KEMENTERIAN KOMUNIKASI DAN INFORMATIKA
REPUBLIK INDONESIA
Menuju Masyarakat Informasi Indonesia

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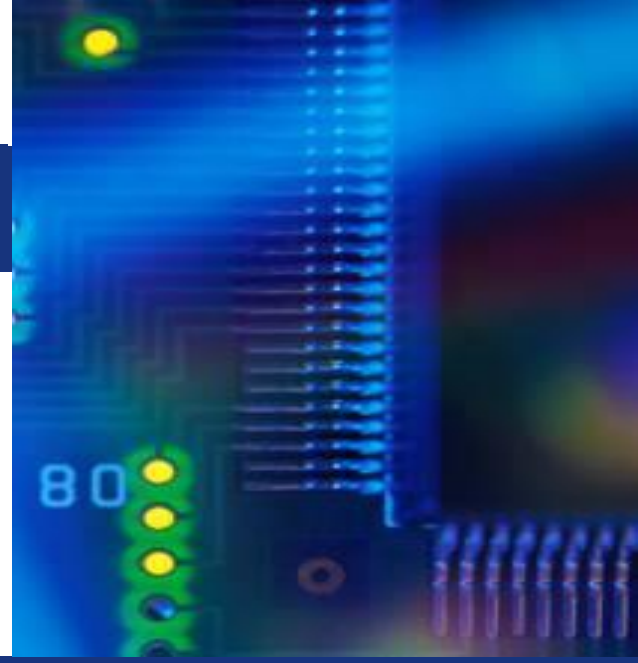
REPUBLIK INDONESIA
Menuju Masyarakat Informasi Indonesia

DIGITAL TALENT SCHOLARSHIP

vsga vocational school graduate academy



JUNIOR MOBILE PROGRAMMER

Proyek Aplikasi Data Persistence Pada Mobile

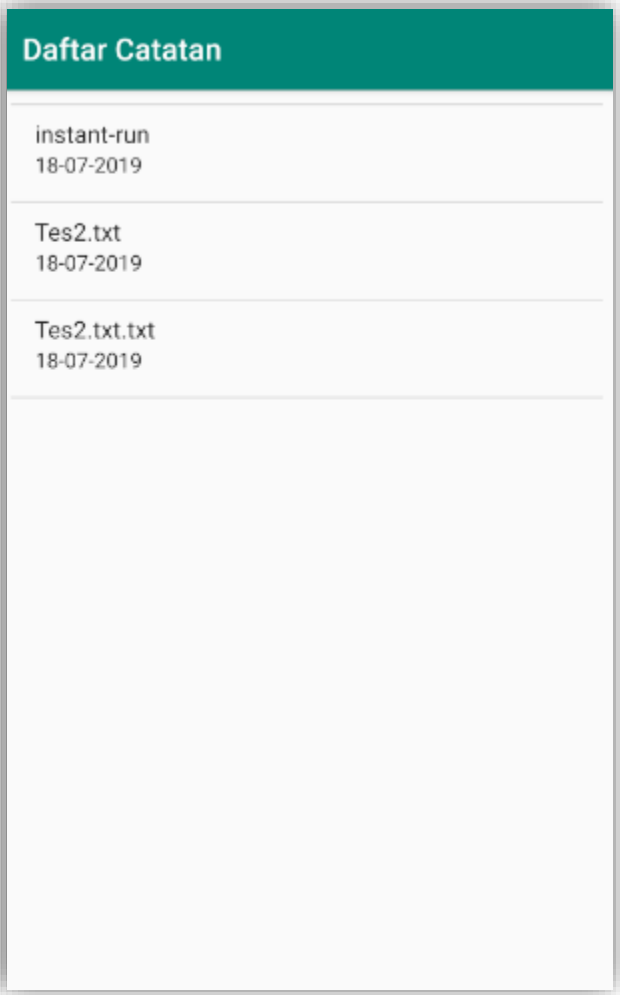
PROYEK

Buat aplikasi

1. Aplikasi catatan harian.

2. Aplikasi validasi login.

APLIKASI CATATAN HARIAN



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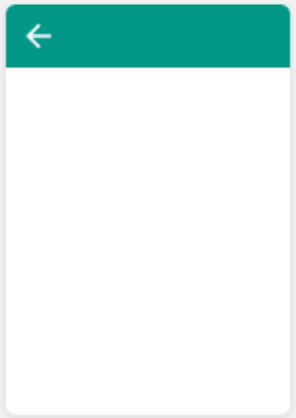
APLIK

Create New Project

Configure your project



Empty Activity

Creates a new empty activity

Name

Catatan Harian

Package name

com.example.catatanharian

Save location

C:\Users\LPA\AndroidStudioProjects\CatatanHarian

Language

Java

Minimum API level

API 15: Android 4.0.3 (IceCreamSandwich)

Your app will run on approximately **100%** of devices.

Help me choose

This project will support instant apps

Use androidx.* artifacts

Previous | Next | Cancel | Finish

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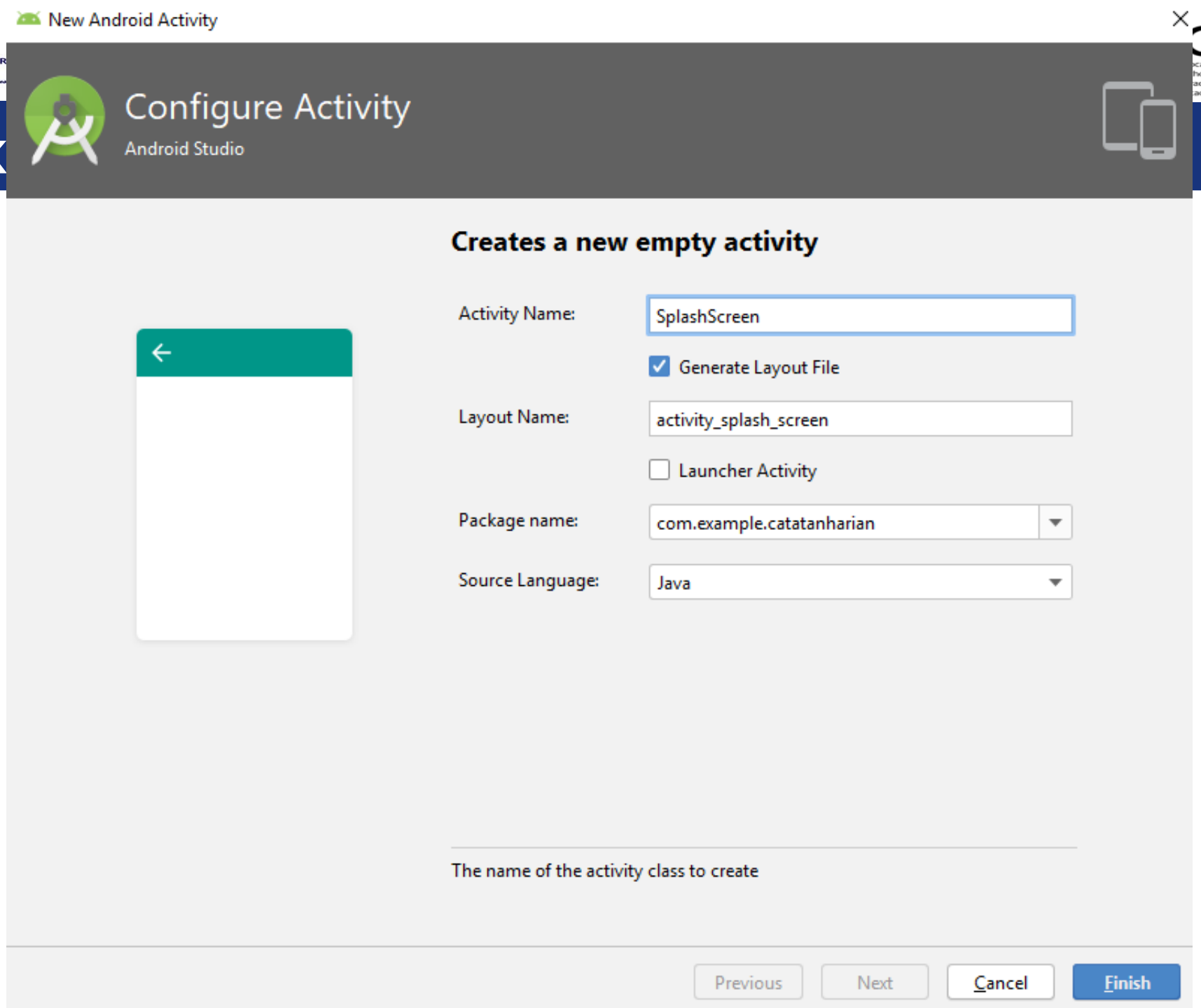
APLIK



