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Subject - OBC621

Mobile Application Development

Laboratory

Course - BCA

Program 1: Create an Android application that displays the message

"Welcome to graphic era University BCA/MCA Programme" on the screen!

Code files:-

Path → app → src → main → res → layout → activity\_main.xml

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"
    android:
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_width="match-parent"
    android:layout_height="match-parent"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap-content"
        android:layout_height="wrap-content"
```

```
    android:text="Welcome to Graphic Era University BCA/  
    MCA Programme"  
    app:layout_constraintBottom_toBottomOf="Parent"  
    app:layout_constraintEnd_toEndOf="Parent"  
    app:layout_constraintStart_toStartOf="Parent"  
    app:layout_constraintTop_toTopOf="parent"/>/  
  
</androidx.constraintlayout.widget.ConstraintLayout>
```

### MainActivity.java

```
package com.example.welcome;  
import android.os.Bundle;  
import androidx.activity.EdgeToEdge;  
import androidx.core.graphics.Insets;  
import androidx.appcompat.app.AppCompatActivity;  
import androidx.core.view.ViewCompat;  
import androidx.core.view.WindowInsetsCompat;  
  
public class MainActivity extends AppCompatActivity {
```

@Override

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

```
    edgeToEdge, enable ( $this->enableEdgeToEdge(); this );
    setContentView(R.layout.activity_main);
    ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (view, windowInsetsCompat
        & insets) → {
```

```
    Insets systemBars = insets.getInsets(WindowInsets
        .compat.Type.systemBars());
```

```
    v.setPadding(systemBars.left, systemBars.top, systemBars
        .right, systemBars.bottom);
```

```
    return insets;
```

```
});
```

```
}
```

```
}
```

```
} AndroidManifest.xml
```

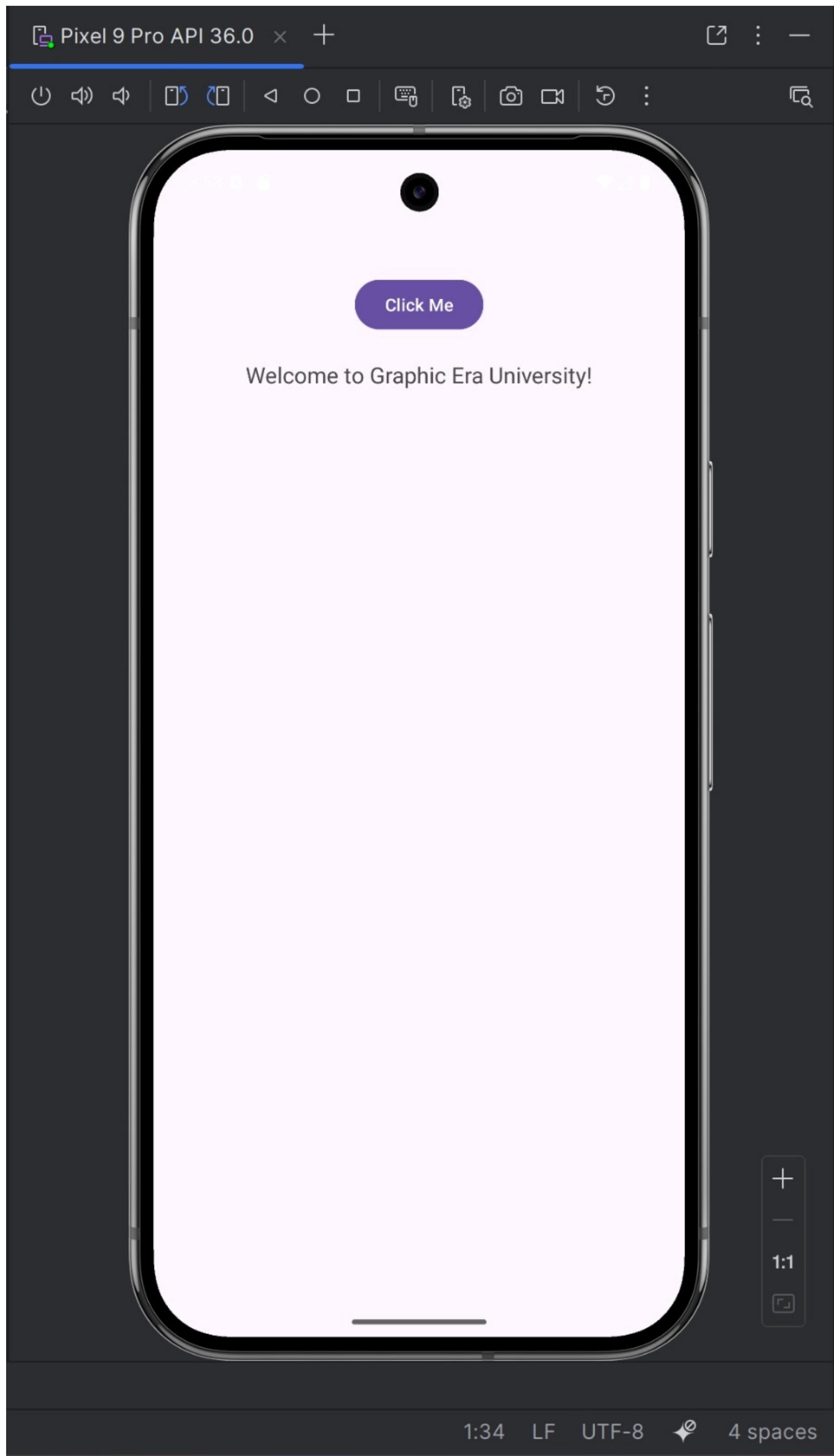
```
<?xml version="1.0" encoding="utf-8"?>
```

```
<manifest xmlns:android="http://schemas.android.com/
    apk/res/android" >
```

```
<application
    android:allowBackup = "true"
    android: dataExtractionRules = "@xml/data-extraction-rules"
    android: fullBackupContent = "@xml/backup-rules"
    android: icon = "@mipmap/ic_launcher"
    android:label = "My Application"
    android: roundIcon = "@mipmap/ic-launcher-round"
    android: supportRtl = "true"
    android: theme = "@style/Theme.MyApplication" >

<activity
    android:name = ".MainActivity"
    android:exported = "true" >
    <intent-filter>
        <action android:name = "android.intent.action.MAIN" />
        <category android:name = "android.intent.category.LAUNCHER" />
    </intent-filter>
</activity>
</application>

</manifest>
```



Program 2: Create an android Application that displays the message "Welcome To Graphic Era University BCA/MCA Programme" with the Click of a button.

Code files: —

Path → app → src → main → res → layout → activity\_main.xml

activity\_main.xml

```
<?xml version = "1.0" encoding = "utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android = "http://schemas.android.com/apk/res/android"
    xmlns:app = "http://schemas.android.com/apk/res-auto"
    xmlns:tools = "http://schemas.android.com/tools"
    android:id = "@+id/main"
    android:layout_width = "match-parent"
    android:layout_height = "match-parent"
    tools:context = ".MainActivity">
```

<Button

android:id = "@+id/showButton"

android:layout\_width = "wrap-content"

android:layout\_height = "wrap-content"

```
    android:text = "click Me"
    app:layout_constraintTop_toTopOf = "parent"
    app:layout_constraintBottom_toTopOf = "@+id/messageText"
    app:layout_constraintStart_toStartOf = "parent"
    app:layout_constraintEnd_toEndOf = "parent"
    android:layout_marginTop = "100dp" />
```

< TextView

```
    android:id = "@+id/messageText"
    android:layout_width = "wrap-content"
    android:layout_height = "wrap-content"
    android:text = "Welcome to Graphic Era University
                    BCA MCA Programme"
```

```
    android:textSize = "18sp"
```

```
    android:visibility = "invisible"
```

```
    app:layout_constraintTop_toBottomOf = "@+id/showButton"
```

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

```
    app:layout_constraintEnd_toEndOf = "parent"
```

```
    android:layout_marginTop = "20dp" />
```

</androidx.constraintLayout.widget.ConstraintLayout >

## MainActivity.java

```
package com.example.myapplication;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

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

        Button showButton = findViewById(R.id.showButton);
        TextView messageText = findViewById(R.id.messageText);

