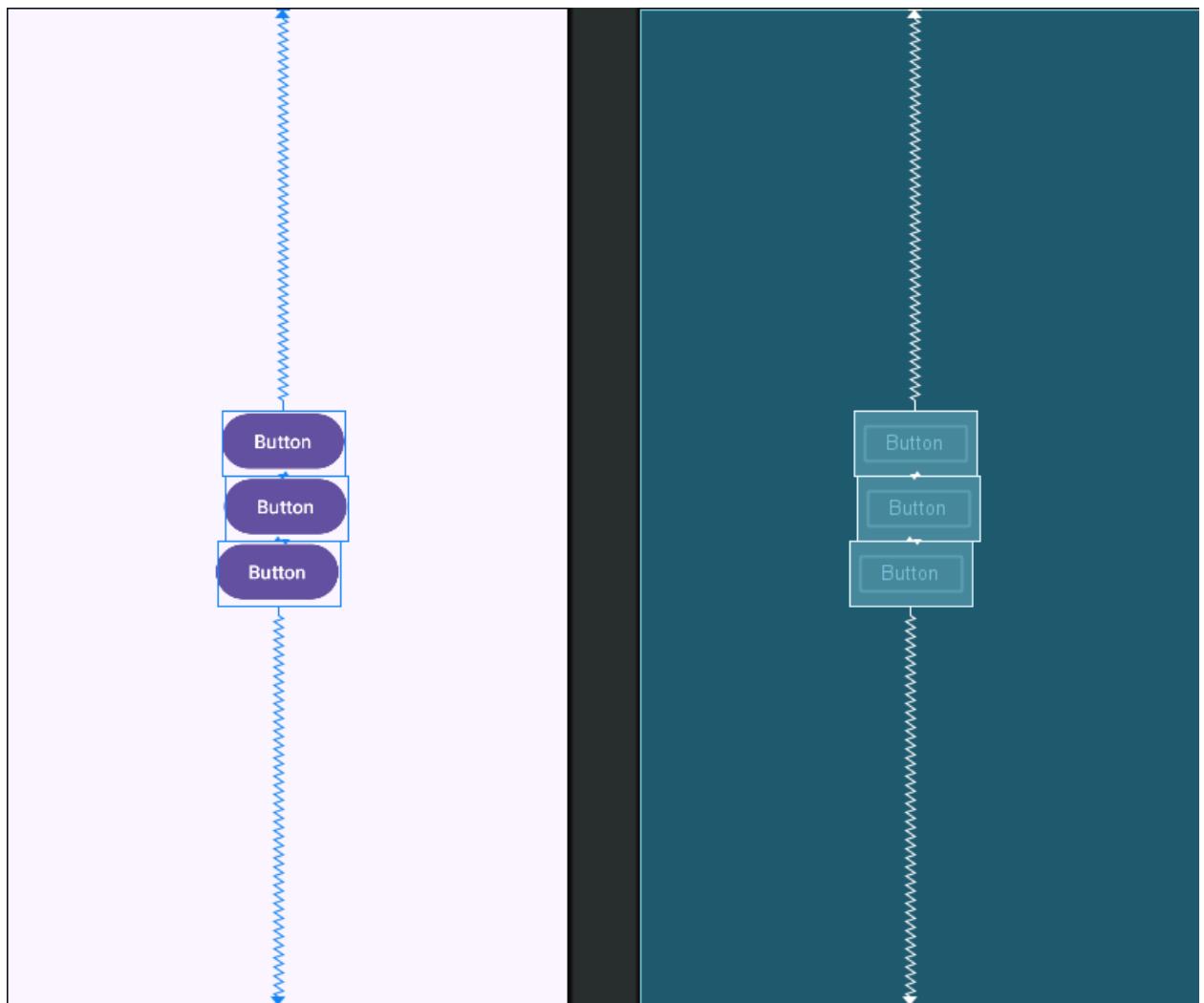
a) Spread



b) Spread inside

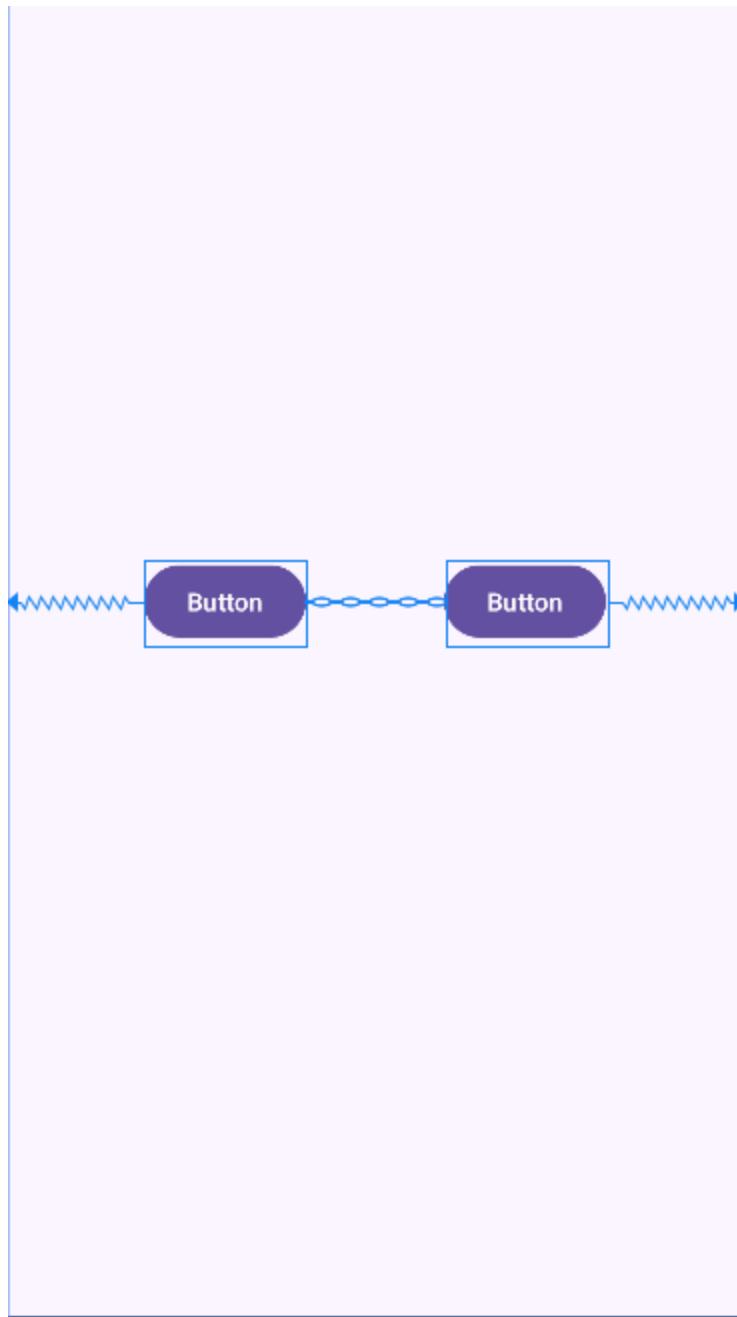


c) packed

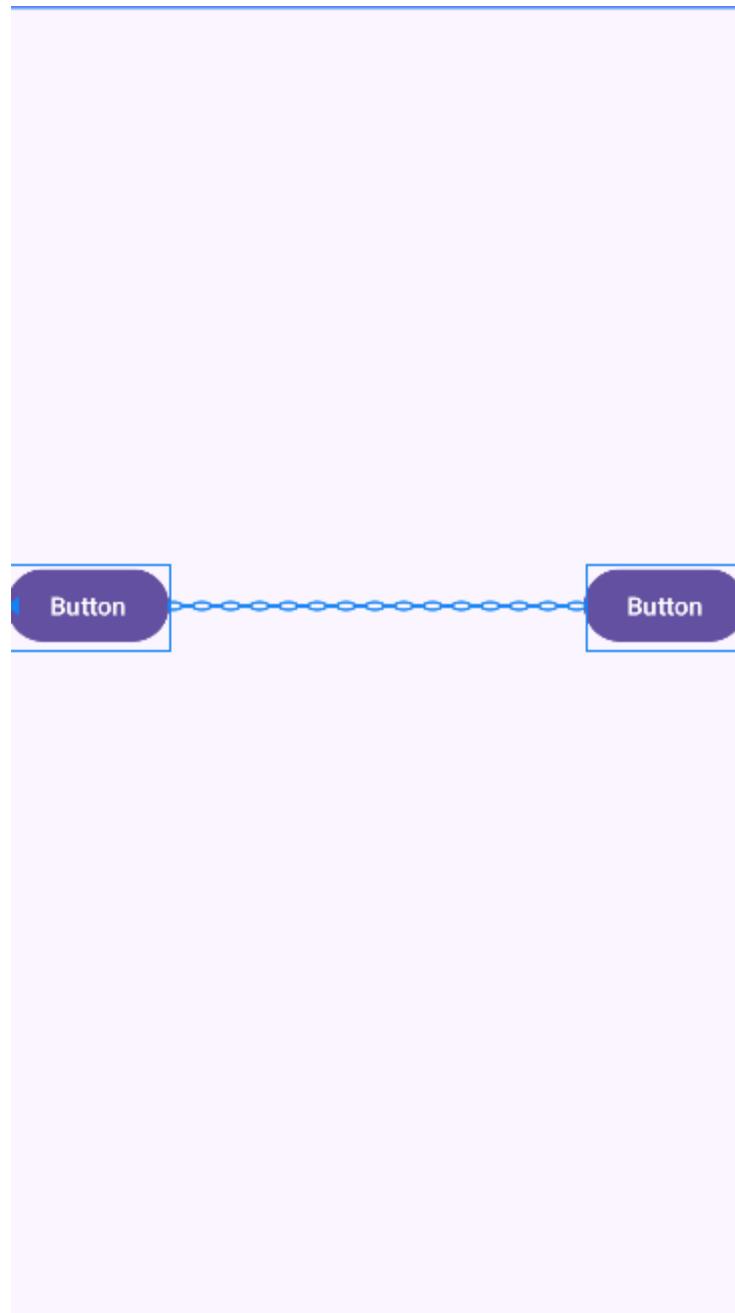


2] Horizontal

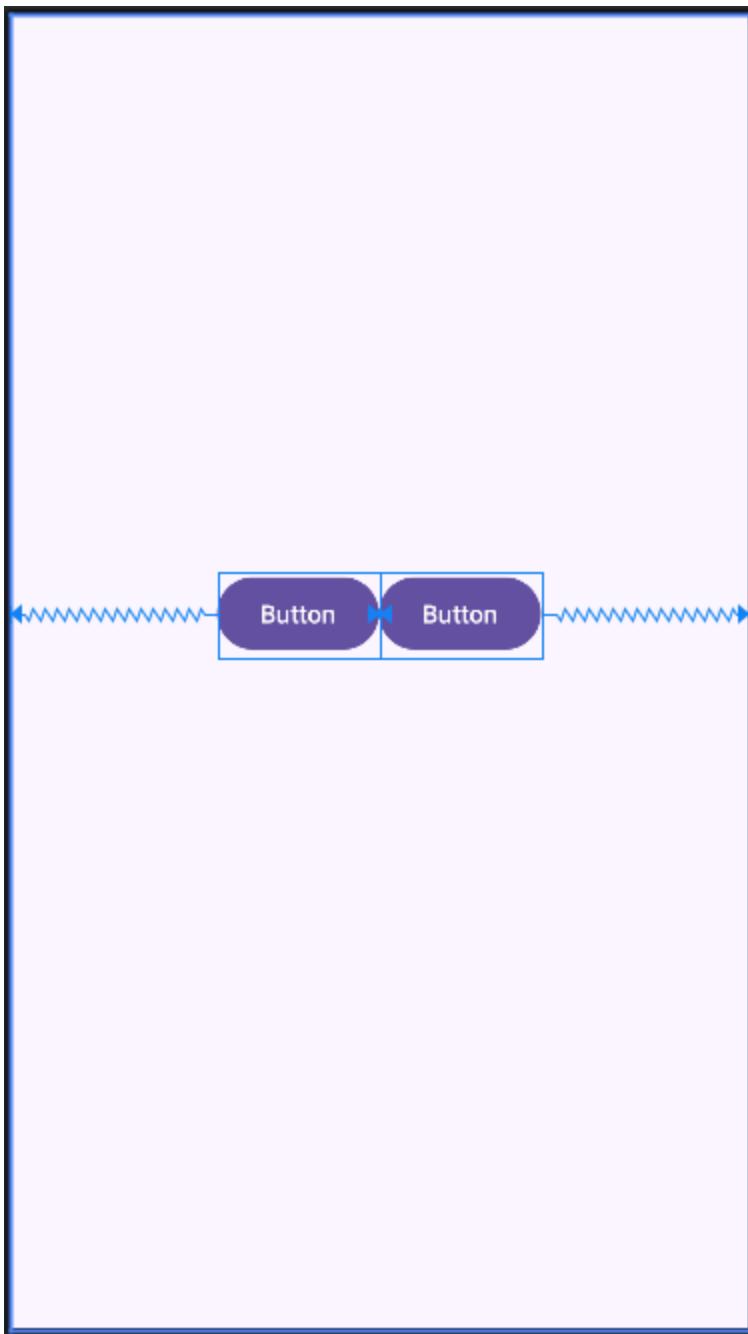
a) spread



b)spread inside



c) Packed



4] Login page using Constraint Layout.

```
<?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/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">>

<ImageView
    android:id="@+id/imageView2"
    android:layout_width="185dp"
    android:layout_height="144dp"
    android:layout_marginStart="138dp"
    android:layout_marginTop="115dp"
    android:layout_marginEnd="34dp"
    android:layout_marginBottom="472dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.0"
    app:srcCompat="@drawable/pinterest_logo" />

<TextView
    android:id="@+id/textView5"
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_marginStart="10dp"
    android:layout_marginTop="357dp"
    android:layout_marginEnd="10dp"
    android:layout_marginBottom="48dp"
    android:text="Email"
    app:layout_constraintBottom_toTopOf="@+id/textView6"
```

```
    app:layout_constraintEnd_toEndOf="@+id/textView6"
    app:layout_constraintStart_toStartOf="@+id/textView6"
    app:layout_constraintTop_toTopOf="parent" />

<EditText
    android:id="@+id/editTextText4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="40dp"
    android:ems="10"
    android:inputType="text"
    android:text=""
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintStart_toEndOf="@+id/textView5"
    app:layout_constraintTop_toTopOf="parent" />

<TextView
    android:id="@+id/textView6"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="10dp"
    android:layout_marginBottom="279dp"
    android:text="Password"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/editTextText6"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView5" />

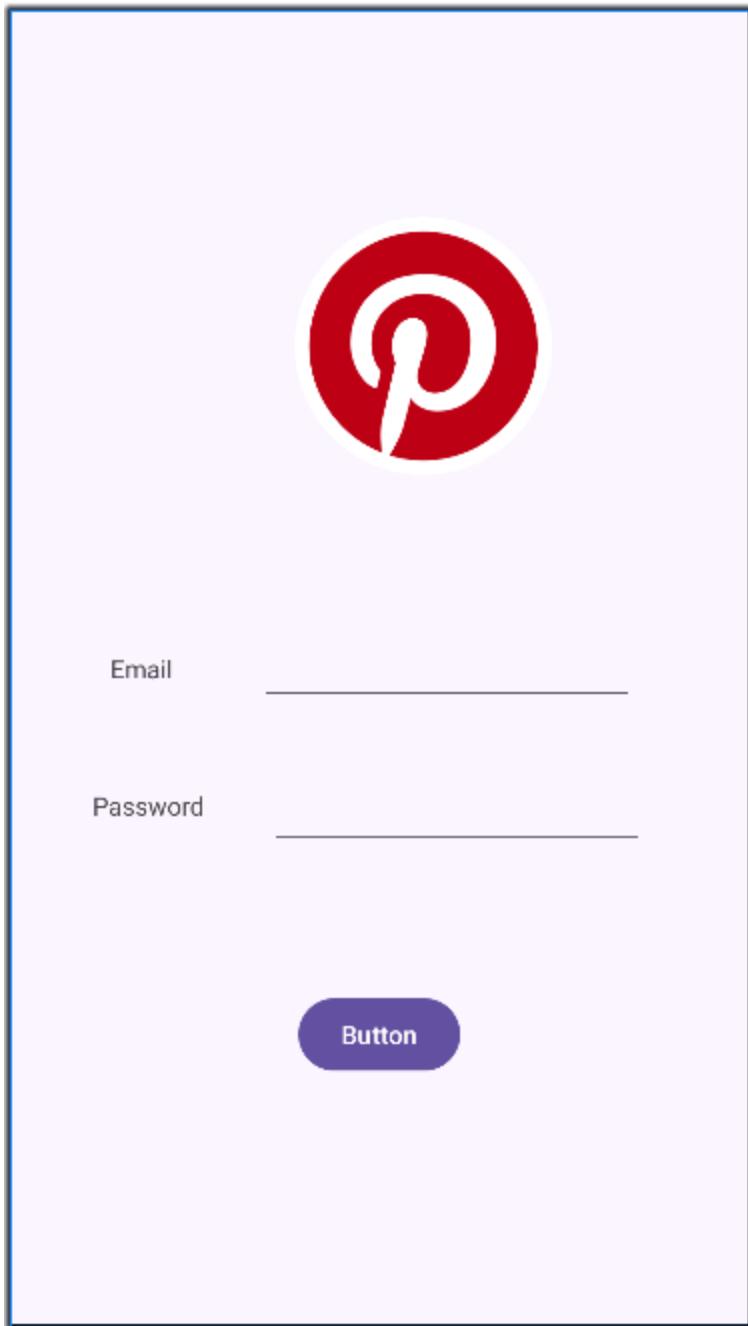
<Button
    android:id="@+id/button15"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
```

```
    android:layout_marginTop="78dp"
    android:text="Button"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/editTextText6" />

<EditText
    android:id="@+id/editTextText6"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="35dp"
    android:layout_marginEnd="21dp"
    android:ems="10"
    android:inputType="text"
    android:text=""
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toEndOf="@+id/textView6"
    app:layout_constraintTop_toBottomOf="@+id/editTextText4" />

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

Output:-



PRACTICAL 13

Aim: Programming UI elements AppBar, Fragments, UI Components