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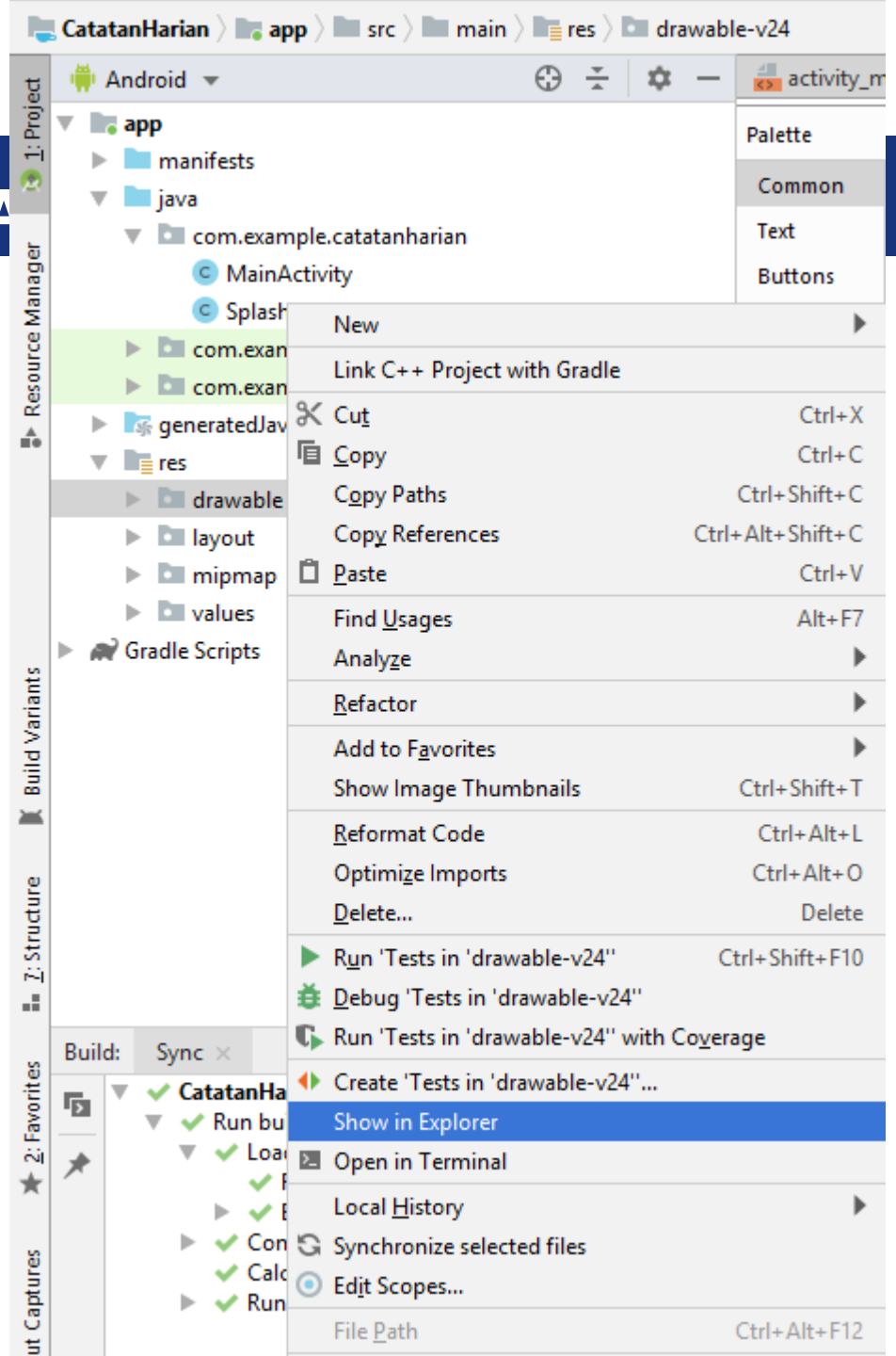
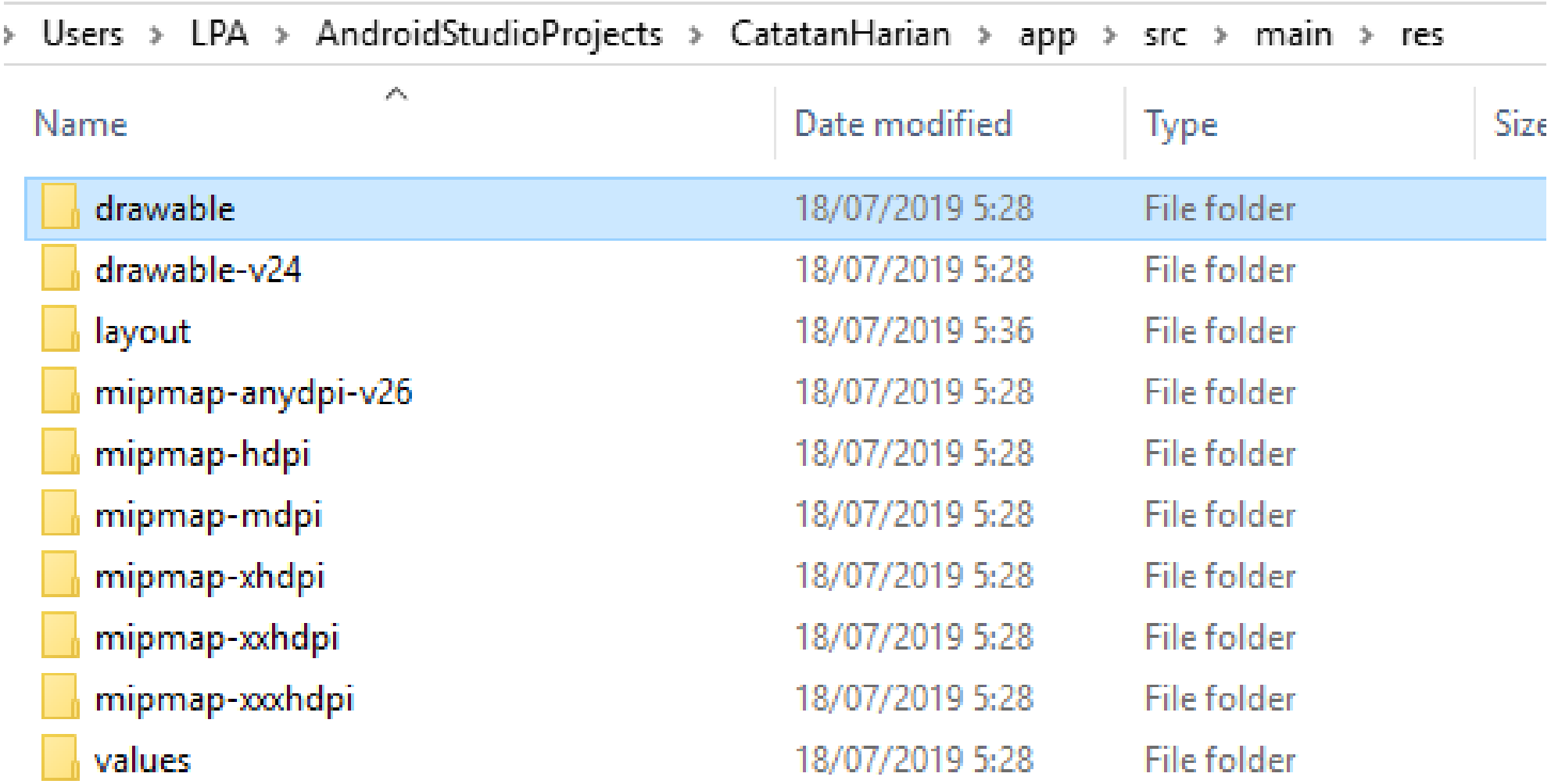
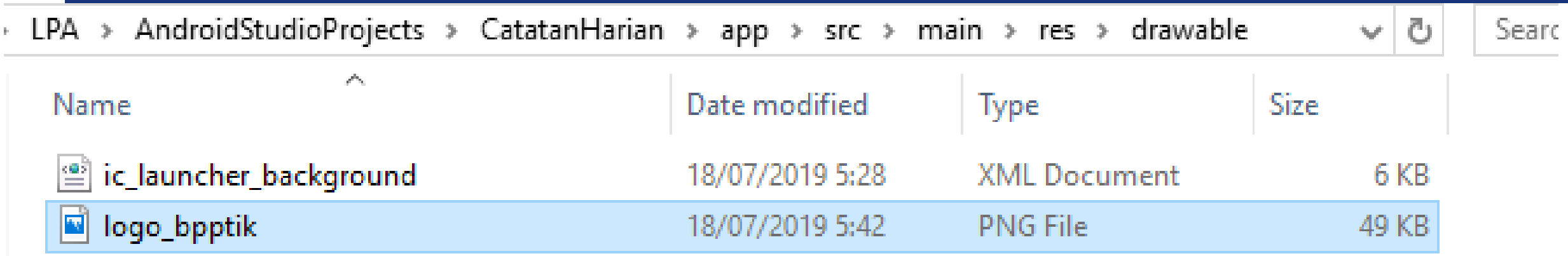
APLIKASI CATATA

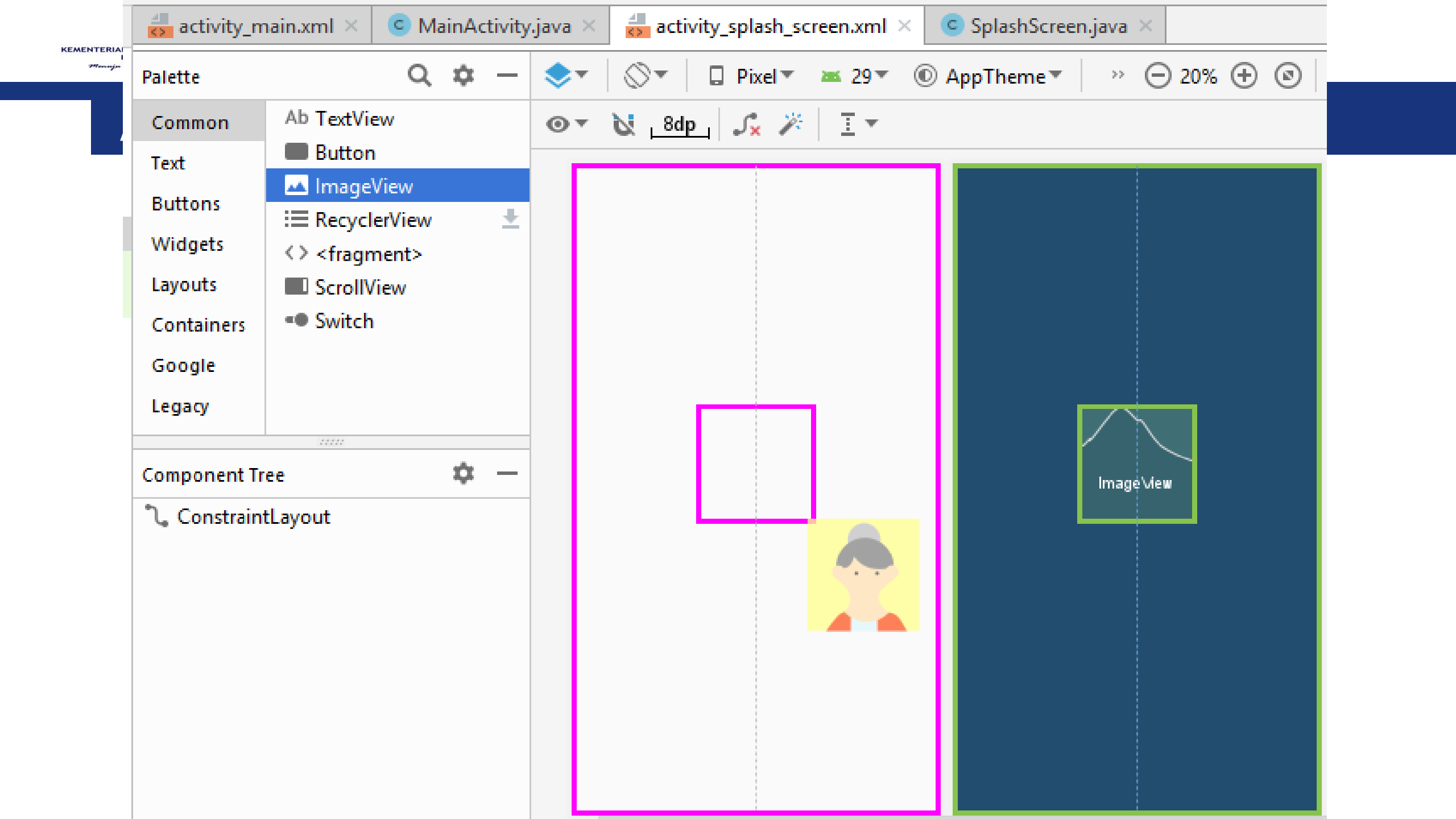


APLIKASI CATATAN HARIAN



APLIKASI CATATAN HARIAN




activity_main.xml
MainActivity.java
activity_splash_screen.xml
SplashScreen.java
Palette
Common
Text
Buttons
Widgets
Layouts
Containers
Google
Legacy
TextView
Button
ImageView
RecyclerView
<fragment>
ScrollView
Switch
Component Tree
ConstraintLayout
Pixel
29
AppTheme
20%
8dp
ImageView