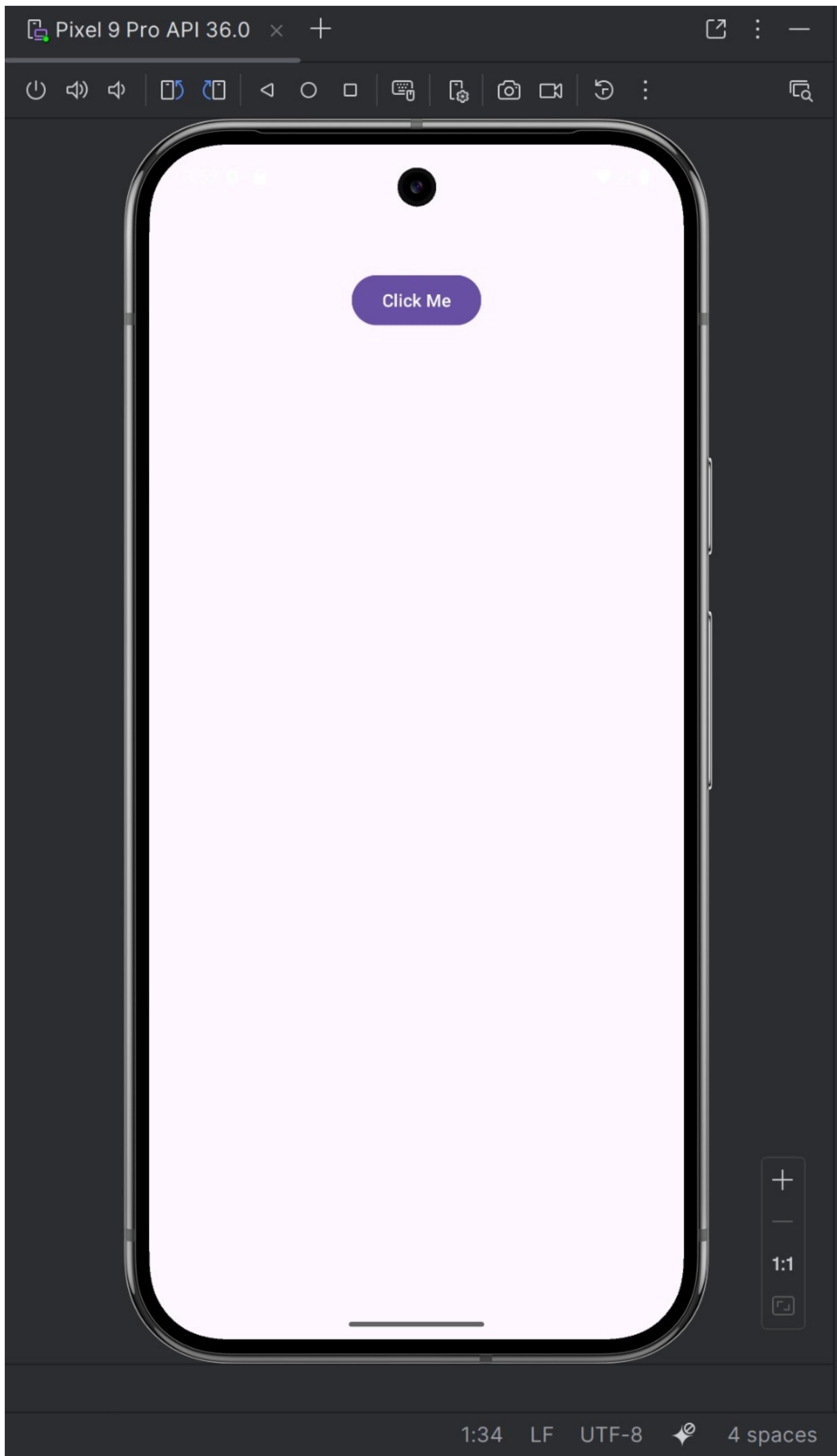
        showButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                messageText.setVisibility(View.VISIBLE);
            }
        });
    }
}
```

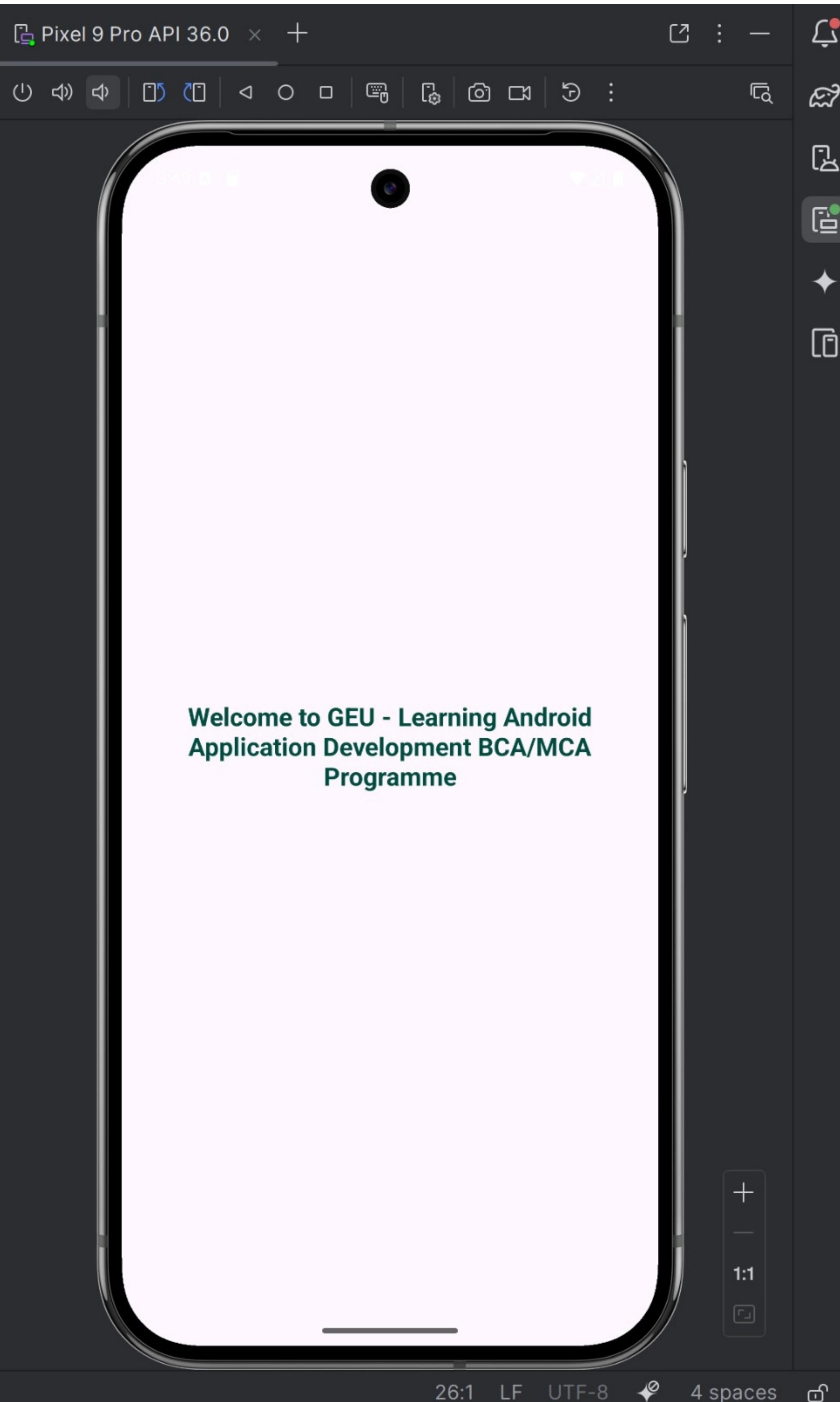
### AndroidManifest.xml

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

<application
    android:allowBackup = "true"
    android:extractDataRules = "@xml/data-extraction-rules"
    android:fullBackupContent = "@xml/backup-rules"
    android:icon = "@mipmap/ic_launcher"
    android:label = "My Application"
    android:roundIcon = "@mipmap/ic_launcher-round"
    android:supportRtl = "true"
    android:theme = "@style/Theme.My Application">

    <activity
        android:name = ".MainActivity"
        android:exported = "true">
        <intent-filter>
            <action android:name = "android.intent.action.MAIN" />
            <category android:name = "android.intent.category.LAUNCHER" />
        </intent-filter>
    </activity>
</application>
</manifest>
```





Program 3: Create an Android application to display  
the message "Welcome to GEU - Learning  
Android Application Development BCA/ MCA  
Programme" and execute the application using  
different emulators.