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_height="match_parent"
    android:layout_width="match_parent"
    android:gravity="center"
    android:orientation="vertical"
    >
    <TextView
        android:id="@+id/txt_one"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="ADCD Practical 13: Programming UI Elements"
        android:textSize="18sp"
        android:gravity="center"
        />
    <TextView
        android:id="@+id/txt_two"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Feedback Form"
        android:textSize="18sp"
        />
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
```

```
    android:orientation="horizontal">
    <TextView
        android:id="@+id/txt_three"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Name:"
        android:textSize="18sp"/>
    <EditText
        android:id="@+id/edittext1"
        android:layout_width="349dp"
        android:layout_height="wrap_content"
        android:hint="Enter Here"
        android:textSize="18sp" />
</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:orientation="horizontal">
    <TextView
        android:id="@+id/txt_four"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Course:"
        android:textSize="18sp"/>
    <EditText
        android:id="@+id/edittext2"
        android:layout_width="339dp"
        android:layout_height="wrap_content"
        android:hint="Enter Here"
        android:textSize="18sp" />
```

```
</LinearLayout>
<Button
    android:id="@+id/submitbutton"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Submit"
    android:textSize="18sp"
/>
<TextView
    android:id="@+id/textview"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="This Text will be replaced via Kotlin"
    android:textSize="18sp"
/>
<RatingBar
    android:id="@+id/ratingbar"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    tools:layout_editor_absoluteX="101dp"
    tools:layout_editor_absoluteY="16dp"
/>
<Button
    android:id="@+id/getratingvaluebutton"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Get Rating Value"
/>
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:gravity="center"
```

```
    android:text="Click on Below Toggle Button"
    android:textSize="18sp"
/>
<ToggleButton
    android:id="@+id/togglebutton"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"/>
<Switch
    android:id="@+id/switch1"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Switch is off"
    android:textSize="18sp"
/>
<SeekBar
    android:id="@+id/seekbar"
    android:layout_width="match_parent"
    android:layout_height="50dp" />
</LinearLayout>
```