KEMENTERIAN KOMUNIKASI DAN INF
REPUBLIK INDONESIA
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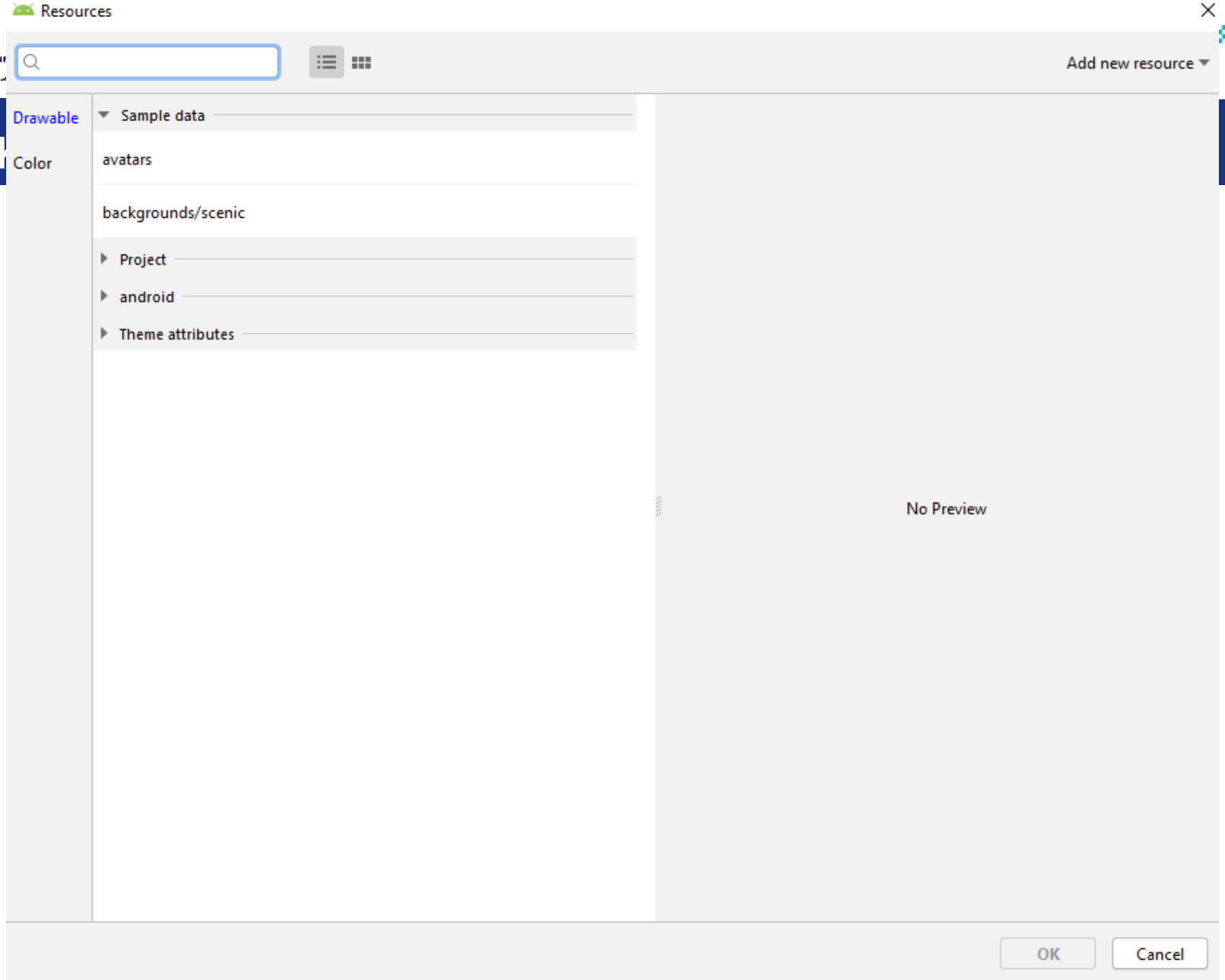
APLI



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APLI

Resources

Add new resource

Drawable

Color

Sample data

avatars

backgrounds/scenic

Project

ic_launcher

ic_launcher_background

ic_launcher_foreground

ic_launcher_round

logo_bpptik

android

Theme attributes

Name: logo_bpptik

Default

PNG

@drawable/logo_bpptik

⇒ logo_bpptik.png

OK

Cancel

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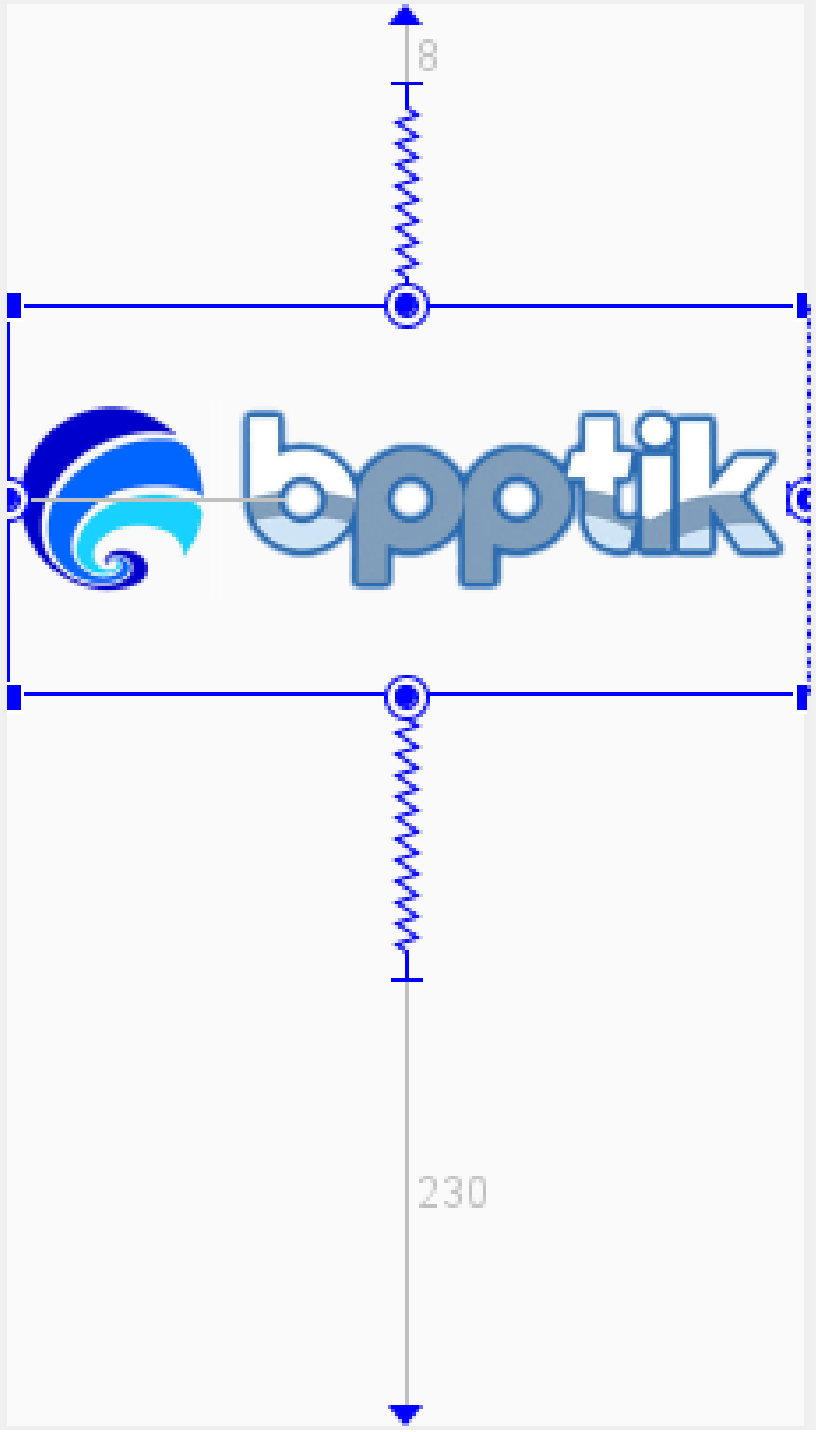
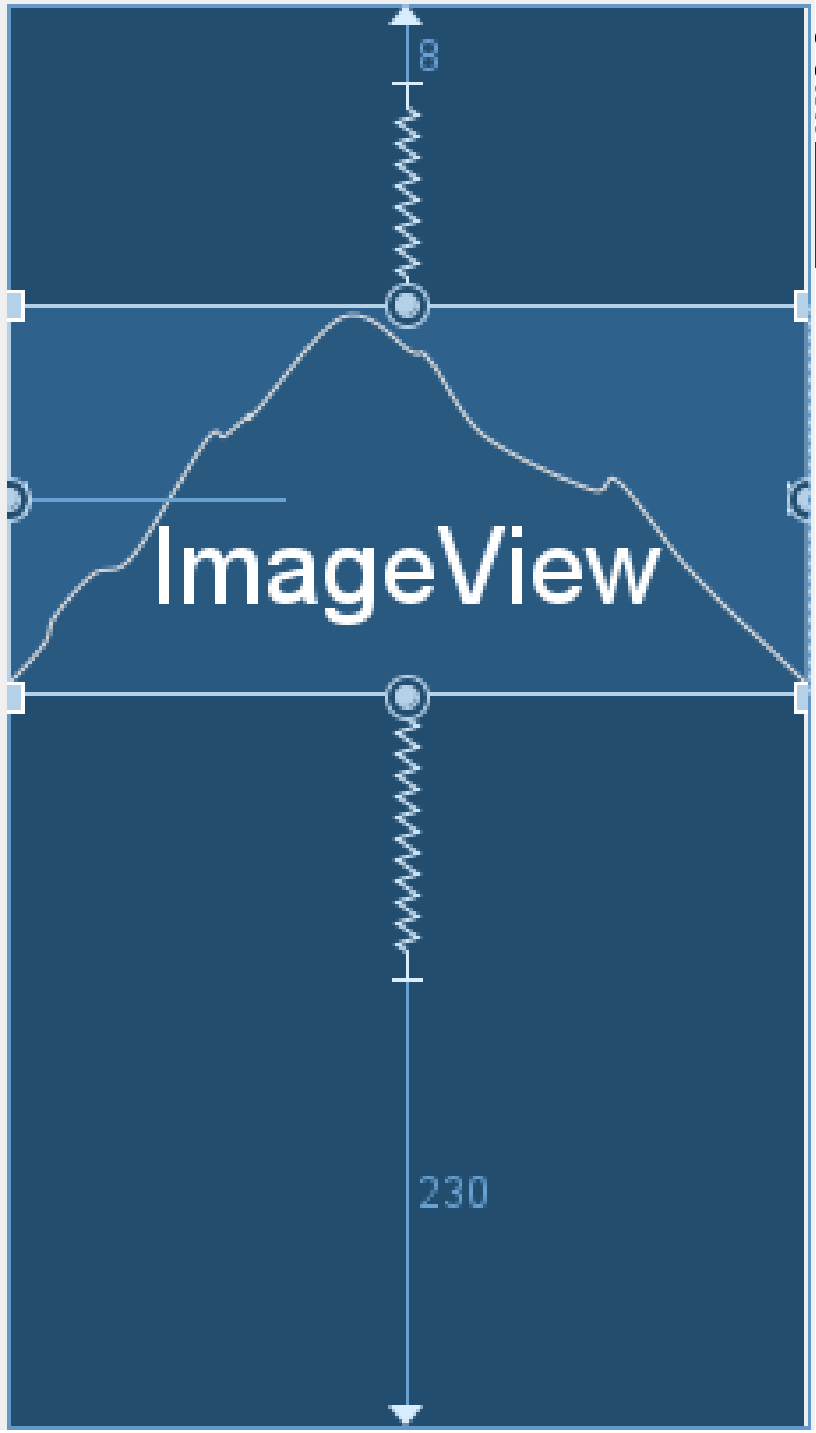
APLIKAS