Code files: —

Path → app → src → main → res → layout → activity\_main.xml

### activity\_main.xml

```
<?xml version = "1.0" encoding = "UTF-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android = "http://schemas.android.com/apk/res/android"
    xmlns:app = "http://schemas.android.com/apk/res-auto"
    xmlns:tools = "http://schemas.android.com/tools"
    android:id = "@+id/mainLayout"
    android:layout_width = "match_parent"
    android:layout_height = "match_parent"
    tools:context = ".MainActivity">

    <TextView
        android:id = "@+id/welcomeText"
        android:layout_width = "wrap-content"
```

android:layout\_width = "wrap\_content"  
android: text = "Welcome to CIEU - Learning Android  
Application Development BCA/MCA Programme"

android: textSize = "20sp"

android: textStyle = "bold"

android: padding = "16dp"

android: textAlign = "center"

android: textColor = "#004D40"

app: layout\_constraintTop\_toTopOf = "parent"

app: layout\_constraintBottom\_toBottomOf = "parent"

app: layout\_constraintStart\_toStartOf = "parent"

app: layout\_constraintEnd\_toEndOf = "parent" />

</androidx.constraintLayout.widget.ConstraintLayout>

### MainActivity.java

path → app → src → main → java → com → example → myapp

package com.example.myapplication;

import android.os.Bundle;

import androidx.appcompat.app.AppCompatActivity;

```
public class MainActivity extends AppCompatActivity {  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
    }  
}
```

### main \ AndroidManifest.xml

path → app → src → main → AndroidManifest.xml

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

```
<manifest xmlns:android="http://schemas.android.com/apk/  
res/android">
```

```
<application>
```

```
    android:allowBackup="true"
```

```
    android: dataExtractionRules="@xml/data-extraction-rules"
```

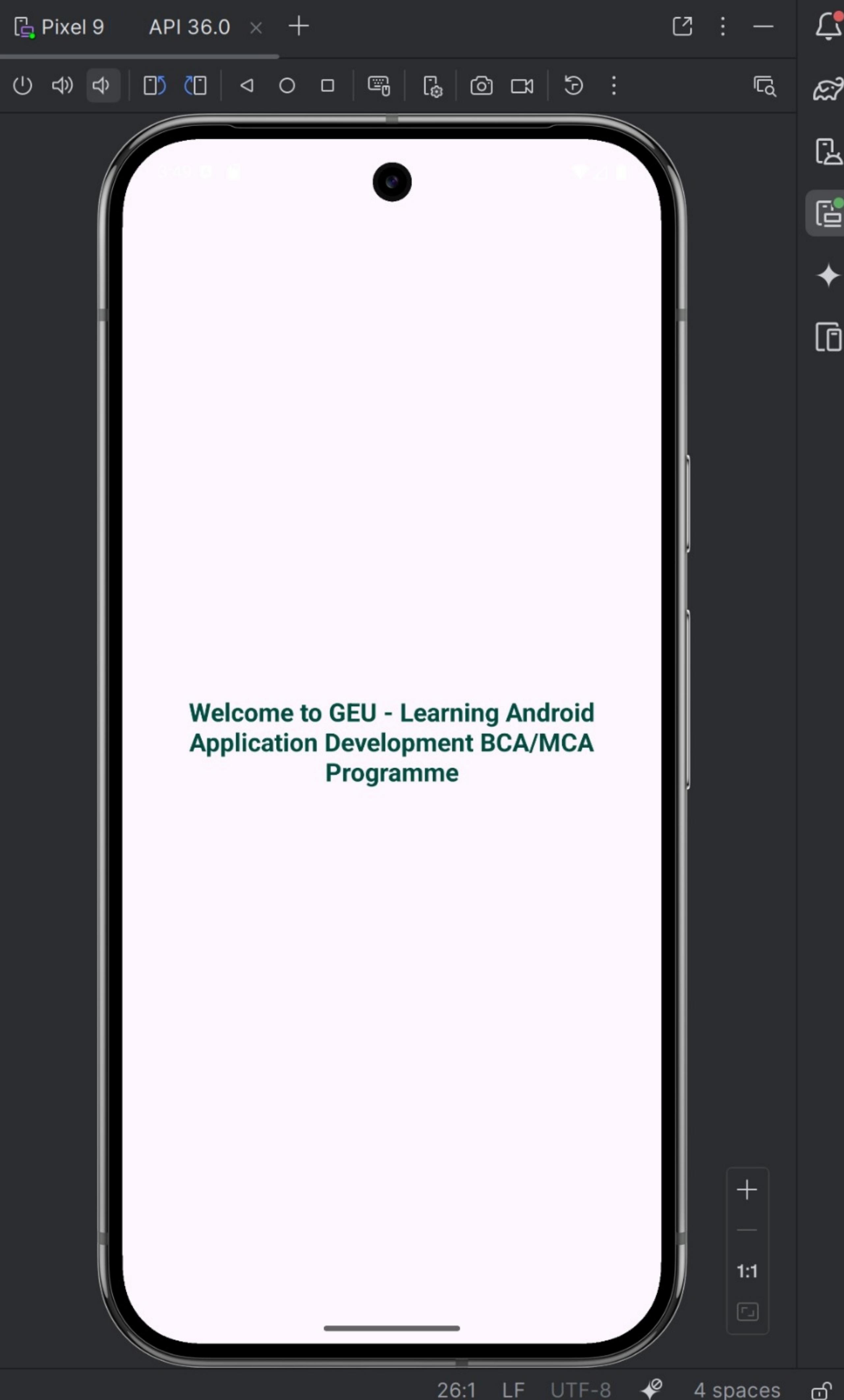
```
    android: fullBackupContent="@xml/backup-rules"
```

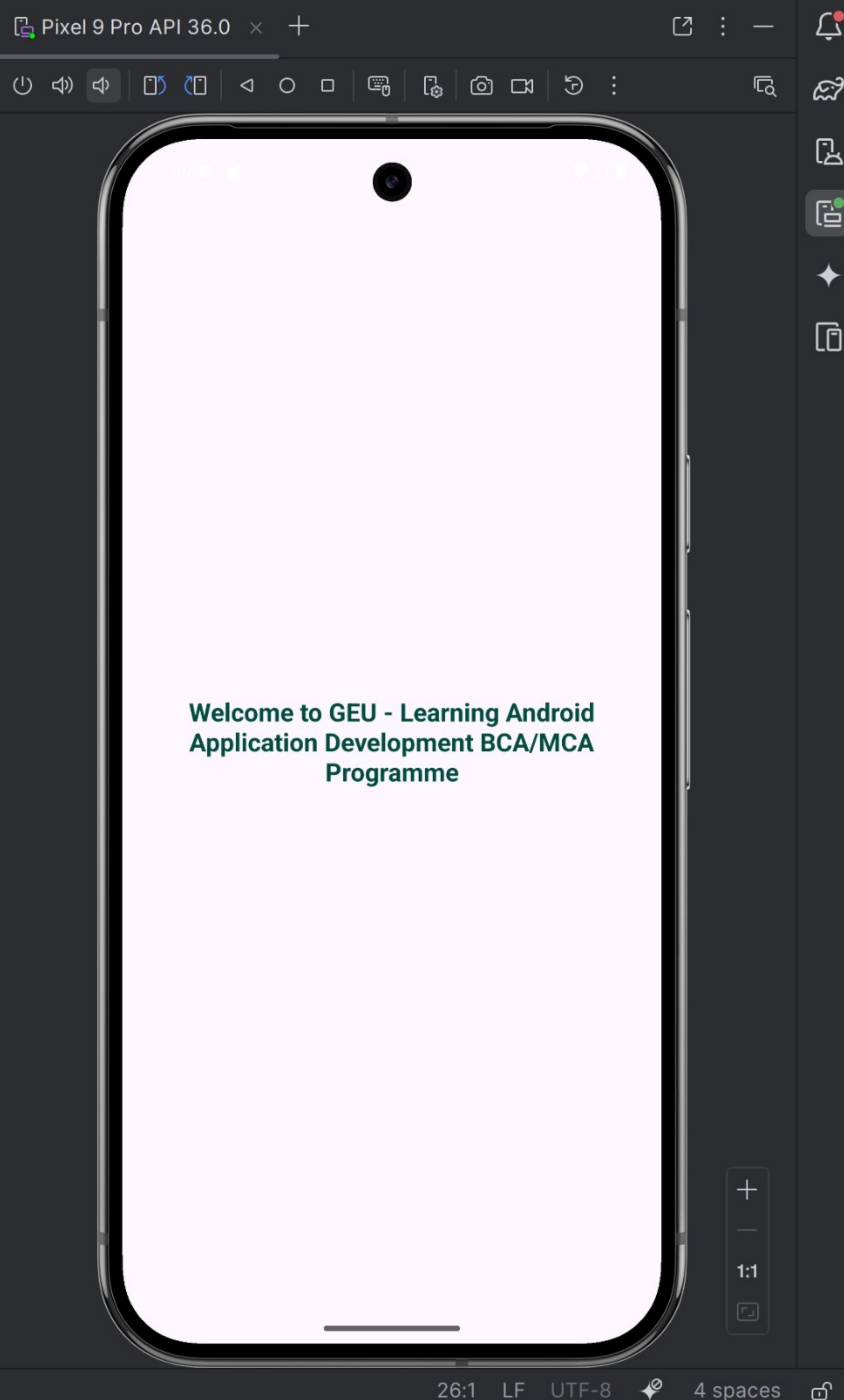
```
    android: icon="@mipmap/ic_launcher"
```

```
    android: label="My Application"
```

```
    android: roundIcon="@mipmap/ic-launcher-round"
```

```
    android:supportRtl = "true"
    android:theme = "@style/Theme.MyApplication"
<activity
    android:name = ".MainActivity"
    android:exported = "true">
<intent-filter>
    <action android:name = "android.intent.action.MAIN"
            "/>
    <category android:name = "android.intent.Category.LAUNCHER"/>
</intent-filter>
</activity>
</application>
</manifest>
```





Program 4: Illustrate with a suitable example  
the use of Toast to display a message  
in an Android application.