MainActivity.kt

```
package com.example.a546_ragini

import android.os.Bundle
import android.widget.Button
import android.widget.EditText
import android.widget.RatingBar
import android.widget.SeekBar
import android.widget.Switch
import android.widget.TextView
```

```
import android.widget.Toast
import android.widget.ToggleButton
import androidx.activity.enableEdgeToEdge
import androidx.appcompat.app.AppCompatActivity
import com.example.a546_ragini.R

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        enableEdgeToEdge()
        setContentView(R.layout.activity_main)

        val editText1: EditText = findViewById(R.id.edittext1)
        val editText2: EditText = findViewById(R.id.edittext2)
        val submitButton: Button = findViewById(R.id.submitbutton)
        val textView: TextView = findViewById(R.id.textview)
        val getRatingValueButton: Button =
            findViewById(R.id.getratingvaluebutton)
        val ratingBar: RatingBar = findViewById(R.id.ratingbar)
        val toggleButton: ToggleButton = findViewById(R.id.togglebutton)
        val switch: Switch = findViewById(R.id.switch1)
        val seekBar: SeekBar = findViewById(R.id.seekbar)

        submitButton.setOnClickListener {
            val name: String = editText1.text.toString()
            val course: String = editText2.text.toString()
            textView.text = "Name: $name\nCourse: $course"
        }

        getRatingValueButton.setOnClickListener {
            val ratingValue: Float = ratingBar.rating
        }
    }
}
```

```

        Toast.makeText(this, ratingValue.toString(),
Toast.LENGTH_LONG).show()
    }

toggleButton.setOnCheckedChangeListener { _, isChecked ->
    val msg = if (isChecked) "Toggle Button is ON" else "Toggle Button is
OFF"
    Toast.makeText(this, msg, Toast.LENGTH_SHORT).show()
}

switch.setOnCheckedChangeListener { _, isChecked ->
    val msg = if (isChecked) "Switch is ON" else "Switch is OFF"
    Toast.makeText(this, msg, Toast.LENGTH_SHORT).show()
    switch.text = msg
}

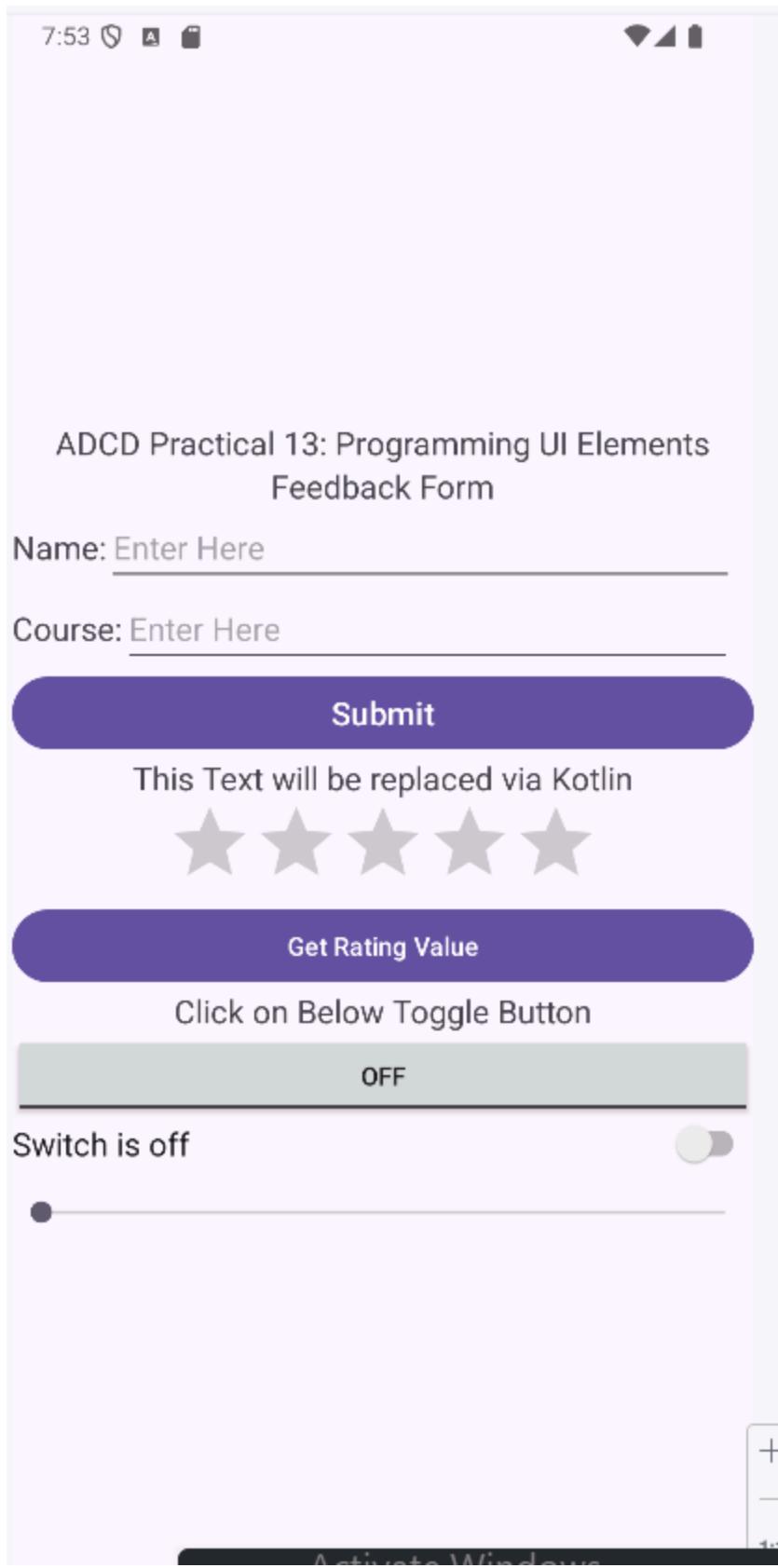
seekBar.setOnSeekBarChangeListener(object :
SeekBar.OnSeekBarChangeListener {
    override fun onProgressChanged(seekBar: SeekBar?, progress: Int,
fromUser: Boolean) {
    }

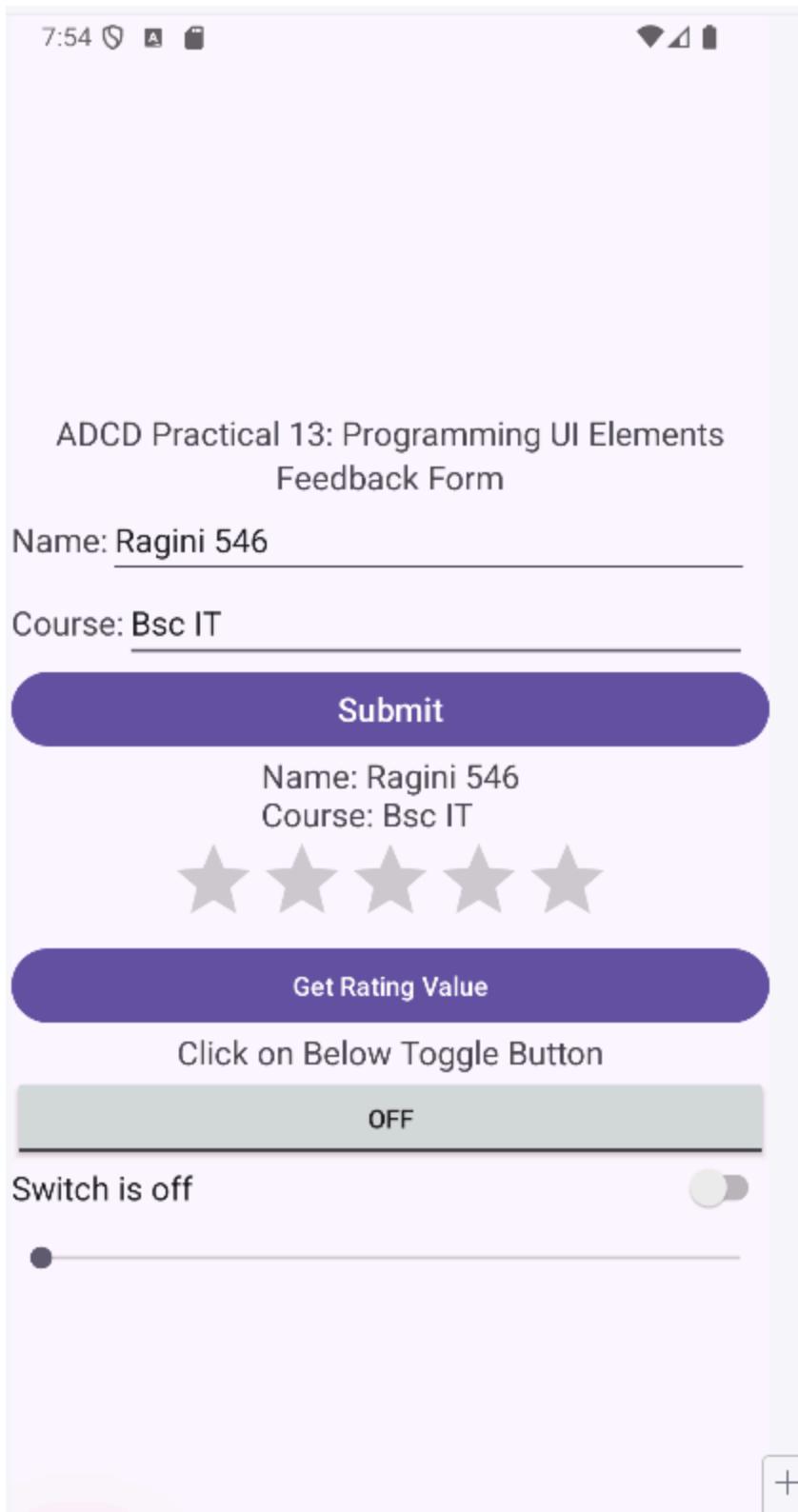
    override fun onStartTrackingTouch(seekBar: SeekBar?) {
    }

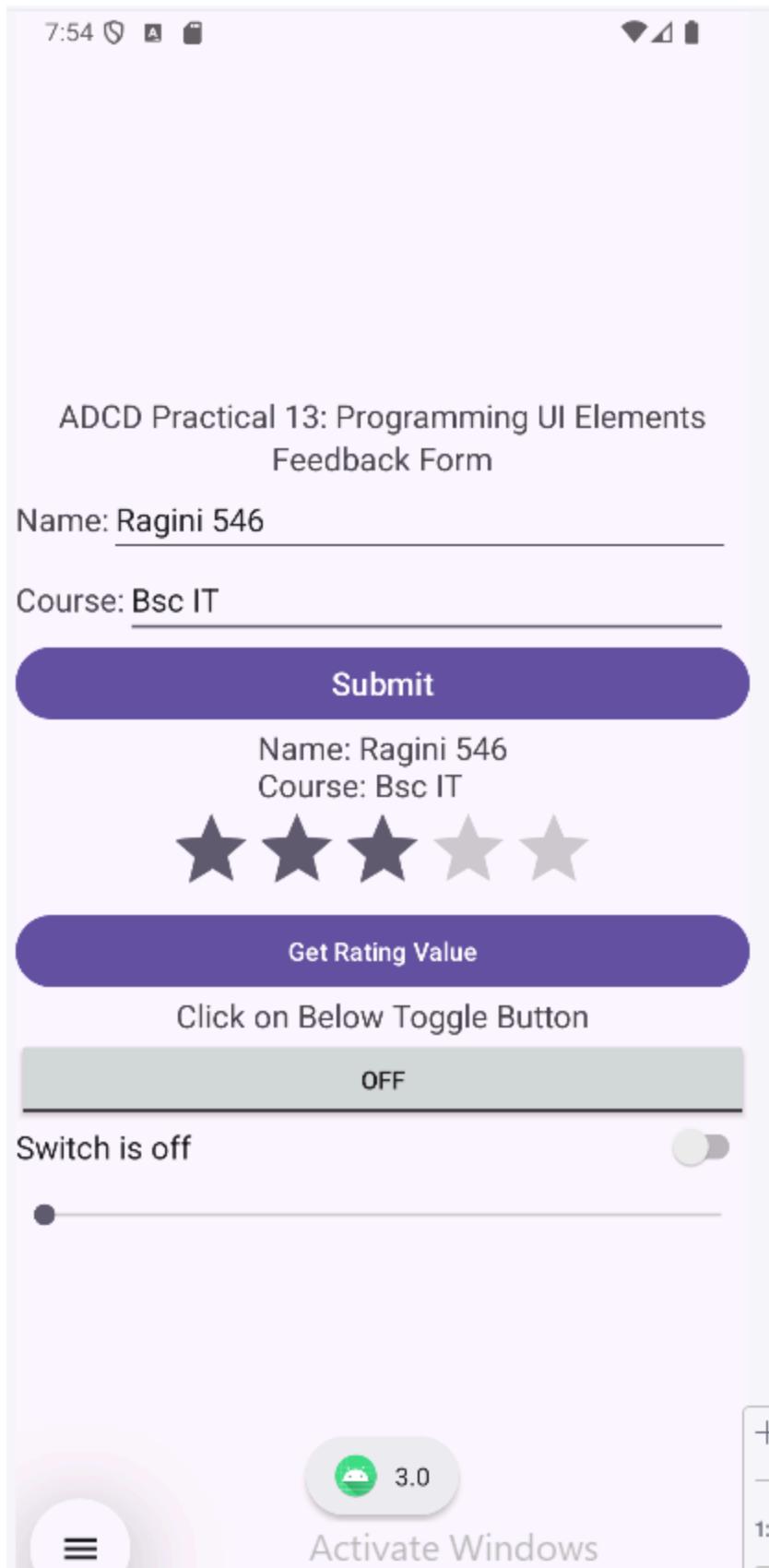
    override fun onStopTrackingTouch(seekBar: SeekBar?) {
        Toast.makeText(this@MainActivity, "Progress is
${seekBar?.progress}%", Toast.LENGTH_SHORT).show()
    }
})
}