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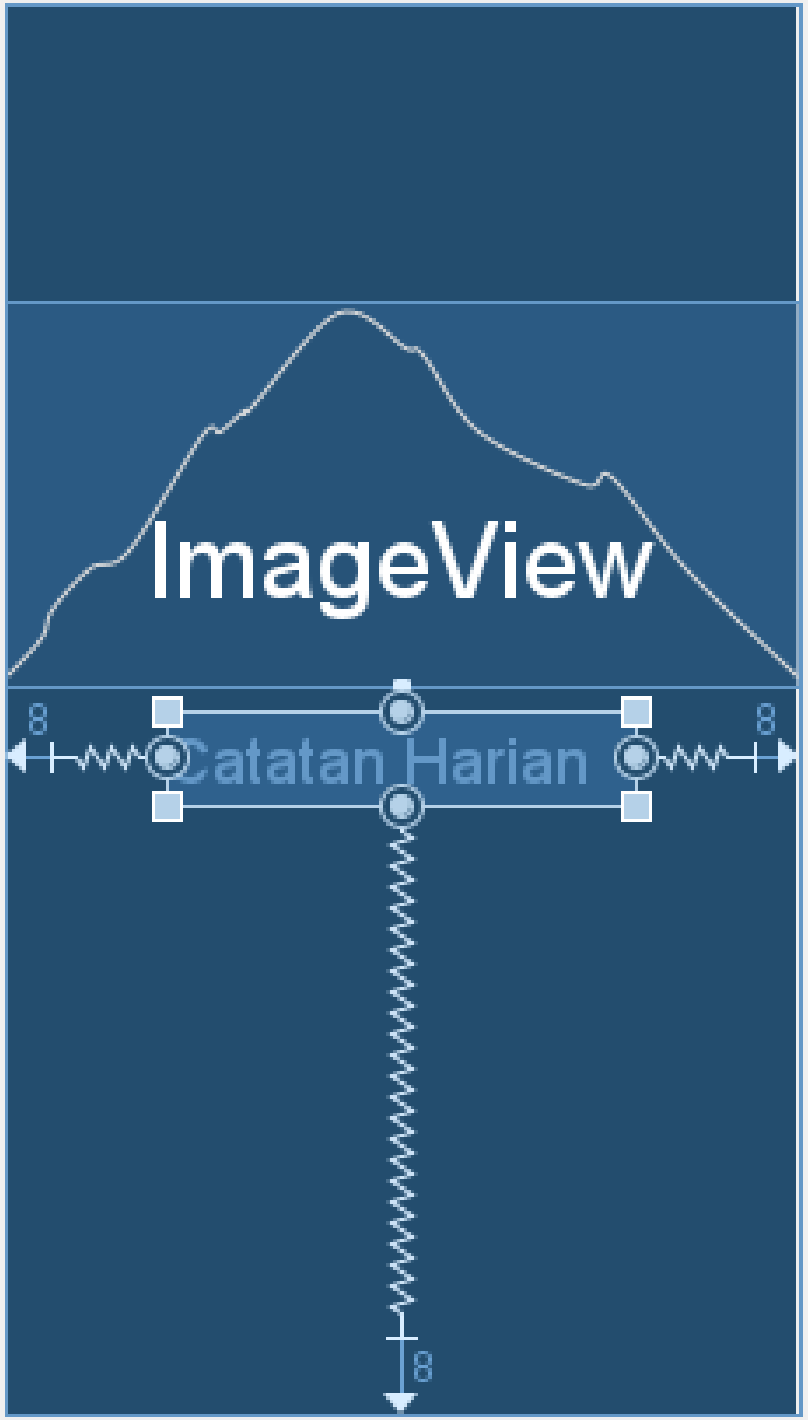
APLIKAS

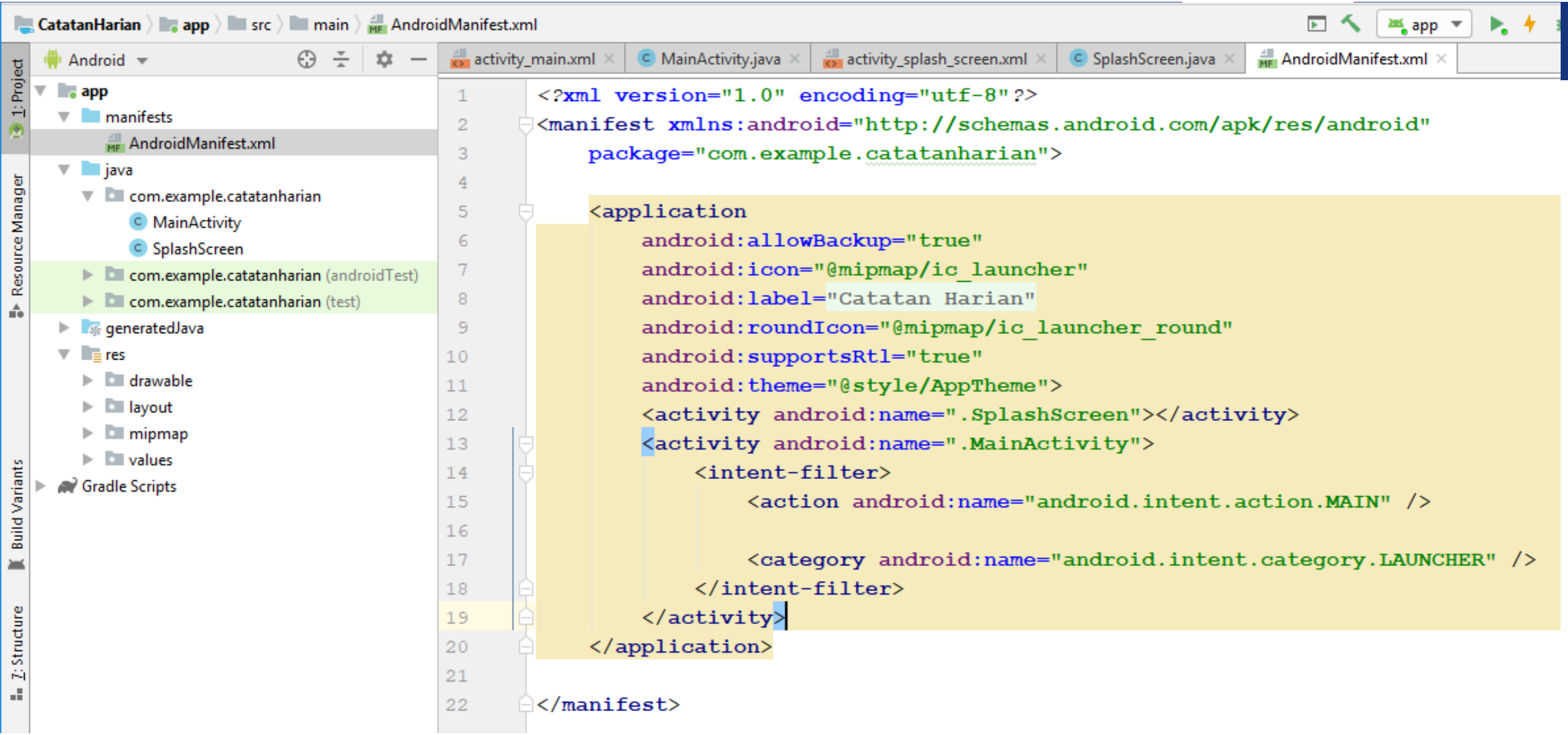


APLIKASI CATATAN HARIAN

```
public class SplashScreen extends AppCompatActivity {

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

        new Handler().postDelayed(new Runnable() {
            @Override
            public void run() {
                Intent intent = new Intent( packageContext: SplashScreen.this, MainActivity.class);
                startActivity(intent);
                finish();
            }
        }, delayMillis: 3000);
    }
}
```


CatatanHarian
app
src
main
AndroidManifest.xml
app
Android
activity_main.xml
MainActivity.java
activity_splash_screen.xml
SplashScreen.java
AndroidManifest.xml
1: Project
Resource Manager
Build Variants
7: Structure
app
manifests
AndroidManifest.xml
java
com.example.catatanharian
MainActivity
SplashScreen
com.example.catatanharian (androidTest)
com.example.catatanharian (test)
generatedJava
res
drawable
layout
mipmap
values
Gradle Scripts
1 <?xml version="1.0" encoding="utf-8"?>
2 <manifest xmlns:android="http://schemas.android.com/apk/res/android"
3 package="com.example.catatanharian">
4
5 <application
6 android:allowBackup="true"
7 android:icon="@mipmap/ic_launcher"
8 android:label="Catatan Harian"
9 android:roundIcon="@mipmap/ic_launcher_round"
10 android:supportsRtl="true"
11 android:theme="@style/AppTheme">
12 <activity android:name=".SplashScreen"></activity>
13 <activity android:name=".MainActivity">
14 <intent-filter>
15 <action android:name="android.intent.action.MAIN" />
16
17 <category android:name="android.intent.category.LAUNCHER" />
18 </intent-filter>
19 </activity>
20 </application>
21
22 </manifest>

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API

_main.xml | MainActivity.java | activity_splash_screen.xml | SplashScreen.java | AndroidManifest.xml

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

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="Catatan Harian"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/AppTheme">
        <activity android:name=".SplashScreen">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
        <activity android:name=".MainActivity">