Code files —

Path → app → src → main → res → layout → activity\_main.xml

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/tools"
    android:id = "@+id/main"
    android:layout_width = "match_parent"
    android:layout_height = "match_parent"
    tools: context = ".MainActivity" >
```

<Button

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

```
    android:layout_width = "wrap-content"
```

```
    android:layout_height = "wrap-content"
```

```
    android:text = "Click Me for Toast"
```

```
    app: layout_constraintTop_toTopOf = "parent"
```

```
    app: layout_constraintBottom_toBottomOf = "parent" >
```

```
    app:layout_constraintStart_toStartOf = "parent"
    app:layout_constraintEnd_toEndOf = "parent"/> 
</androidx.constraintlayout.widget.ConstraintLayout>
```

~~path → app → src →~~

/MainActivity.java

```
package com.example.myapplication;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;
```

```
public class MainActivity extends AppCompatActivity {
```

@Override

```
protected void onCreate(Bundle savedInstanceState) {
```

```
    super.onCreate(savedInstanceState);
```

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

```
    Button toastButton = findViewById(R.id.toastButton);
```

```
    toastButton.setOnClickListener(new View.OnClickListener()
```

{ @Override

```
    public void onClick(View v) {
```

```
    Toast.makeText(context: MainActivity.this,  
        text: "Welcome to GEU - This is a Toast  
        message!");  
    Toast.LENGTH_LONG).show();  
}  
};  
}  
}
```

### AndroidManifest.xml

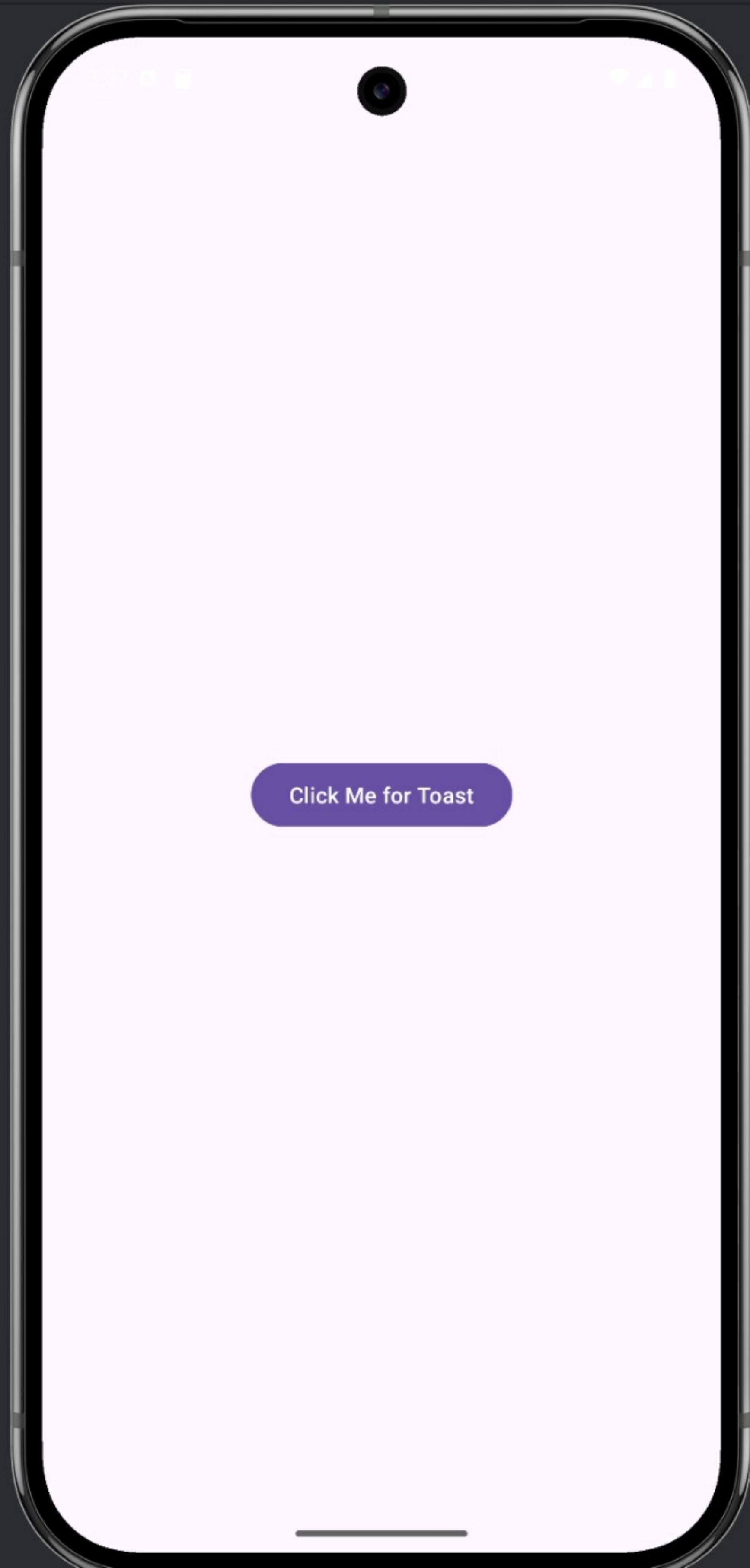
```
<?xml version="1.0" encoding="UTF-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk  
        /res/android"  
        xmlns:tools="http://schemas.android.com/tools">  
  
<application>  
    android:allowBackup = "true"  
    android:dataExtractionRule = "@xml/data-extraction-  
        rules"  
    android:fullBackupContent = "@xml/backup_rules"  
    android:icon = "@mipmap/ic_launcher"  
    android:label = "My Application"  
    android:roundIcon = "@mipmap/ic_launcher-round"  
    android:supportsRtl = "true"
```

```
    android:supportRtl="true"
    android:theme="@style/Theme.MyApplication"