```

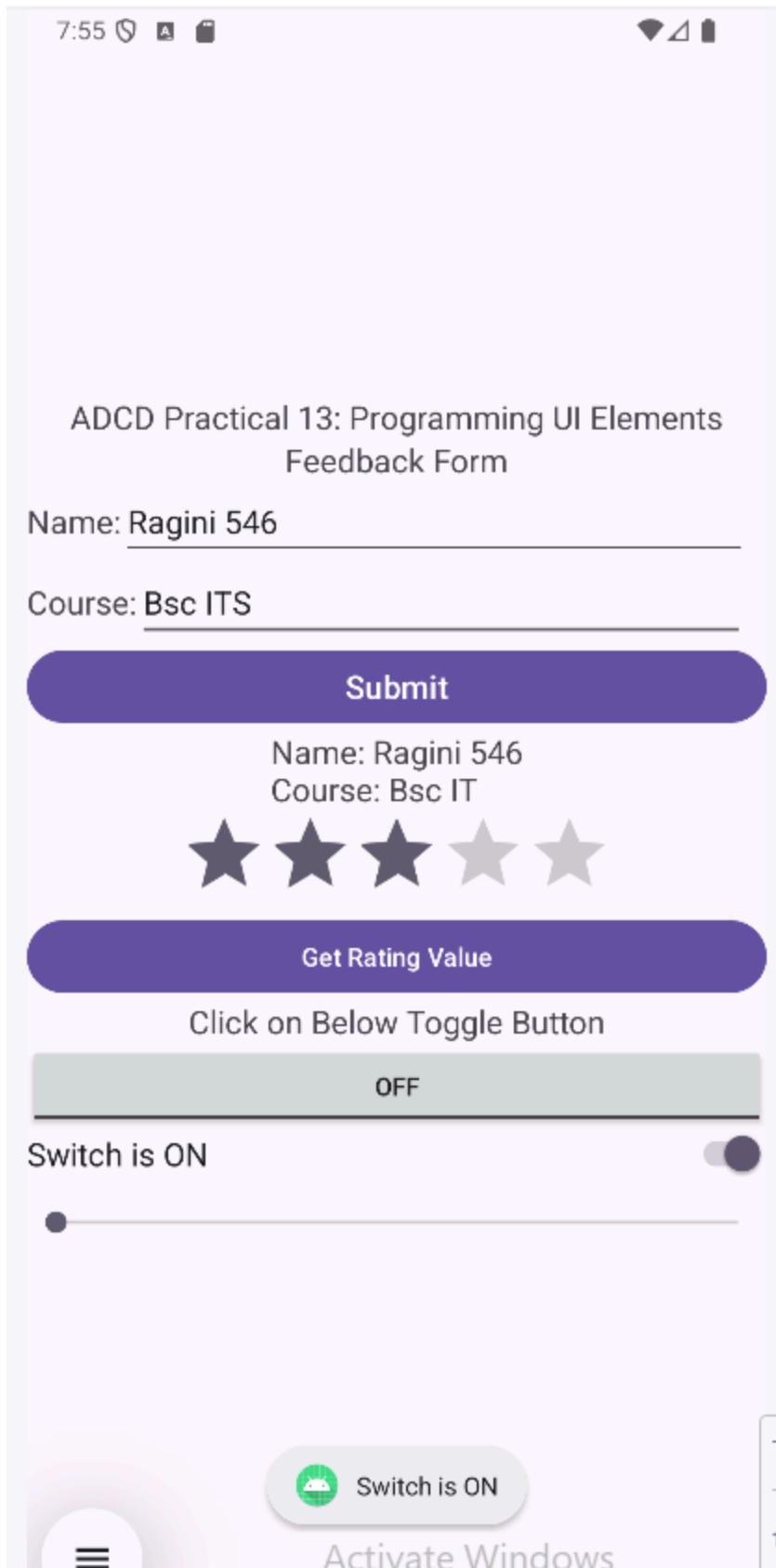
Output:-







Ragini Vishwakarma
546



7:55



ADCD Practical 13: Programming UI Elements Feedback Form

Name: Ragini 546

Course: Bsc ITS

Submit

Name: Ragini 546

Course: Bsc IT



Get Rating Value

Click on Below Toggle Button

ON

Switch is ON



Toggle Button is ON



7:55



ADCD Practical 13: Programming UI Elements Feedback Form

Name: Ragini 546

Course: Bsc ITS

Submit

Name: Ragini 546

Course: Bsc IT



Get Rating Value

Click on Below Toggle Button

ON

Switch is ON



Progress is 73%



Activate Windows

Go to Settings to activate Windows



PRACTICAL 15

Aim: Programs on Intents, Events, Listeners and Adapters:
The Android Intent Class, Using Events and Event Listeners
i] Programs on Intent.
1] Navigation between 2 files.