        </activity>
    </application>

</manifest>
```

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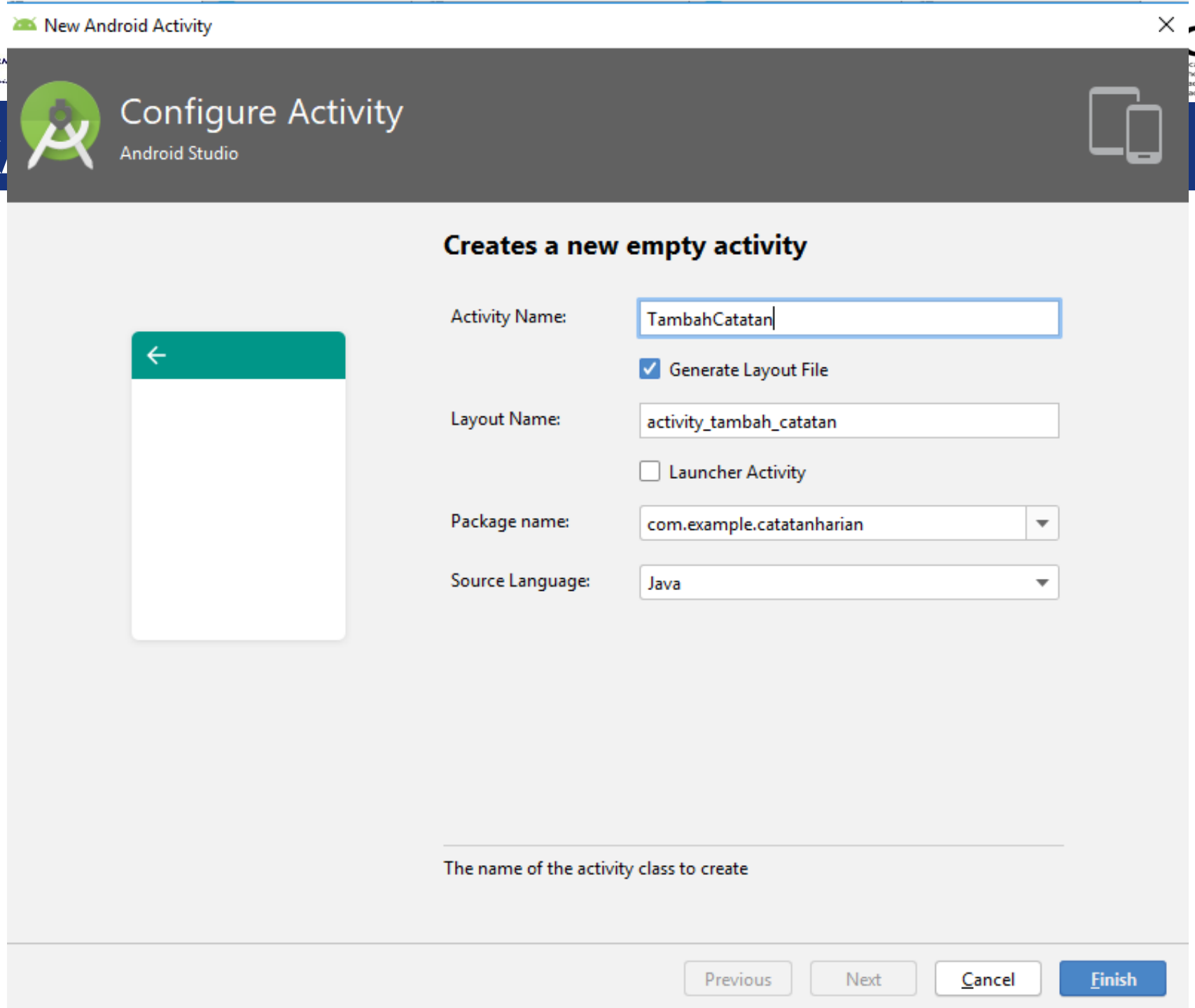
APLIKAS

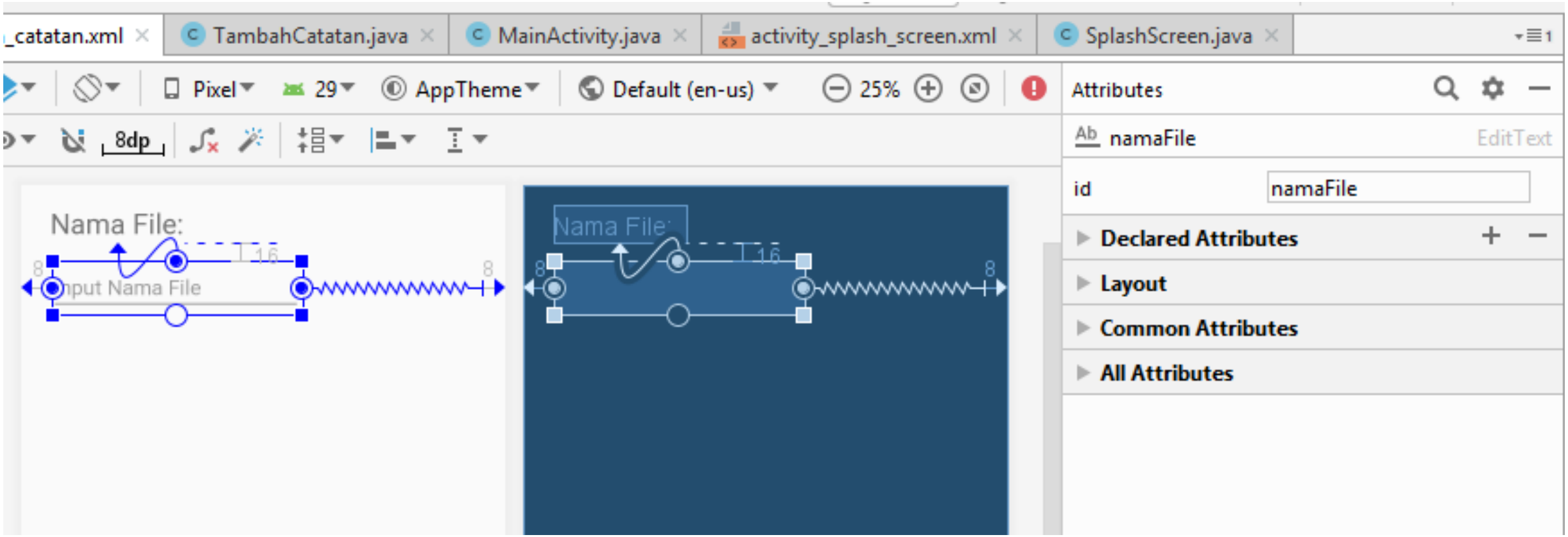
TAMBAH CATATAN

LIHAT CATATAN

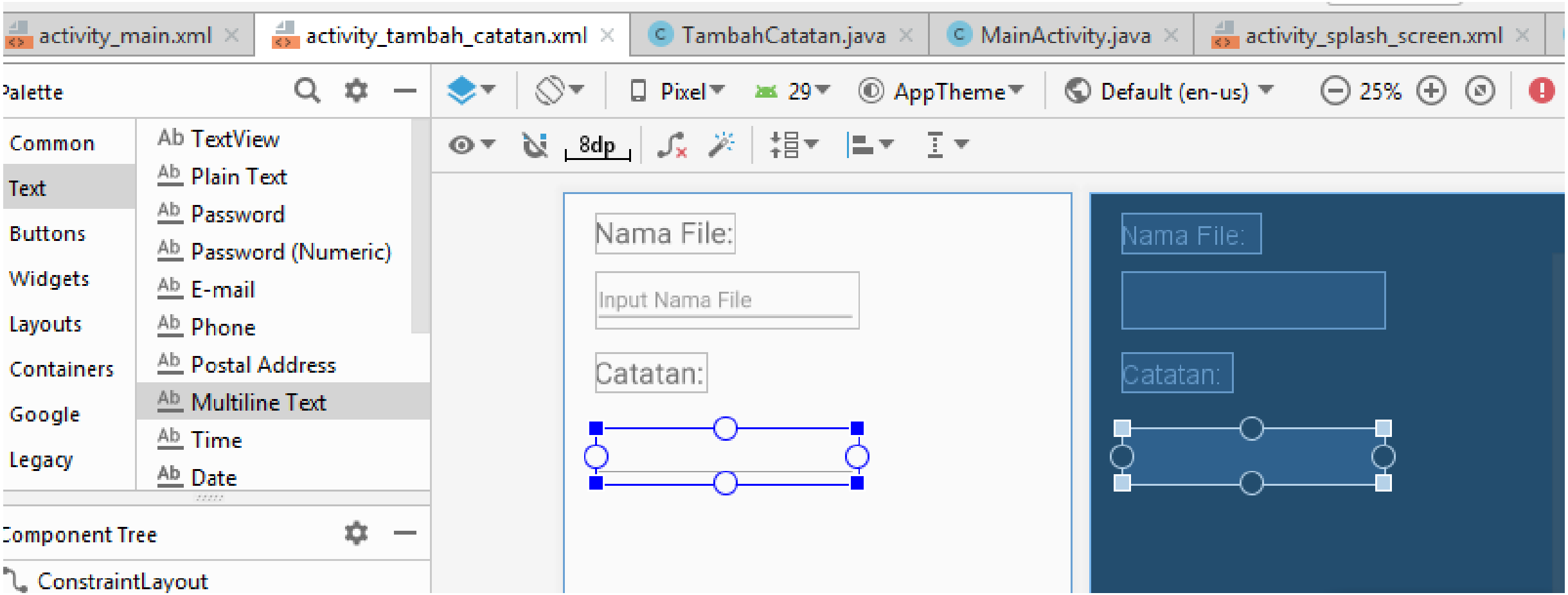
APLIK


New Android Activity
Configure Activity
Android Studio
Creates a new empty activity
Activity Name:
TambahCatatan
Generate Layout File
Layout Name:
activity_tambah_catatan
Launcher Activity
Package name:
com.example.catatanharian
Source Language:
Java
The name of the activity class to create
Previous
Next
Cancel
Finish

APLIKASI CATATAN HARIAN



APLIKASI CATATAN HARIAN



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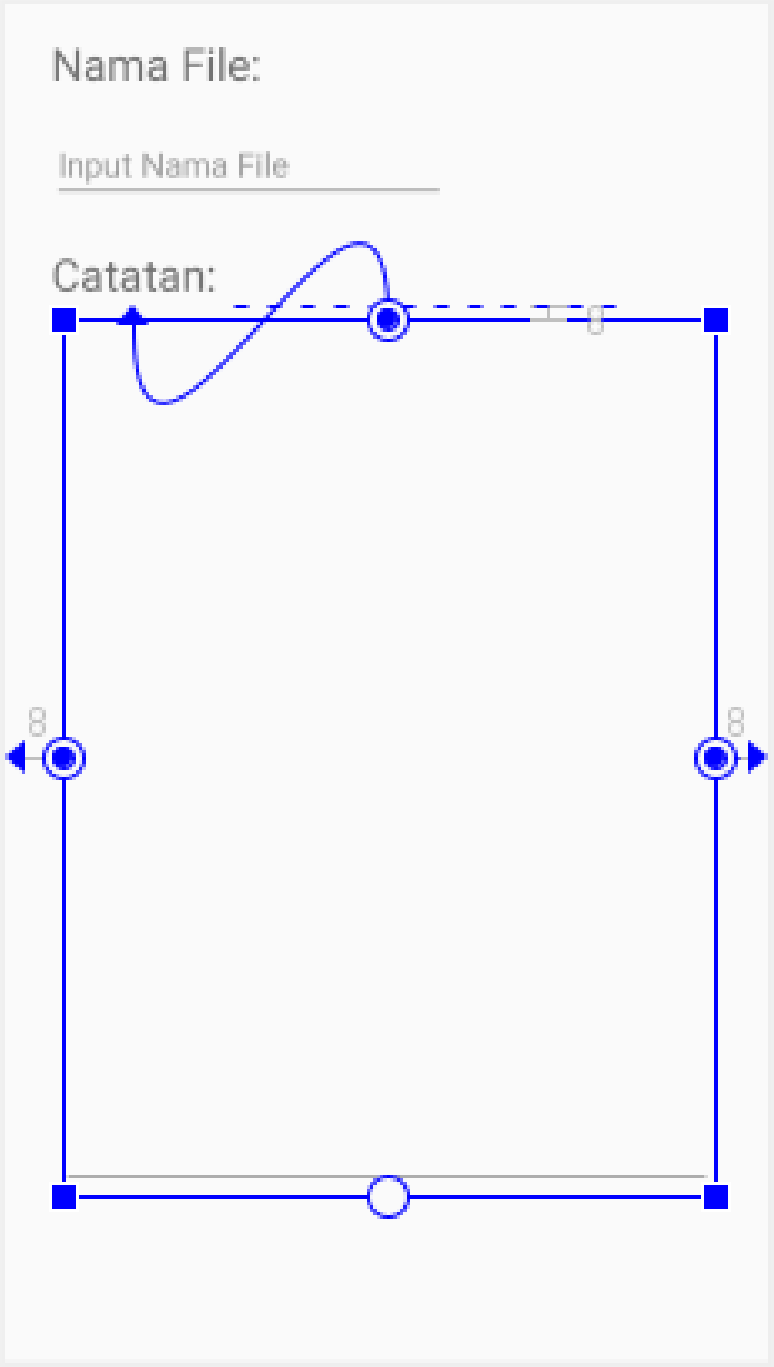
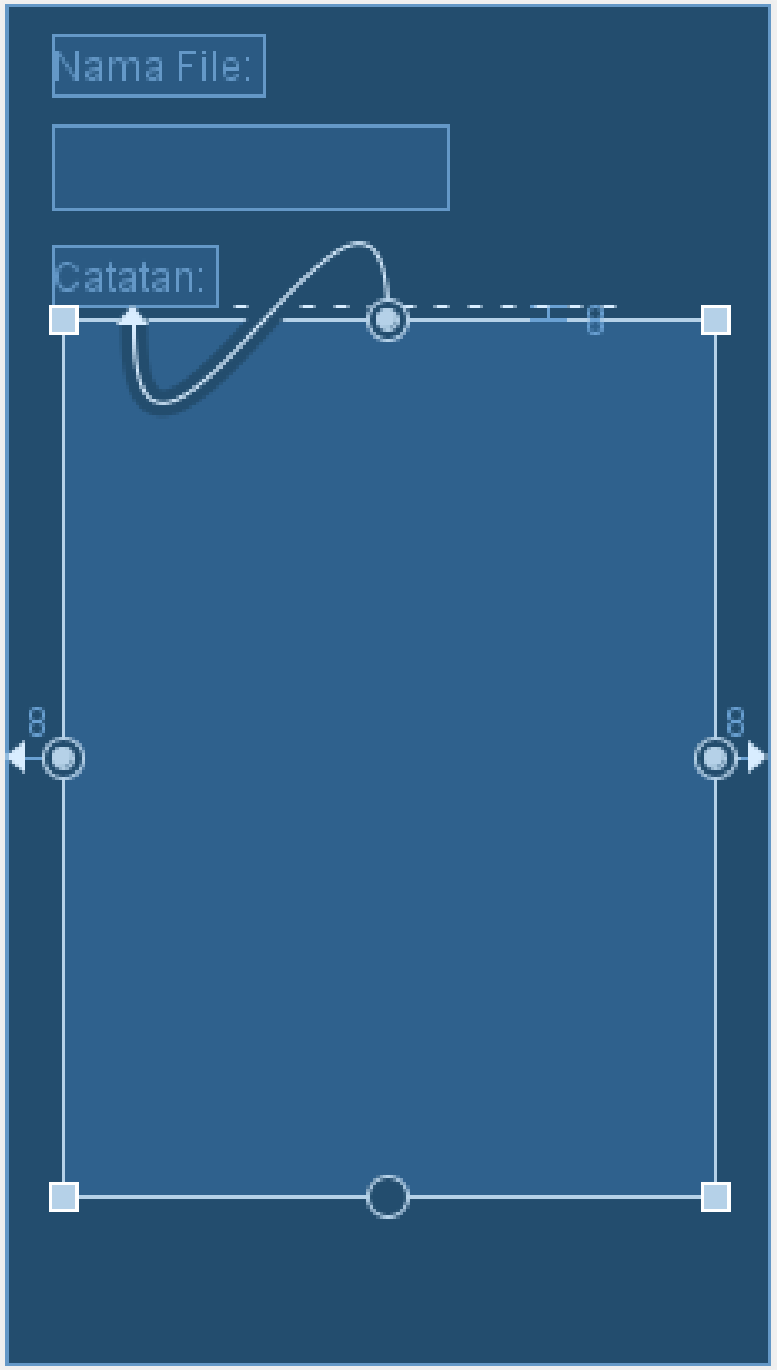
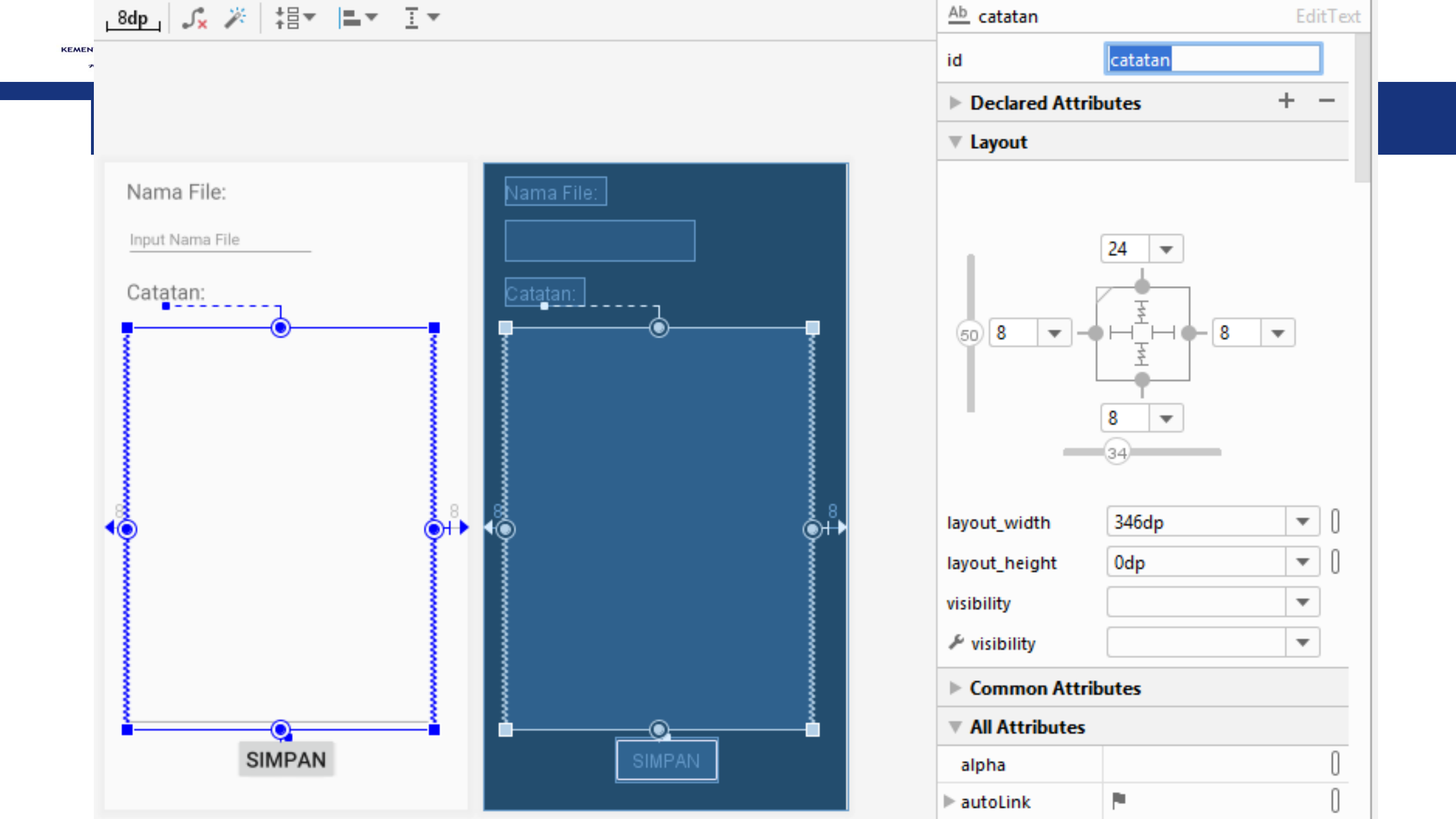
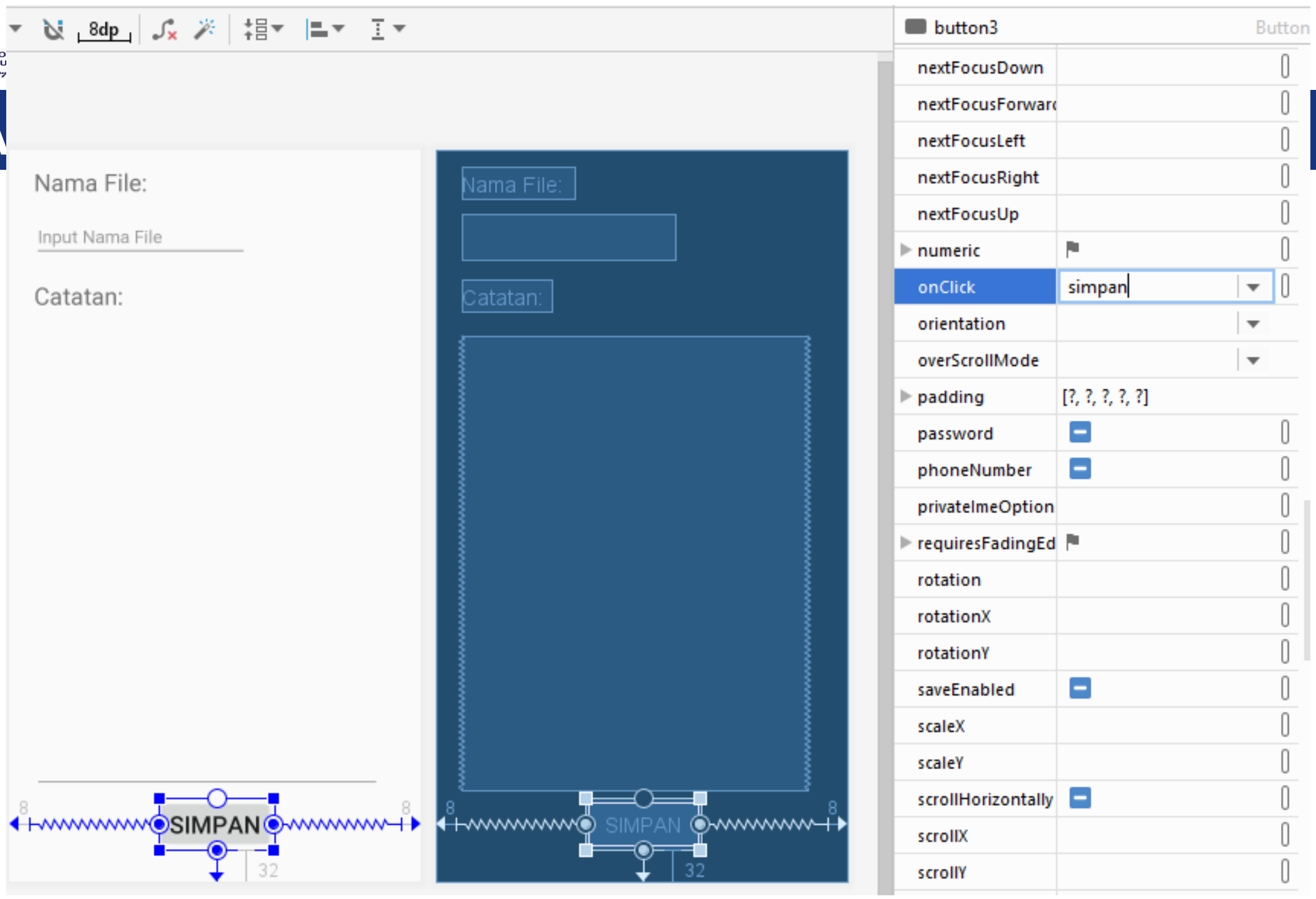