<activity
    android:name=".MainActivity"
    android:exported="true">
    <intent-filter>
        <action android:name="android.intent.action.MAIN" />
        <category android:name="android.intent.category.LAUNCHER" />
    </intent-filter>
</activity>
</application>
</manifest>
```



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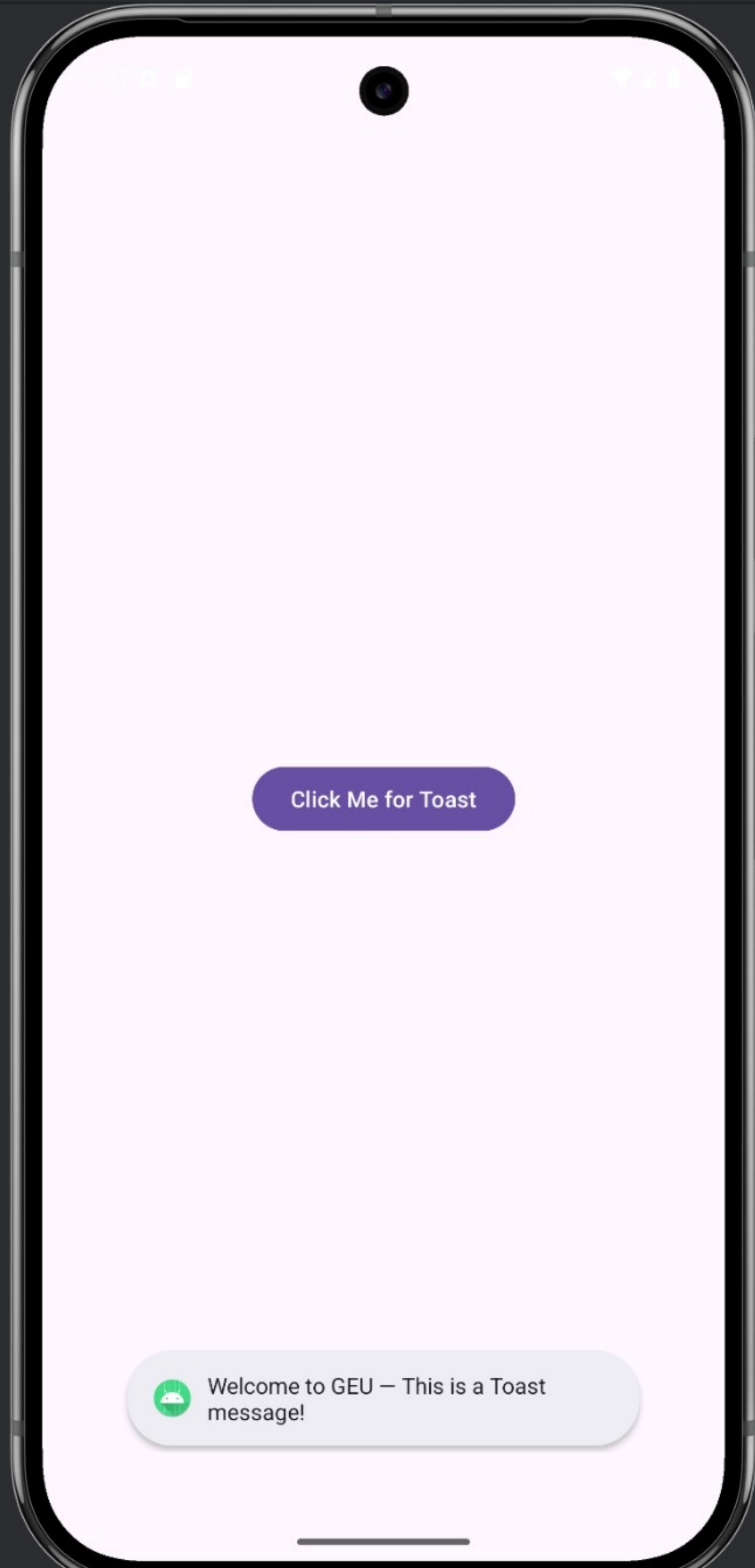


+

-

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+

-

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[ ]

Program #5. Illustrate with a suitable example — the use of Intent in linking activities.

Code Files —

activity\_main.xml

```
<?xml version='1.0' encoding='utf-8'?>
<android.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/mainLayout"
    android:layout_width="match_parent"
    android:layout_height="match-parent"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/mainText"
        android:layout_width="wrap-content"
        android:layout_height="wrap-content"
        android:text="This is the first activity of the
        project"
        android:textSize="18sp">
```

```
    android:textStyle="bold"
    android:textColor="#000000"
    android:layout_marginBottom="16dp"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintBottom_toTopOf="@+id/goButton"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"/>/
```

### <Button

```
    android:id="@+id/goButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Go to Second Activity"
    app:layout_constraintTop_toBottomOf="@+id/mainText"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"/>/
```

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

## MainActivity.java

```
package com.example.myapplication;

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

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

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

        Button goButton = findViewById(R.id.goButton);
        goButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(getApplicationContext(),
                        MainActivity.this, SecondActivity.class);
                startActivity(intent);
            }
        });
    }
}
```

### activity-second.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns: android="http://schemas.android.com/apk/res
        /android"
    xmlns: app="http://schemas.android.com/apk/res-auto"
    xmlns: tools="http://schemas.android.com/tools"
    android:id="@+id/secondLayout"
    android: layout_width="match-parent"
    android: layout_height="match-parent"
    tools: context=".Second Activity">
```

#### <Text View

```
    android: id="@+id/secondText"
    android: layout_width="wrap-content"
    android: layout_height="wrap-content"
    android: text="You are now in the Second Activity!"
    android: textSize="20sp"
    android: textStyle="bold"
    android: textColor="#3A237E"
    app: layout_constraintTop_toTopOf="parent"
    app: layout_constraintBottom_toBottomOf="parent"
    app: layout_constraintStart_toStartOf="parent"
```

```
    app:layout_constraintEnd_toEndOf = "parent"/> >  
</androidx.constraintlayout.widget.ConstraintLayout>
```

### SecondActivity.java

```
package com.example.myapplication;  
  
import android.os.Bundle;  
import androidx.appcompat.app.AppCompatActivity;  
  
public class SecondActivity extends AppCompatActivity {
```

@Override

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

}

### AndroidManifest.xml

```
<?xml version = "1.0" encoding = "UTF-8"?>  
<manifest xmlns:android = "http://schemas.android.com/apk/  
           tools/android"  
          xmlns:tools = "http://schemas.android.com/tools">  
  
<application  
        android:allowBackup = "true"
```

```
    android: dataExtractionRules = "@xml/data_extraction_rules"
    android: fullBackupContent = "@xml/backup_rules"
    android: icon = "@mipmap/ic_launcher"
    android: label = "My Application"
    android: roundIcon = "@mipmap/ic_launcher_round"
    android: supportsRtl = "true"
    android: theme = "@style/Theme.MyApplication"

<activity
    android:name=".SecondActivity"
    android:exported = "false"/>

<activity
    android:name=".MainActivity"
    android:exported = "true">

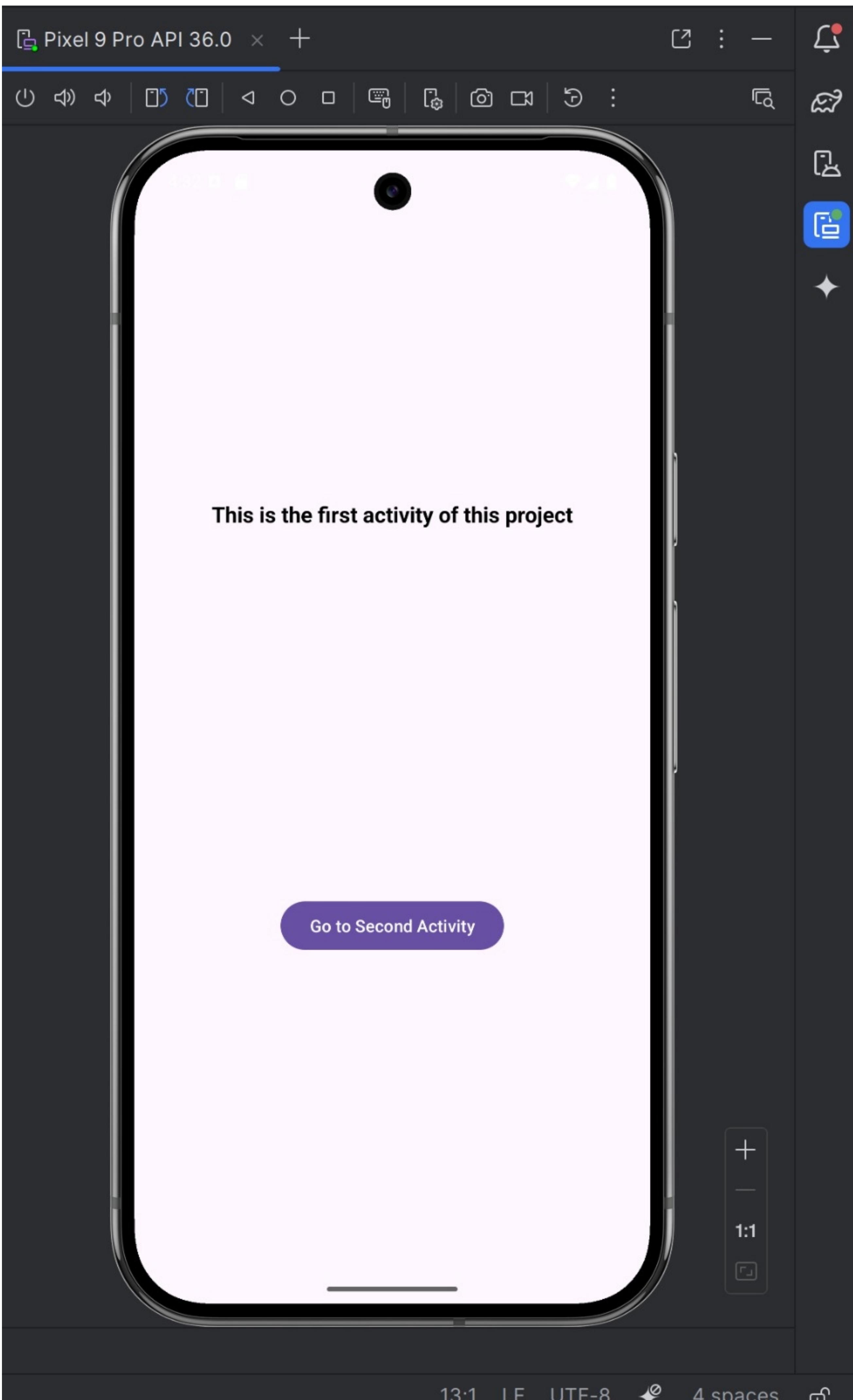
<intent-filter>
    <action android:name = "android.intent.action.MAIN">
    <category android:name = "android.intent.Category.LAUNCHER" />

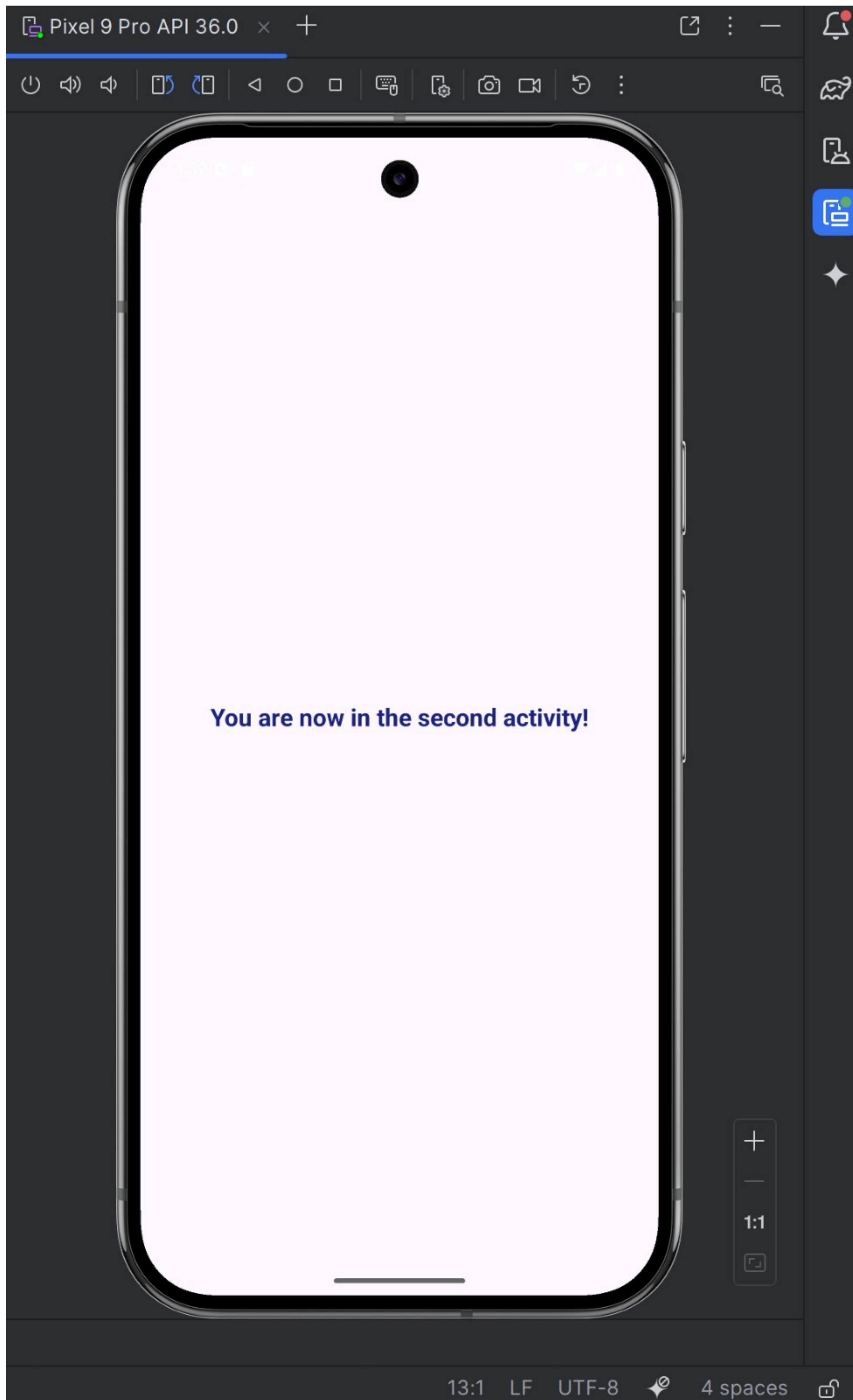
</intent-filter>

</activity>

</application>

</manifest>
```