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/main"
    android:layout_height="match_parent"
    android:layout_width="match_parent"
    android:orientation="vertical"
    android:gravity="center">
    <TextView
        android:id="@+id/txt1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Ragini_546"
        android:textSize="30sp"/>
    <TextView
        android:id="@+id/txt2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Programs on Intents"
        android:textSize="30sp"/>
    <Button
```

```
    android:id="@+id	btn1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:textSize="30sp"
    android:text="Next Activity"/>
</LinearLayout>
```

MainActivity.kt

```
package com.example.a546_ragini

import android.content.Intent
import android.os.Bundle
import android.widget.Button
import androidx.activity.enableEdgeToEdge
import androidx.appcompat.app.AppCompatActivity

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        enableEdgeToEdge()
        setContentView(R.layout.activity_main)
        val btn1 = findViewById<Button>(R.id.btn1)
        btn1.setOnClickListener{
            val intent = Intent(this, SecondActivity::class.java)
            startActivity(intent)
        }
    }
}
```

```
}
```

activity_second.xml

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

<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/main"
    android:layout_height="match_parent"
    android:layout_width="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    >
<TextView
    android:id="@+id/txt4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Welcome 546"
    android:textSize="30sp"/>
</LinearLayout>
```

SecondActivity.kt

```
package com.example.a546_ragini
```

```
import android.os.Bundle
```

Ragini Vishwakarma
546

```
import androidx.appcompat.app.AppCompatActivity

class SecondActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_second) // second XML
    }
}
```

9:04



Ragini_546
Programs on Intents

Next Activity





Welcome 546

2] Navigation between 2 files

Activity_main.xml

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

```
    android:orientation="vertical"
    android:gravity="center"
    >
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="First Activity"
    android:textSize="30sp"
    />
<EditText
    android:id="@+id/edt1"
    android:layout_width="match_parent"
    android:layout_height="50dp"
    android:hint="Enter Your Name"
    android:inputType="text"
    android:padding="15dp"
    android:textColor="#000000"/>
<Button
    android:id="@+id	btn1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="SUBMIT"
    android:textSize="30sp"
    />
</LinearLayout>
```

MainActivity.kt

```
package com.example.a546_ragini
```

```
import android.content.Intent
```

```
import android.os.Bundle
```

```

import android.widget.Button
import android.widget.EditText
import androidx.appcompat.app.AppCompatActivity

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        val btn1 = findViewById<Button>(R.id.btn1)
        val edt1 = findViewById<EditText>(R.id.edt1)
        btn1.setOnClickListener {
            val message: String = edt1.text.toString()
            val intent = Intent(this,
                SecondActivity::class.java)
            intent.putExtra("key1",message)
            startActivity(intent)
        }
    }
}

```

Activity_second.xml

```

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

<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_height="match_parent"
    android:layout_width="match_parent"
    android:orientation="vertical"

```

```
    android:gravity="center"
    >

<TextView
    android:id="@+id/txt3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Welcome"
    android:textSize="30sp"
    />
</LinearLayout>
```

SecondActivity.kt

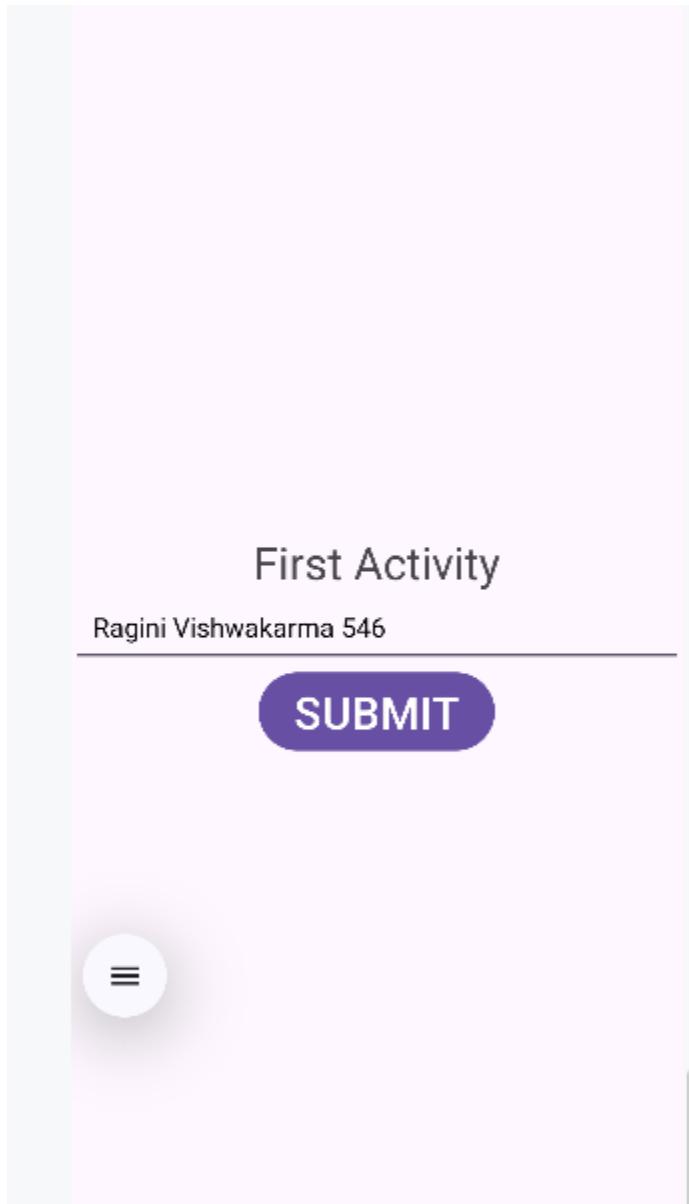
```
package com.example.a546_ragini

import android.os.Bundle
import android.widget.TextView
import androidx.appcompat.app.AppCompatActivity

class SecondActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_second)
        val txt3 = findViewById<TextView>(R.id.txt3)
        val bundle: Bundle? = intent.extras
        val grabMsg = bundle!![getString("key1")]
        txt3.text = "Welcome " + grabMsg
    }
}
```

}

Output:-



Ragini Vishwakarma
546

Welcome Ragini Vishwakarma
546

3] Implicit Data Sharing Activity_main.xml

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

Ragini Vishwakarma
546

```
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_height="match_parent"
    android:layout_width="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    >
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Ragini 546"
        android:textSize="30sp"
        />
    <EditText
        android:id="@+id/edt1"
        android:layout_width="match_parent"
        android:layout_height="50dp"
        android:hint="Enter Your Name"
        android:inputType="text"
        android:padding="15dp"
        android:textColor="#000000"/>
    <Button
        android:id="@+id/btn1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="SUBMIT"
        android:textSize="30sp"
        />
</LinearLayout>
```

MainActivity.kt

```
package com.example.a546_ragini

import android.content.Intent
import android.os.Bundle
import android.widget.Button
import android.widget.EditText
import androidx.appcompat.app.AppCompatActivity

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        val btn1 = findViewById<Button>(R.id.btn1)
        val edt1 = findViewById<EditText>(R.id.edt1)
        btn1.setOnClickListener {
            val message: String = edt1.text.toString()
            val intent = Intent()
            intent.action = Intent.ACTION_SEND
            intent.putExtra(Intent.EXTRA_TEXT, message)
            intent.type = "text/plain"
            startActivity(Intent.createChooser(intent, "send my data to:"))
        }
    }
}
```

Activity_second.xml

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

<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_height="match_parent"
    android:layout_width="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    >
    <TextView
        android:id="@+id/txt3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Welcome"
        android:textSize="30sp"
        />
</LinearLayout>
```

SecondActivity.kt

```
package com.example.a546_ragini

import android.os.Bundle
import android.widget.TextView
import androidx.appcompat.app.AppCompatActivity
```