vocational school graduate academy

APLIK






8dp
Nama File:
Input Nama File
Catatan:
8
8
SIMPAN
Nama File:
Catatan:
8
8
SIMPAN
catatan
EditText
id
catatan
Declared Attributes
Layout
24
50
8
8
8
34
layout_width
346dp
layout_height
0dp
visibility
visibility
Common Attributes
All Attributes
alpha
autoLink


8dp
Nama File:
Input Nama File
Catatan:
SIMPAN
8
8
32
Nama File:
Catatan:
SIMPAN
8
8
32
button3
Button
nextFocusDown
nextFocusForwar
nextFocusLeft
nextFocusRight
nextFocusUp
numeric
onClick
simpan
orientation
overScrollMode
padding
[?, ?, ?, ?, ?]
password
phoneNumber
privateImeOption
requiresFadingEd
rotation
rotationX
rotationY
saveEnabled
scaleX
scaleY
scrollHorizontally
scrollX
scrollY

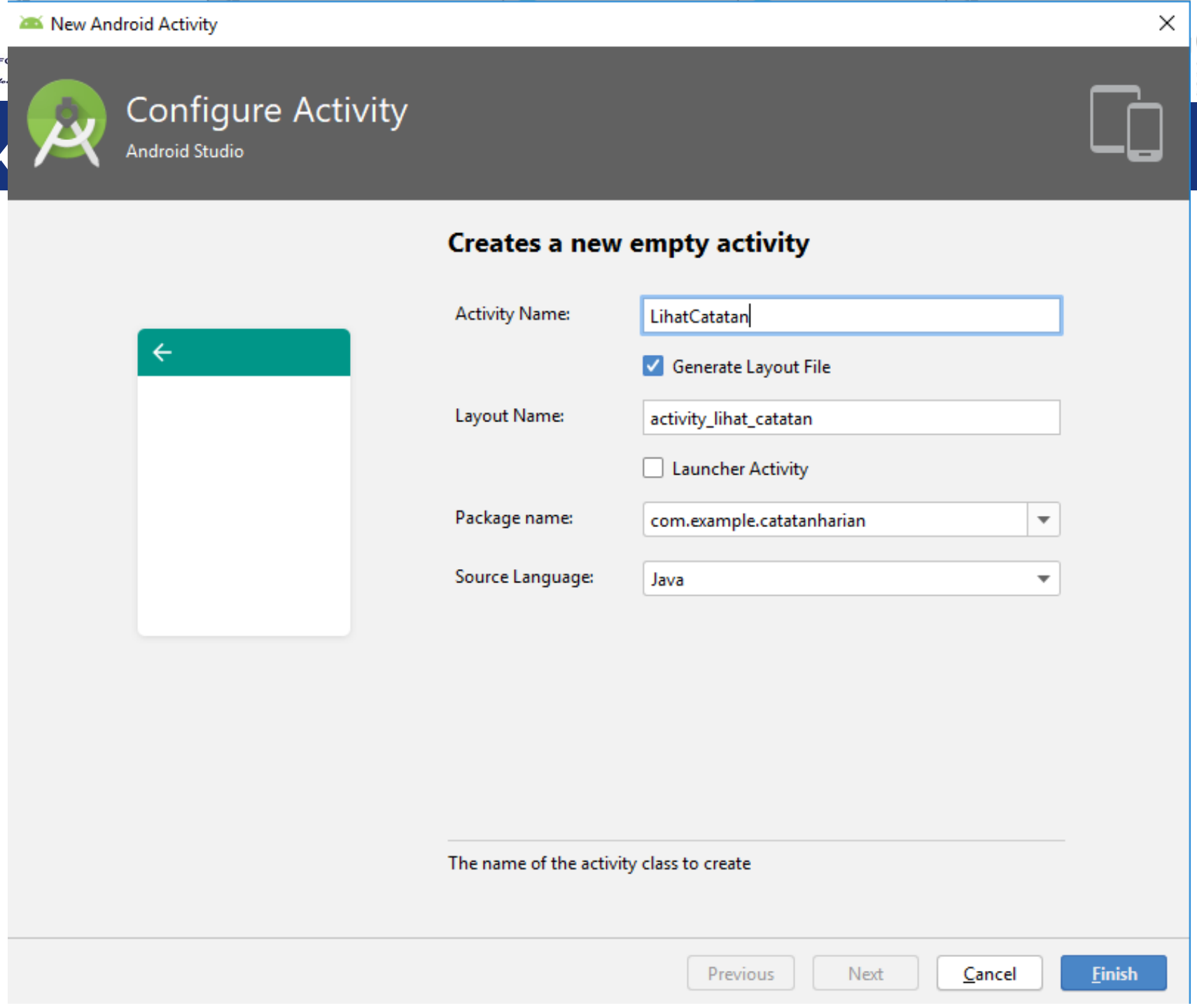
APLIKAS

_main.xml | activity_tambah_catatan.xml | TambahCatatan.java | MainActivity.java | activity_sp