Program 6: Illustrate with a suitable example  
the use of Intent in navigating  
to any other website.

Code Files —

### activity\_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/mainLayout"
    android:layout_width="match_parent"
    android:layout_height="match-parent"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/openWebButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap-content"
        android:text="Visit GEU website"
        app:layout_constraintBottom_toBottomOf="parent"
```

```
    app.layout_constraintTop_toTopOf = "parent"
    app.layout_constraintStart_toStartOf = "parent"
    app.layout_constraintEnd_toEndOf = "parent" />
```

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

### MainActivity.java

```
package com.example.myapplication;

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

import androidx.appcompat.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

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

        Button openWebButton = findViewById(R.id.openWebButton);
        openWebButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent browserIntent = new Intent(Intent.ACTION_VIEW, Uri.parse("http://www.google.com"));
                startActivity(browserIntent);
            }
        });
    }
}
```

```

@Override
public void onClick(View v) {
    Intent browserIntent = new Intent(Intent.
        ACTION_VIEW, Uri.parse("http://www.geu.ac.in"));
    startActivity(browserIntent);
}
}

```

### AndroidManifest.xml

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/
    res/android"
    package="com.example.myapplication">

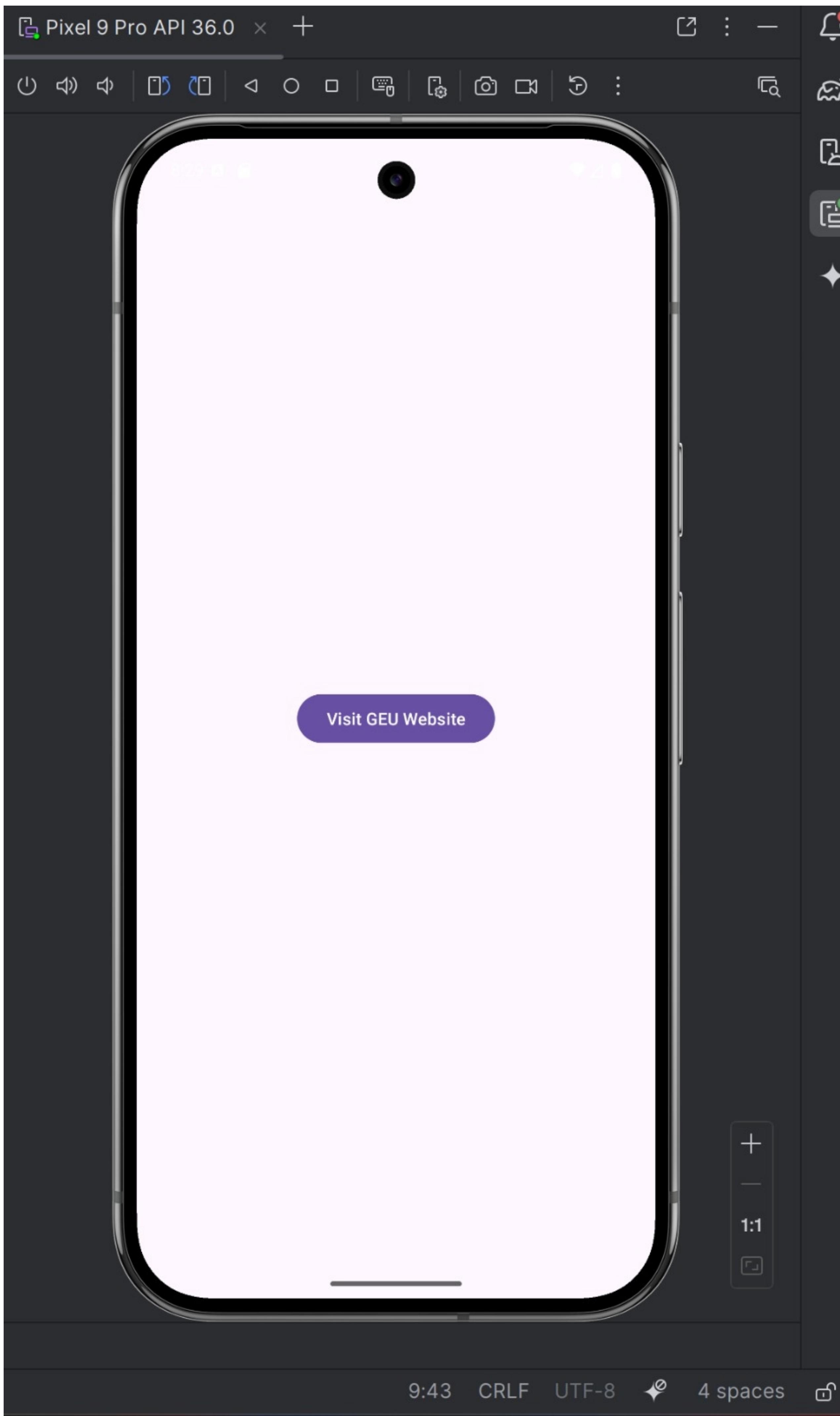
    <application
        android:allowBackup="true"
        android: dataExtractionRules="@xml/data
            data-extraction-rules"
        android: fullBackupContent="@xml/backup-modes"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
    >
```

```
    android: roundIcon = "@mipmap/ic_launcher_round"
    android: supportsRtl = "true"
    android: theme = "@style/Theme.MyApplication"

<activity
    android:name=".MainActivity"
    android:exported="true">

    <intent-filter>
        <action android:name="android.intent.action.MAIN"/>
        <category android:name="android.intent.category.LAUNCHER" />

    </intent-filter>
</activity>
</application>
</manifest>
```