```
class SecondActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
```

```
setContentView(R.layout.activity_second)
val txt3 = findViewById<TextView>(R.id.txt3)
val bundle: Bundle? = intent.extras
val grabMsg = bundle!!.getString("key1")
txt3.text = "Welcome " + grabMsg
}
}
```

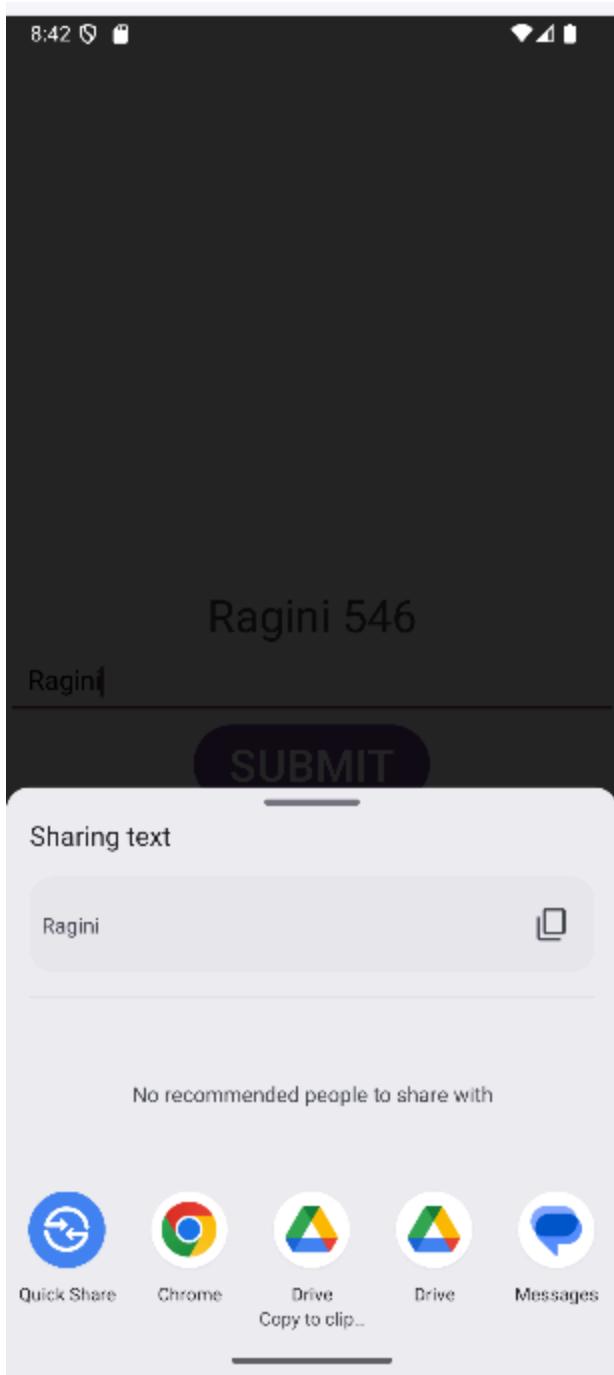
Ragini 546

Ragini

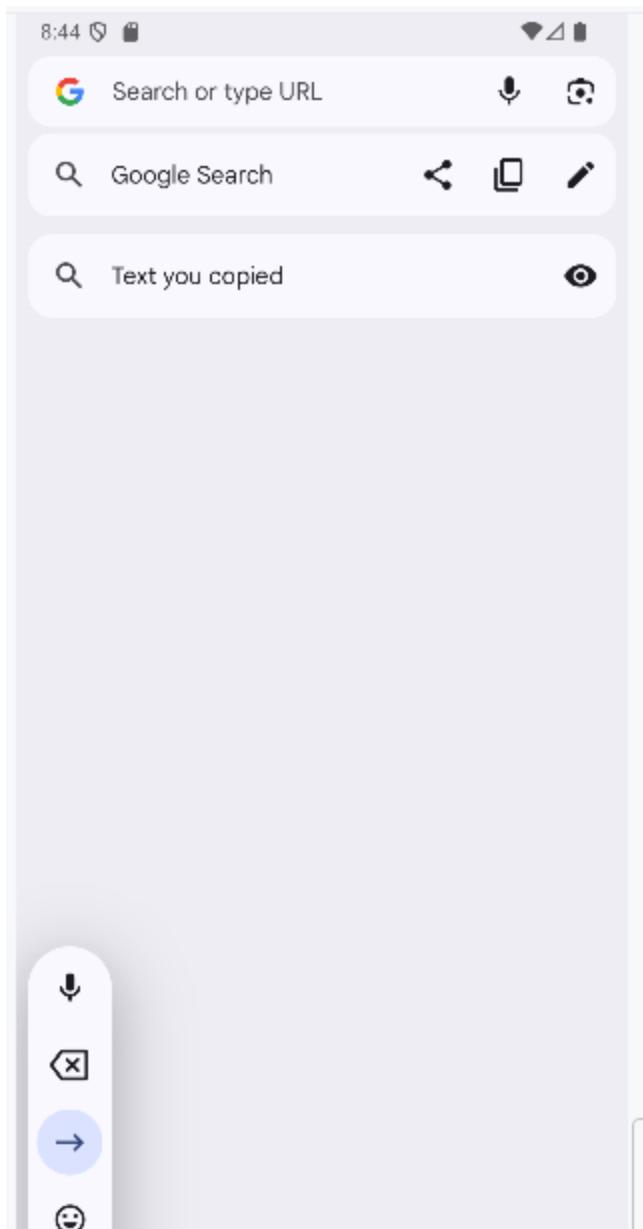
SUBMIT



+
—
1:1



Ragini Vishwakarma
546



4] Implicit Data Sharing direct to the website.

Activity_main.xml

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

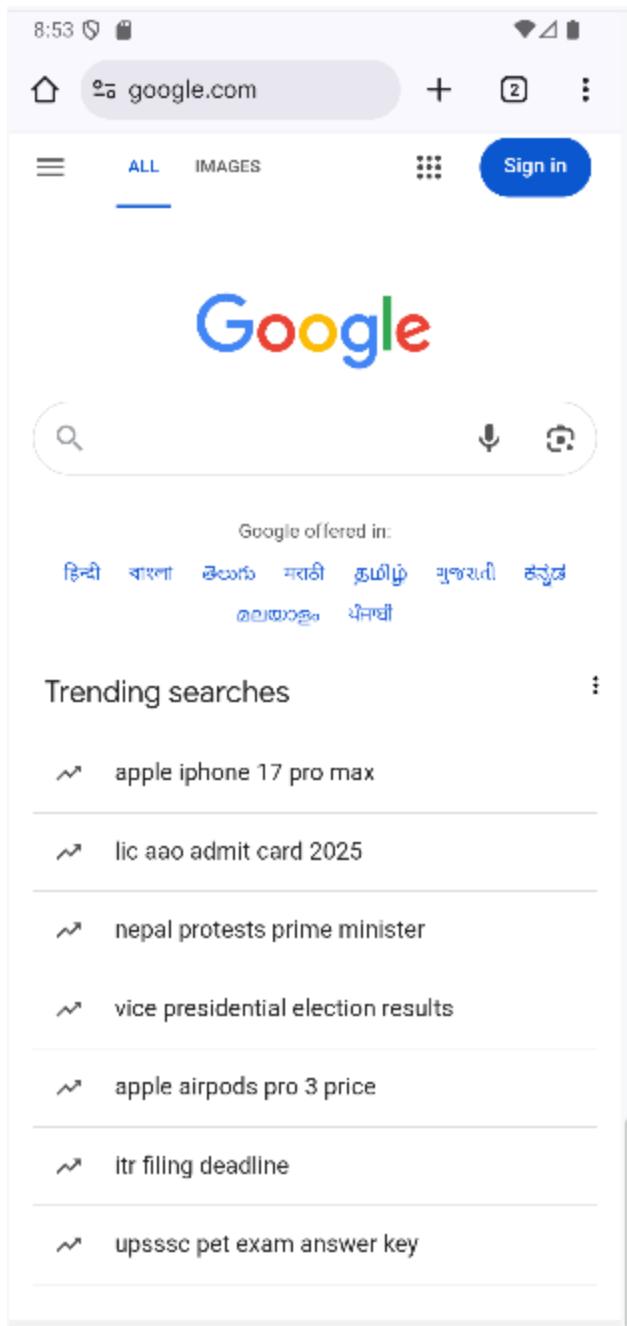
```
xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_height="match_parent"
    android:layout_width="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    >
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Ragini_546"
    android:textSize="30sp"
    />
<EditText
    android:id="@+id/edt1"
    android:layout_width="match_parent"
    android:layout_height="50dp"
    android:hint="Enter Your Name"
    android:inputType="text"
    android:padding="15dp"
    android:textColor="#000000"/>
<Button
    android:id="@+id	btn1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="SUBMIT"
    android:textSize="30sp"
    />
</LinearLayout>
```

MainActivity.kt

```
package com.example.a546_ragini

import android.content.Intent
import android.net.Uri
import android.os.Bundle
import android.widget.Button
import android.widget.EditText
import androidx.appcompat.app.AppCompatActivity

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        val btn1 = findViewById<Button>(R.id.btn1)
        val edt1 = findViewById<EditText>(R.id.edt1)
        btn1.setOnClickListener {
            val intent = Intent()
            intent.action = Intent.ACTION_VIEW
            intent.data = Uri.parse("https://www.google.com/")
            startActivity(intent)
        }
    }
}
```



PRACTICAL 14

AIM:- Programming menus, dialog

new-

Part 1

Manufile.xml:-

```

<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">
    <item android:title="Contact Us"
        android:id="@+id/contact"/>
    <item android:title="About Us"
        android:id="@+id/about"/>
    <item android:title="Help"
        android:id="@+id/help"/>
    <item android:title="FAQ"
        android:id="@+id/faq"/>

</menu>

```

MainActivity.kt:-

```

package com.example.ragini_546

import android.os.Bundle
import android.view.Menu
import android.view.MenuItem
import android.widget.Toast
import androidx.activity.enableEdgeToEdge
import androidx.appcompat.app.AppCompatActivity
import androidx.core.view.ViewCompat
import androidx.core.view.WindowInsetsCompat

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
    }

    override fun onCreateOptionsMenu(menu: Menu?): Boolean {
        super.onCreateOptionsMenu(menu)
        menuInflater.inflate(R.menu.menufile, menu) // Inflate your menu XML
    }
}

```