```
        android:gravity="start|top"
        android:inputType="textMultiLine"
        app:layout_constraintBottom_toTopOf="@+id/button3"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.346"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView3" />

    <Button
        android:id="@+id/button3"
        android:layout_width="wrap_content"
        android:layout_height="51dp"
        android:layout_marginStart="8dp"
        android:layout_marginLeft="8dp"
        android:layout_marginEnd="8dp"
        android:layout_marginRight="8dp"
        android:layout_marginBottom="32dp"
        android:onClick="simpan"
```

Provide feedback on this warning
Suppress: Add tools:ignore="OnClick" attribute
Create 'simpan(View)' in 'TambahCatatan'
Typo: Change to...
Save 'simpan' to project-level dictionary
Create onClick event handler
Override Resource in Other Configuration...
Rearrange tag attributes
Remove attribute
Inject language or reference

```
public void simpan(View view) {
    EditText namaFile = findViewById(R.id.namaFile);
    String namaFileString = namaFile.getText().toString() + ".txt";
    EditText catatan = findViewById(R.id.catatan);
    String catatanString = catatan.getText().toString();

    File file = new File(getFilesDir(), namaFileString);
    if(file.exists()){
        file.delete();
    }
    FileOutputStream outputStream = null;
    try{
        file.createNewFile();
        outputStream = new FileOutputStream(file, append: true);
        outputStream.write(catatanString.getBytes());
        outputStream.flush();
        outputStream.close();
        Toast.makeText(getApplicationContext(), text: "Catatan Berhasil Disimpan",
                Toast.LENGTH_SHORT).show();
    } catch (Exception e){
        e.printStackTrace();
    }
}
```


New Android Activity
Configure Activity
Android Studio
Creates a new empty activity
Activity Name:
LihatCatatan
Generate Layout File
Layout Name:
activity_lihat_catatan
Launcher Activity
Package name:
com.example.catatanharian
Source Language:
Java
The name of the activity class to create
Previous
Next
Cancel
Finish

activity_main.xml | activity_lihat_catatan.xml | LihatCatatan.java | activity_tambah_catatan.xml | TambahCatatan.java | MainActivity.java

Palette

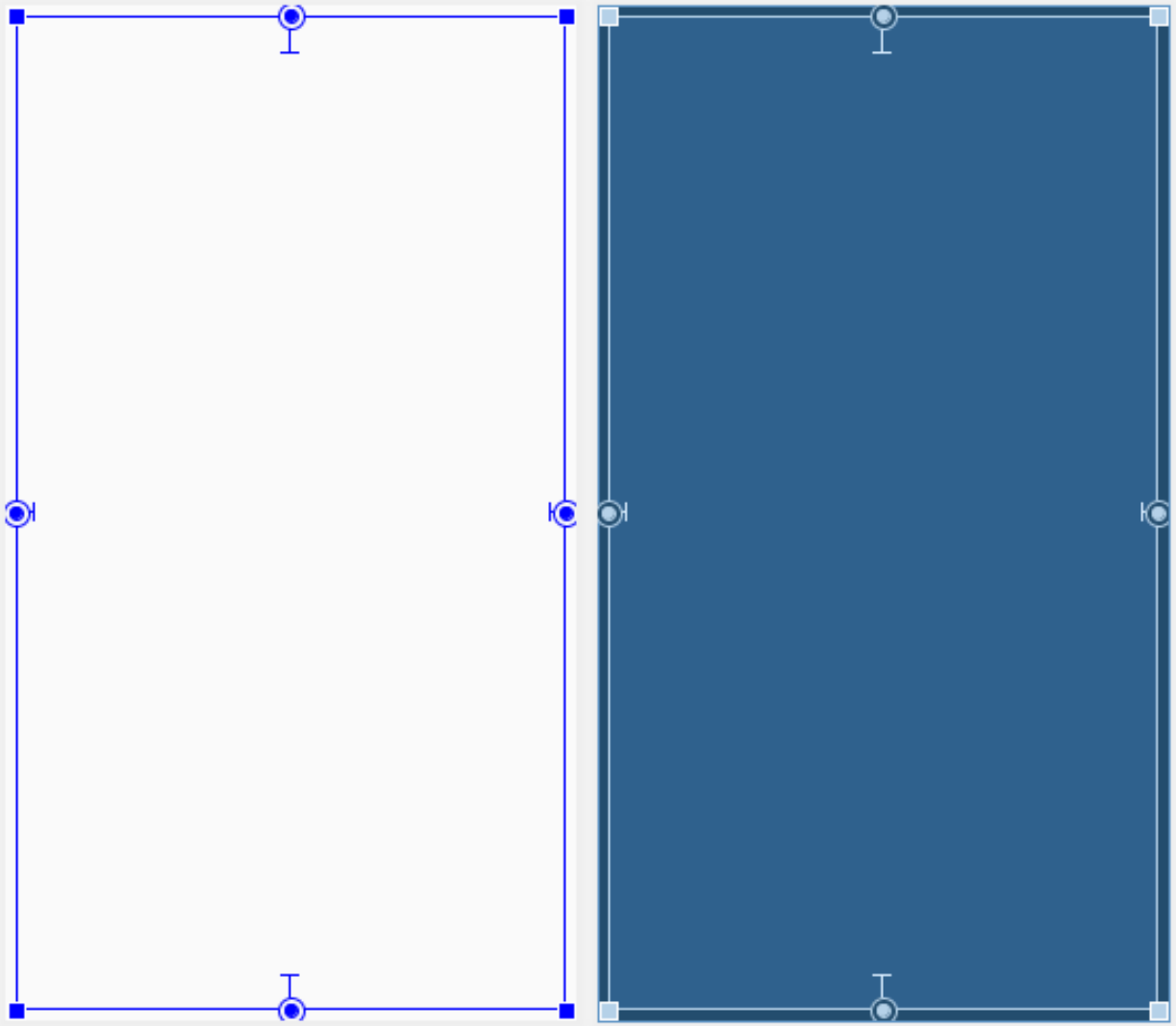
Common
Text
Buttons
Widgets
Layouts
Containers
Google
Legacy

GridLayout
ListView
TabHost
RelativeLayout
GridView

Component Tree

ConstraintLayout
_dynamic

Pixel | 29 | AppTheme | Default (en-us) | 25% | 8dp



Attributes

<unnamed> ListView

id listCatatan

Declared Attribu...

Layout

8
8
8
50

layout_wid... 395dp
layout_hei... 715dp
visibility
visibility

Common Attributes

All Attributes

addStatesF
alpha
alwaysDrav
animateLay