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Make Chrome your own

Sign in to get your bookmarks, passwords, and  
more on all your devices

Add account to device

Use without an account

By continuing, you agree to the [Terms of Service](#). To help improve the  
app, Chrome sends usage and crash data to Google. [Manage](#)

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□

Program 7 : Create an Android App that Demonstrates  
the use of ImageButton.

Code file -

```
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" >

    <ImageButton
        android: id = "@+id/myImageButton"
        android: layout_width = "100dp"
        android: layout_height = "100dp"
        android: layout_background = "@ android: color / transparent"
        android: layout_margin = "16dp"
        android: contentDescription = "Logo Button"
        android: src = "@drawable/logo" />
```

```
    app:layout_constraintTop_toTopOf = "parent"
    app:layout_constraintBottom_toBottomOf = "parent"
    app:layout_constraintStart_toStartOf = "parent"
    app:layout_constraintEnd_toEndOf = "parent" />
<androidx.constraintlayout.widget.ConstraintLayout>
```

### MainActivity.java

```
package com.example.myapplication;

import android.os.Bundle;
import android.widget.ImageButton;
import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

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

    ImageButton imgBtn = findViewById(R.id.myImage
        .Button);
    imgBtn.setOnClickListener(View v → {
        Toast.makeText(context: MainActivity.this,
        text: "You Clicked on the ImageButton!",
        Toast.LENGTH_SHORT).show();
    });
}
```

## AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk
           android"
          package="com.example.myapplication">

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data-extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:soundIcon="@mipmap/ic_launcher_sound"
        android:supportsRtl="true"
        android:theme="@style/Theme.MyApplication">

        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN"/>
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        
```

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1:1



9:43

CRLF

UTF-8



4 spaces





```
</activity>  
</application>  
</manifest>
```

Program 8: Create an Android Application that demonstrates the use of ImageView.

Code files -

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

<ImageView

android:id="@+myImageView"

android:layout\_width="200dp"

```
    android:id="@+id/logo"
    android:contentDescription="Sample Image"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"/>
</androidx.constraintlayout.widget.ConstraintLayout>
```

### MainActivity.java

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

public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}
```

### AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/
            org/android"
    package="com.example.myapplication">

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.MyApplication">

        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN"/>
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
</manifest>
```

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UTF-8



4 spaces



Program 9: Create an Android application that demonstrates the use of Relative Layout in Android by using appropriate view for creating a login form. Display the message "Login successful" on the click of a submit button.

Code files —

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/mainLayout"
                  android:layout_width="match-parent"
                  android:layout_height="match-parent"
                  android:padding="24dp"
                  tools:context=".MainActivity">

    <EditText
            android:id="@+id/username"
            android:layout_width="match-parent"
            android:layout_height="wrap-content"
            android:hint="Username"/>
```

< EditText

    android:id="@+id/password"  
    android:layout\_width="match\_parent"  
    android:layout\_height="wrap\_content"  
    android:hint="Password"  
    android:inputType="text Password"  
    android:layout\_below="@+id/username"  
    android:layout\_marginTop="16dp"/>,

< Button

    android:id="@+id/submitBtn"  
    android:layout\_width="wrap\_content"  
    android:layout\_height="wrap\_content"  
    and zoid: ~~text~~ = "Submit"  
    and zoid: layout\_below="@+id/password"  
    and zoid: layout\_centerHorizontal="true"  
    and zoid: layout\_marginTop="24dp"/>,

< /RelativeLayout >

## MainActivity.java

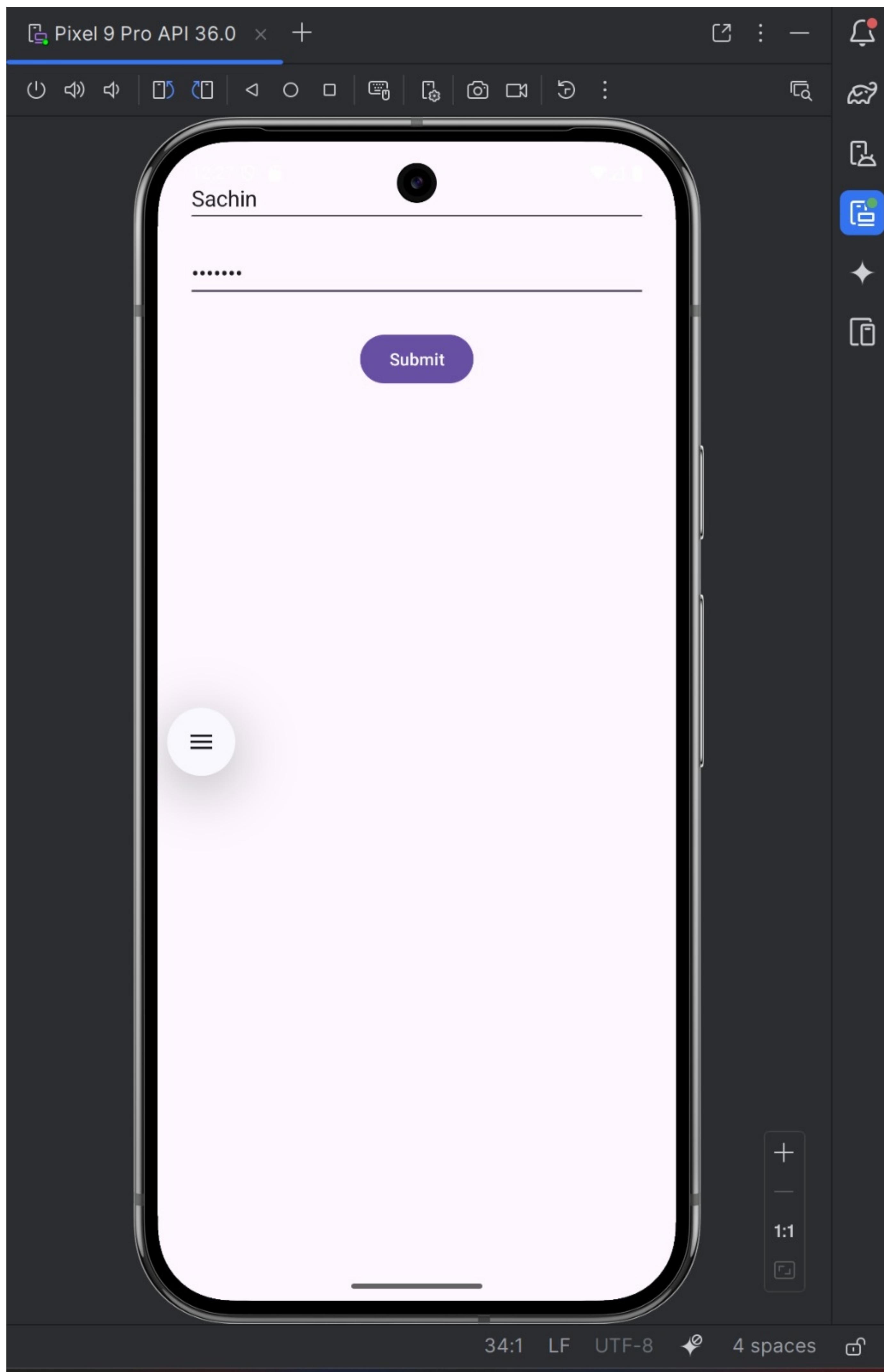
```
package com.example.myapplication;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;
public class MainActivity extends AppCompatActivity {
    EditText username, password;
    Button submitBtn;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        username = findViewById(R.id.username);
        password = findViewById(R.id.password);
        submitBtn = findViewById(R.id.submitBtn);
        submitBtn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Toast.makeText(getApplicationContext(), "Button Clicked", Toast.LENGTH_SHORT).show();
            }
        });
    }
}
```