```

        return true
    }

override fun onOptionsItemSelected(item: MenuItem): Boolean {
    var optionSelected = ""
    when (item.itemId) {
        R.id.contact -> optionSelected = "Contact Us Selected"
        R.id.about -> optionSelected = " About Us Selected"
        R.id.help -> optionSelected = " Help Selected"
        R.id.faq -> optionSelected = " FAQ Selected"

    }
    Toast.makeText(this,optionSelected,
        Toast.LENGTH_LONG).show()
    return super.onOptionsItemSelected(item)
}
}

```

Values\themes.xml

```

<resources xmlns:tools="http://schemas.android.com/tools">
    <!-- Base application theme. -->
    <style name="Base.Theme.Ragini_546" parent="Theme.Material3.DayNight">
        <!-- Customize your dark theme here. -->
        <!-- <item name="colorPrimary">@color/my_dark_primary</item> -->
    </style>
</resources>

```

Night\themes.xml

```

<resources xmlns:tools="http://schemas.android.com/tools">
    <!-- Base application theme. -->
    <style name="Base.Theme.Ragini_546" parent="Theme.Material3.DayNight">
        <!-- Customize your light theme here. -->
        <!-- <item name="colorPrimary">@color/my_light_primary</item> -->
    </style>

```

```
<style name="Theme.Ragini_546" parent="Base.Theme.Ragini_546" />
</resources>
```

Output:-

ragini_546

Contact Us

About Us

Help

FAQ

Hello World!

+

-

1:1

Part 2

MainActivity.kt

```
package com.example.ragini_546
```

```
import android.os.Bundle
import android.view.Menu
import android.view.MenuItem
import android.widget.Button
import android.widget.Toast
import android.app.AlertDialog
import androidx.activity.enableEdgeToEdge
import androidx.appcompat.app.AppCompatActivity
import androidx.core.view.ViewCompat
import androidx.core.view.WindowInsetsCompat
```

```
class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState) //<--- MUST call super
        enableEdgeToEdge()
        setContentView(R.layout.activity_main) //<--- MUST inflate layout first
```

```
    val submitbutton: Button = findViewById(R.id.submitbutton) //<-- Correct ID
    reference
```

```
    submitbutton.setOnClickListener {
        val builder = AlertDialog.Builder(this)
        builder.setTitle("Are you sure")
        builder.setMessage("Are you sure you want to close the app?")
        builder.setPositiveButton("Yes") { dialogInterface, i -> finish() }
        builder.setNegativeButton("No") { dialogInterface, i -> }
        builder.show()
    }
}
```

Activity_main.xml

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

```
xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/rootLayout"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:padding="16dp"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/submitbutton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Submit"
        android:layout_centerInParent="true" />

</RelativeLayout>
```

Output:-

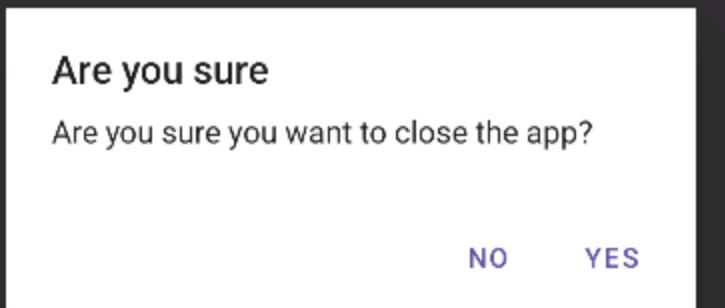
ragini_546

Submit



Ragini Vishwakarma
546

ragini_546



Part3

[MainActivity.kt](#)

package com.example.ragini_546

Ragini Vishwakarma
546

```

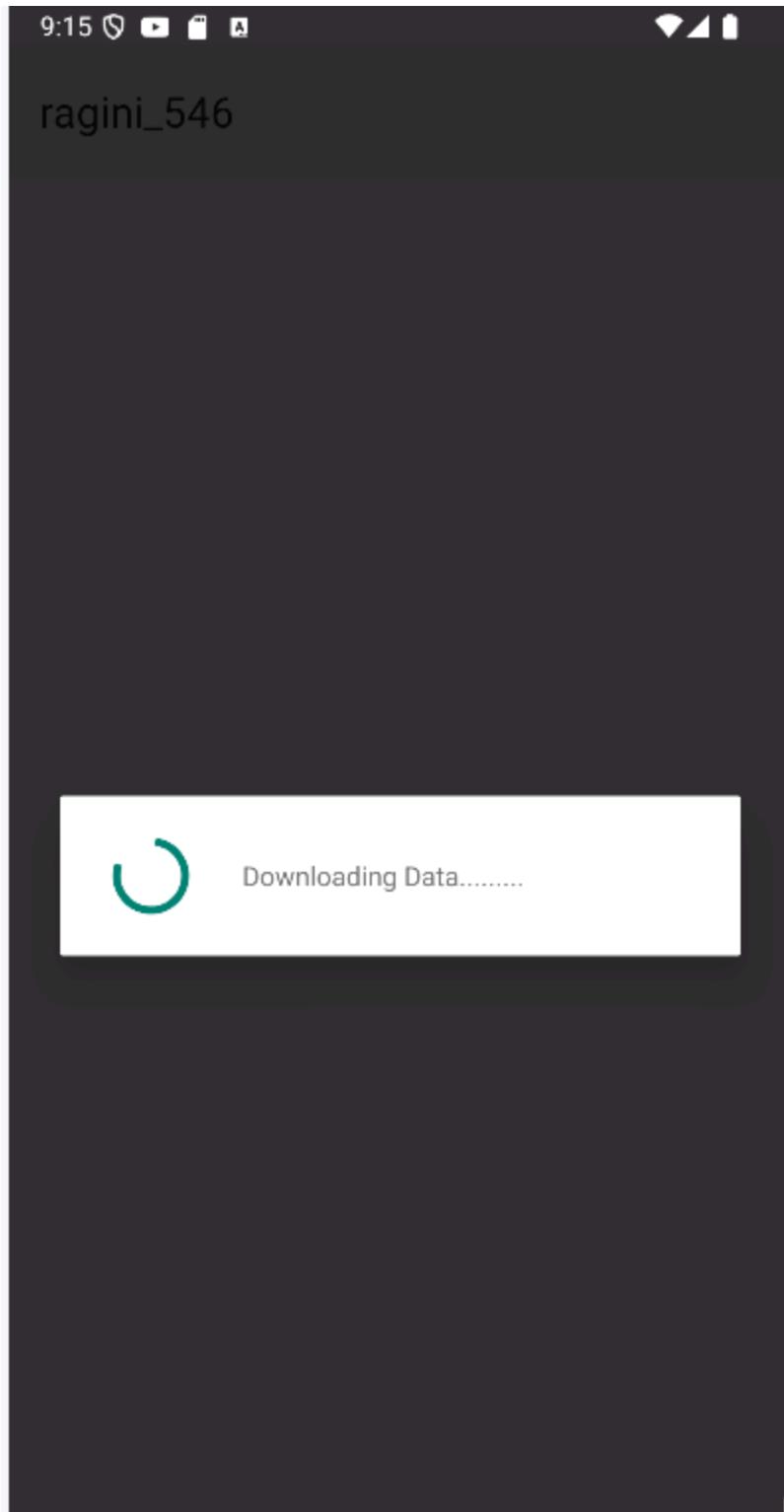
import android.os.Bundle
import android.view.Menu
import android.view.MenuItem
import android.widget.Button
import android.widget.Toast
import android.app.AlertDialog
import android.app.ProgressDialog
import android.os.Handler
import androidx.activity.enableEdgeToEdge
import androidx.appcompat.app.AppCompatActivity
import androidx.core.view.ViewCompat
import androidx.core.view.WindowInsetsCompat

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState) //<--- MUST call super
        enableEdgeToEdge()
        setContentView(R.layout.activity_main) //<--- MUST inflate layout first

        val progressDialog = ProgressDialog(this)
        progressDialog.setMessage("Downloading Data.....")
        progressDialog.setCancelable(false)
        progressDialog.show()
        Handler().postDelayed({progressDialog.dismiss()},10000)
    }
}

```

Output:-



override fun

```
onCreate(savedInstanceState: Bundle?) {  
    super.onCreate(savedInstanceState)  
    enableEdgeToEdge()
```

```
setContentView(R.layout.activity_main)
val btn1 = findViewById<Button>(R.id.btn1)
btn1.setOnClickListener{
    val intent = Intent(this, SecondActivity::class.java)
    startActivity(intent)
}
}
```

activity_second.xml

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

<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/main"
    android:layout_height="match_parent"
    android:layout_width="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    >
<TextView
    android:id="@+id/txt4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Welcome 546"
    android:textSize="30sp"/>
</LinearLayout>
```

SecondActivity.kt

```
package com.example.a546_ragini
```

```
import android.os.Bundle
import androidx.appcompat.app.AppCompatActivity

class SecondActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_second) // second XML
    }
}
```

9:04



Ragini_546
Programs on Intents

Next Activity





Welcome 546

2] Navigation between 2 files

Activity_main.xml

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

```

    android:gravity="center"
    >
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="First Activity"
    android:textSize="30sp"
    />
<EditText
    android:id="@+id/edt1"
    android:layout_width="match_parent"
    android:layout_height="50dp"
    android:hint="Enter Your Name"
    android:inputType="text"
    android:padding="15dp"
    android:textColor="#000000"/>
<Button
    android:id="@+id	btn1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="SUBMIT"
    android:textSize="30sp"
    />
</LinearLayout>

```

MainActivity.kt

```

package com.example.a546_ragini

import android.content.Intent
import android.os.Bundle
import android.widget.Button
import android.widget.EditText
import androidx.appcompat.app.AppCompatActivity

```

```

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        val btn1 = findViewById<Button>(R.id.btn1)
        val edt1 = findViewById<EditText>(R.id.edt1)
        btn1.setOnClickListener {
            val message: String = edt1.text.toString()
            val intent = Intent(this,
                SecondActivity::class.java)
            intent.putExtra("key1",message)
            startActivity(intent)
        }
    }
}

```

Activity_second.xml

```

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

<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_height="match_parent"
    android:layout_width="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    >

    <TextView
        android:id="@+id/txt3"
        android:layout_width="wrap_content"

```

```
    android:layout_height="wrap_content"
    android:text="Welcome"
    android:textSize="30sp"
/>
</LinearLayout>
```

SecondActivity.kt

```
package com.example.a546_ragini

import android.os.Bundle
import android.widget.TextView
import androidx.appcompat.app.AppCompatActivity

class SecondActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_second)
        val txt3 = findViewById<TextView>(R.id.txt3)
        val bundle: Bundle? = intent.extras
        val grabMsg = bundle!!.getString("key1")
        txt3.text = "Welcome " + grabMsg
    }
}
```

Output:-

First Activity

Ragini Vishwakarma 546

SUBMIT





Welcome Ragini Vishwakarma
546

3] Implicit Data Sharing Activity_main.xml

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

Ragini Vishwakarma
546

```
xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_height="match_parent"
    android:layout_width="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    >
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Ragini 546"
    android:textSize="30sp"
    />
<EditText
    android:id="@+id/edt1"
    android:layout_width="match_parent"
    android:layout_height="50dp"
    android:hint="Enter Your Name"
    android:inputType="text"
    android:padding="15dp"
    android:textColor="#000000"/>
<Button
    android:id="@+id	btn1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="SUBMIT"
    android:textSize="30sp"
    />
</LinearLayout>
```

MainActivity.kt

```
package com.example.a546_ragini
```

```

import android.content.Intent
import android.os.Bundle
import android.widget.Button
import android.widget.EditText
import androidx.appcompat.app.AppCompatActivity

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        val btn1 = findViewById<Button>(R.id.btn1)
        val edt1 = findViewById<EditText>(R.id.edt1)
        btn1.setOnClickListener {
            val message: String = edt1.text.toString()
            val intent = Intent()
            intent.action = Intent.ACTION_SEND
            intent.putExtra(Intent.EXTRA_TEXT, message)
            intent.type = "text/plain"
            startActivity(Intent.createChooser(intent, "send my data to:"))
        }
    }
}

```

Activity_second.xml

```

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

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

```

```
    android:layout_height="match_parent"
    android:layout_width="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    >
<TextView
    android:id="@+id/txt3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Welcome"
    android:textSize="30sp"
    />
</LinearLayout>
```

SecondActivity.kt

```
package com.example.a546_ragini

import android.os.Bundle
import android.widget.TextView
import androidx.appcompat.app.AppCompatActivity

class SecondActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_second)
        val txt3 = findViewById<TextView>(R.id.txt3)
        val bundle: Bundle? = intent.extras
        val grabMsg = bundle!!.getString("key1")
        txt3.text = "Welcome " + grabMsg
    }
}
```

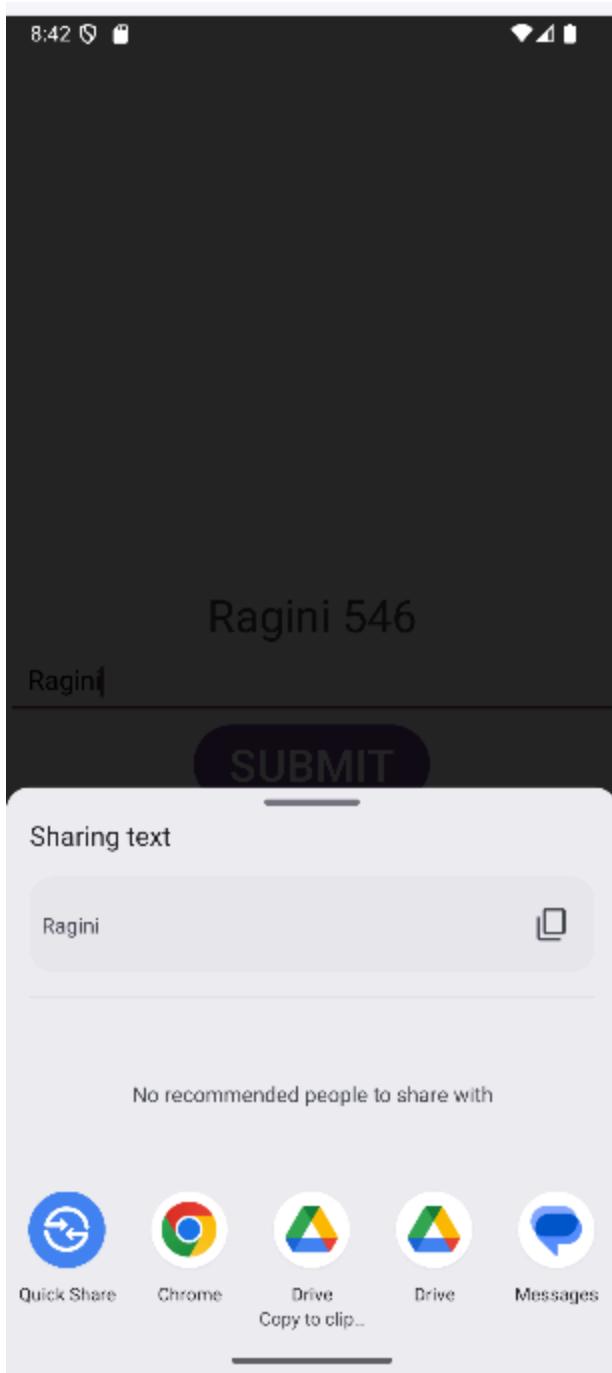
Ragini 546

Ragini

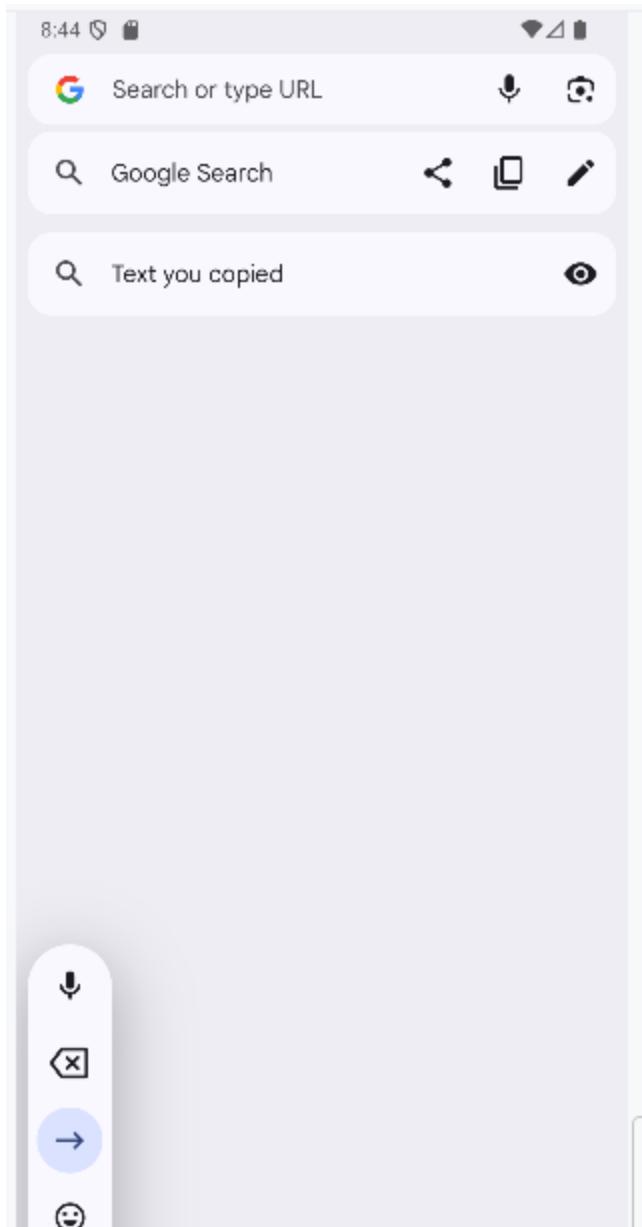
SUBMIT

≡

+
—
1:1



Ragini Vishwakarma
546



4] Implicit Data Sharing direct to the website.

Activity_main.xml

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

```
    android:layout_height="match_parent"
    android:layout_width="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    >
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Ragini_546"
    android:textSize="30sp"
    />
<EditText
    android:id="@+id/edt1"
    android:layout_width="match_parent"
    android:layout_height="50dp"
    android:hint="Enter Your Name"
    android:inputType="text"
    android:padding="15dp"
    android:textColor="#000000"/>
<Button
    android:id="@+id	btn1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="SUBMIT"
    android:textSize="30sp"
    />
</LinearLayout>
```

MainActivity.kt

```
package com.example.a546_ragini
```

```
import android.content.Intent
import android.net.Uri
import android.os.Bundle
import android.widget.Button
import android.widget.EditText
import androidx.appcompat.app.AppCompatActivity

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        val btn1 = findViewById<Button>(R.id.btn1)
        val edt1 = findViewById<EditText>(R.id.edt1)
        btn1.setOnClickListener {
            val intent = Intent()
            intent.action = Intent.ACTION_VIEW
            intent.data = Uri.parse("https://www.google.com/")
            startActivity(intent)
        }
    }
}
```