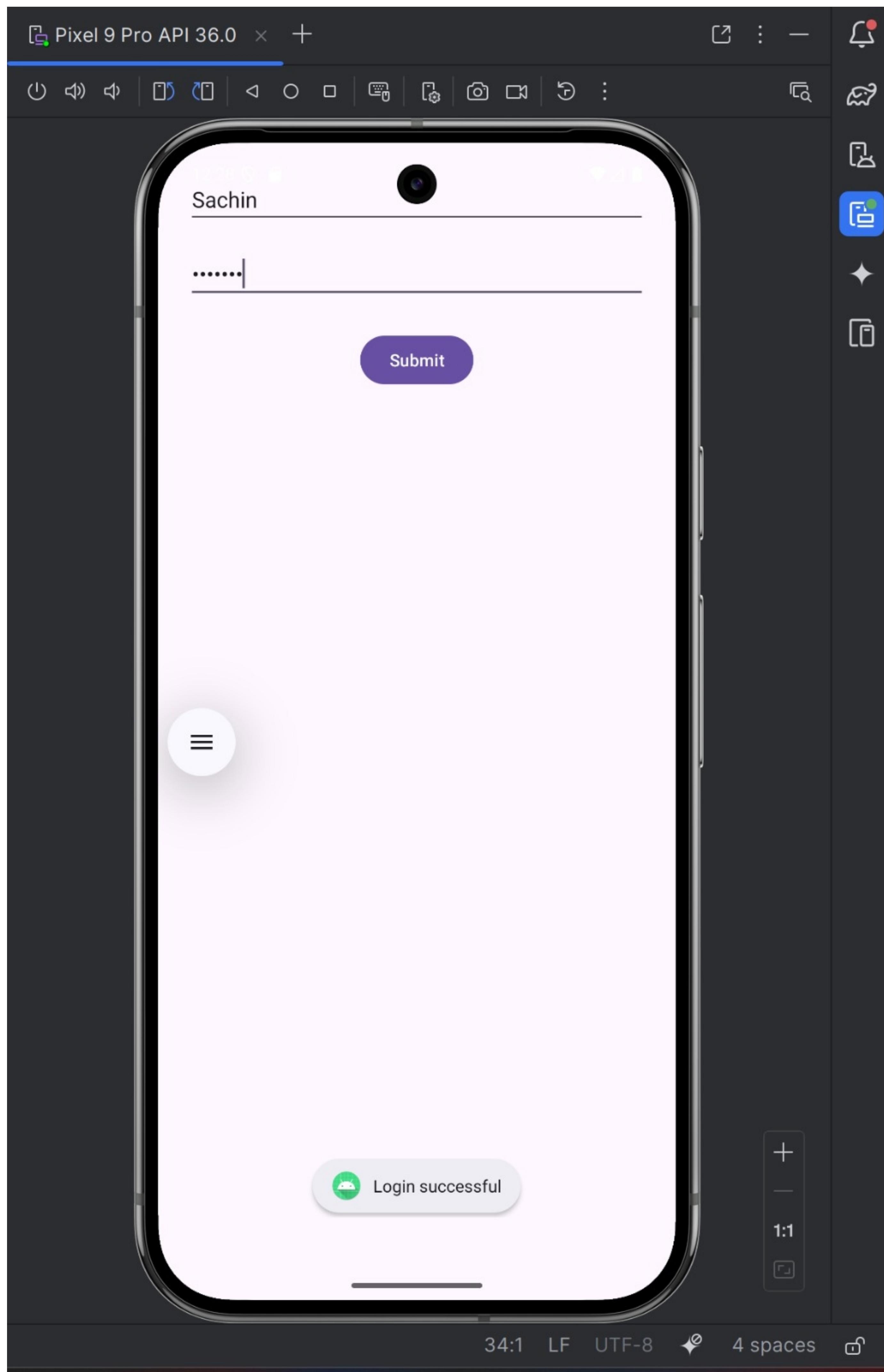
```
    Toast.makeText(MainActivity.this, "Login Successful",  
        Toast.LENGTH_SHORT).show();  
}  
};  
}  
}
```

### AndroidManifest.xml

```
<?xml version = "1.0" encoding = "utf-8"?>  
<manifest xmlns:android = "http://schemas.android.com/  
          apk/res/android"  
    package = "com.example.myapplication" >  
  
<application  
    android:allowBackup = "true"  
    android:dataExtractionRules = "@xml/data-extraction_rules"  
    android:fullBackupContent = "@xml/backup_rules"  
    android:icon = "@mipmap/ic_launcher"  
    android:label = "@string/app_name"  
    android:soundIcon = "@mipmap/ic_launcher_sound"  
    android:supportsRtl = "true"  
    android:theme = "@style/Theme.MyApplication" >  
  
<activity  
    android:name = ".MainActivity" >
```

```
    android:exported = "true" >  
    <intent-filter>  
        <action android:name = "android.intent.action.MAIN" />  
        <category android:name = "android.intent.category.LAUNCHER" />  
  
    </intent-filter>  
    <activity>  
    </application>  
</manifest>
```





Program 10: Create an Android Application that demonstrates the use of layouts and views for creating a Registration Form [Inter college Quiz competition] and display the message "Registration is successful" on Click of a submit button.

Code files —

activity\_main.xml

```
<?xml version = "1.0" encoding = "utf-8"?>
<ScrollView xmlns: android = "http://schemas.android.com/
    apk/res/android"
    android:layout-width = "match-parent"
    android:layout-height = "match-parent"
```

< LinearLayout

android: orientation = "vertical"

android: layout-width = "match-parent"

android: layout-height = "wrap-content"

android: padding = "24dp" >

< EditText

android: id = "@+id/namefield"

```
    android:layout_width = "match_parent"  
    android:layout_height = "wrap_content"  
    android:hint = "Full Name" />
```

< EditText

```
    android:id = "@+id/emailField"  
    android:layout_width = "match_parent"  
    android:layout_height = "wrap_content"  
    android:hint = "Full Name Email"  
    android:inputType = "textEmailAddress" />
```

< EditText

```
    android:id = "@+id/phonefield"  
    android:layout_width = "match_parent"  
    android:layout_height = "wrap_content"  
    android:inputType = "phone" />  
    android:hint = "Phone number" />
```

< EditText

```
    android:id = "@+id/collegeField"  
    android:layout_width = "match_parent"  
    android:layout_height = "wrap_content"  
    android:inputHint = "Department" />  
    college name
```

```
<EditText  
    android:id="@+id/departmentField"  
    android:layout_width="match-parent"  
    android:layout_height="wrap-content"  
    android:hint="Department" />
```

```
<Button  
    android:id="@+id/submitBtn"  
    android:layout_width="wrap-content"  
    android:layout_height="wrap-content"  
    android:text="Submit"  
    android:layout_gravity="center-horizontal"  
    android:layout_marginTop="24dp" />
```

```
</LinearLayout>
```

```
</ScrollView>
```

```
>MainActivity.java
```

```
package com.example.os.Bundle;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.Toast;
```

```
import androidx.appcompat.app.AppCompatActivity;  
public class MainActivity extends AppCompatActivity {  
    Button submitBtn;  
    @Override  
    protected void onCreate(Bundle savedInstanceState)  
    {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
        submitBtn = findViewById(R.id.submitBtn);  
        submitBtn.setOnClickListener(new View.OnClickListener()  
        {  
            @Override  
            public void onClick(View view)  
            {  
                Toast.makeText(MainActivity.this,  
                    "Registration is successful",  
                    Toast.LENGTH_SHORT).show();  
            }  
        });  
    }  
}
```

## Android Manifest

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk
           android:versionCode="1" android:versionName="1.0" >

    <application
        android:allowBackup="true"
        android:backupRule="@xml/backup-rules"
        android:fullBackupContent="@xml/full-backup-rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher-round"
        android:supportsRtl="true"
        android:theme="@style/Theme.MyApplication" >

        <activity
            android:name=".MainActivity" >
            android:exported="true" >
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
</manifest>
```

```
    android:src = "@drawable/logo"
    android:contentDescription = "Sample Image"
    app:layout_constraintTop_toTopOf = "parent"
    app:layout_constraintBottom_toBottomOf = "parent"
    app:layout_constraintStart_toStartOf = "parent"
    app:layout_constraintEnd_toEndOf = "parent"/> />
<androidx.constraintlayout.widget.ConstraintLayout >
```