```java
package com.example.catatanharian;

import ...

public class LihatCatatan extends AppCompatActivity {

    private ListView listView;

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

        getSupportActionBar().setTitle("Daftar Catatan");
        listView = findViewById(R.id.listCatatan);

        File direktori = new File(getFilesDir().getPath());
        File[] daftarFile = direktori.listFiles();
        String[] daftarNamaFile = new String[daftarFile.length];
        String[] tanggal = new String[daftarFile.length];
        SimpleDateFormat simpleDateFormat = new SimpleDateFormat( pattern: "dd MM YYYY");
        ArrayList<Map<String, Object>> itemDataList = new ArrayList<Map<String, Object>>();
    }
}
```

```
for (int i = 0; i < daftarFile.length; i++) {
    daftarNamaFile[i] = daftarFile[i].getName();
    Date lastModDate = new Date(daftarFile[i].lastModified());
    tanggal[i] = simpleDateFormat.format(lastModDate);
    Map<String, Object> listItemMap = new HashMap<>();
    listItemMap.put( k: "Nama", daftarNamaFile[i]);
    listItemMap.put( k: "Tanggal", tanggal[i]);
    itemDataList.add(listItemMap);
}

SimpleAdapter simpleAdapter = new SimpleAdapter( context: this, itemDataList,
        android.R.layout.simple_list_item_2, new String[]{"Nama", "Tanggal"},
        new int[]{android.R.id.text1, android.R.id.text2});
listView.setAdapter(simpleAdapter);
simpleAdapter.notifyDataSetChanged();
```

APLIKASI CATATAN HARIAN

```
listView.setOnItemClickListener(new AdapterView.OnItemClickListener() {
    @Override
    public void onItemClick(AdapterView<?> adapterView, View view, int i, long l) {
        Intent intent = new Intent( packageContext: LihatCatatan.this, TambahCatatan.class);
        intent.putExtra( name: "namaFile", daftarNamaFile[i]);
        startActivity(intent);
    }
});
```

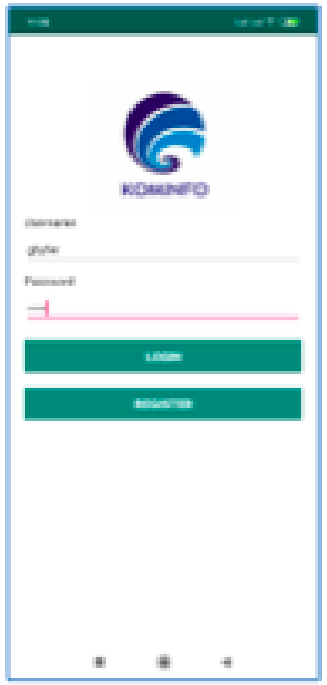
```
public class TambahCatatan extends AppCompatActivity {

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

        EditText namaFile = findViewById(R.id.namaFile);
        String namaFileString = namaFile.getText().toString() + ".txt";
        EditText catatan = findViewById(R.id.catatan);
        String catatanString = catatan.getText().toString();
        Bundle extras = getIntent().getExtras();
```

```
if (extras != null){
    namaFileString = extras.getString( key: "namaFile");
    namaFile.setText(namaFileString.substring(0, namaFileString.length()-4));
    try{
        FileInputStream fileInputStream = openFileInput(namaFileString);
        InputStreamReader inputStreamReader = new InputStreamReader(fileInputStream);
        BufferedReader bufferedReader = new BufferedReader(inputStreamReader);
        StringBuffer stringBuffer = new StringBuffer();
        String baris;
        while ((baris = bufferedReader.readLine()) != null){
            stringBuffer.append(baris + "\n");
        }
        catatan.setText(stringBuffer.toString());
        catatanString = stringBuffer.toString();
    } catch (FileNotFoundException e){
        e.printStackTrace();
    } catch (IOException e){
        e.printStackTrace();
    }
}
```

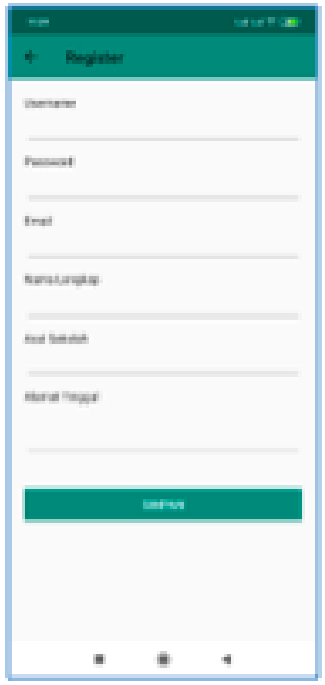
APLIKASI VALIDASI LOGIN

- penyimpanan file (data persistence) menggunakan *internal storage*.
- perhatikan beberapa tampilan berikut ini :

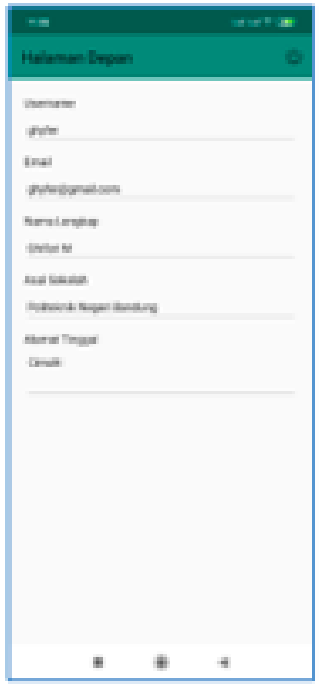
Gambar Tampilan Splashscreen



Gambar Tampilan Halaman Login



GambaR. Tampilan Halaman Register



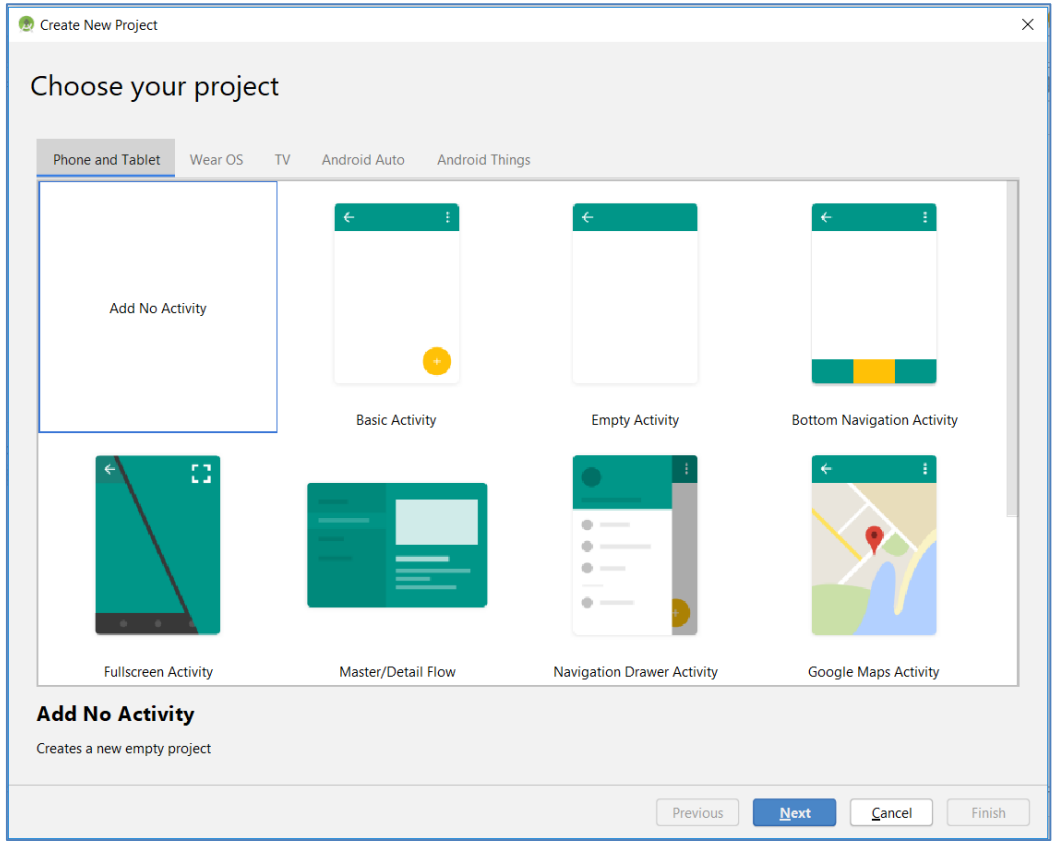
Gambar Tampilan Halaman Home

APLIKASI VALIDASI LOGIN

- melakukan pengecekan terhadap data user yang tersimpan pada file teks.
- Pertama kali aplikasi dijalankan akan muncul *splahscreen*,
- apabila user belum teregistrasi, maka dapat melakukan registrasi pada halaman registrasi,
- apabila sudah memiliki akun dapat login menggunakan akun tersebut pada halaman login.
- Setelah berhasil login, aplikasi akan masuk ke halaman utama yang memunculkan data user.
- Tersedia juga tombol logout untuk keluar dari aplikasi.

APLIKASI VALIDASI LOGIN

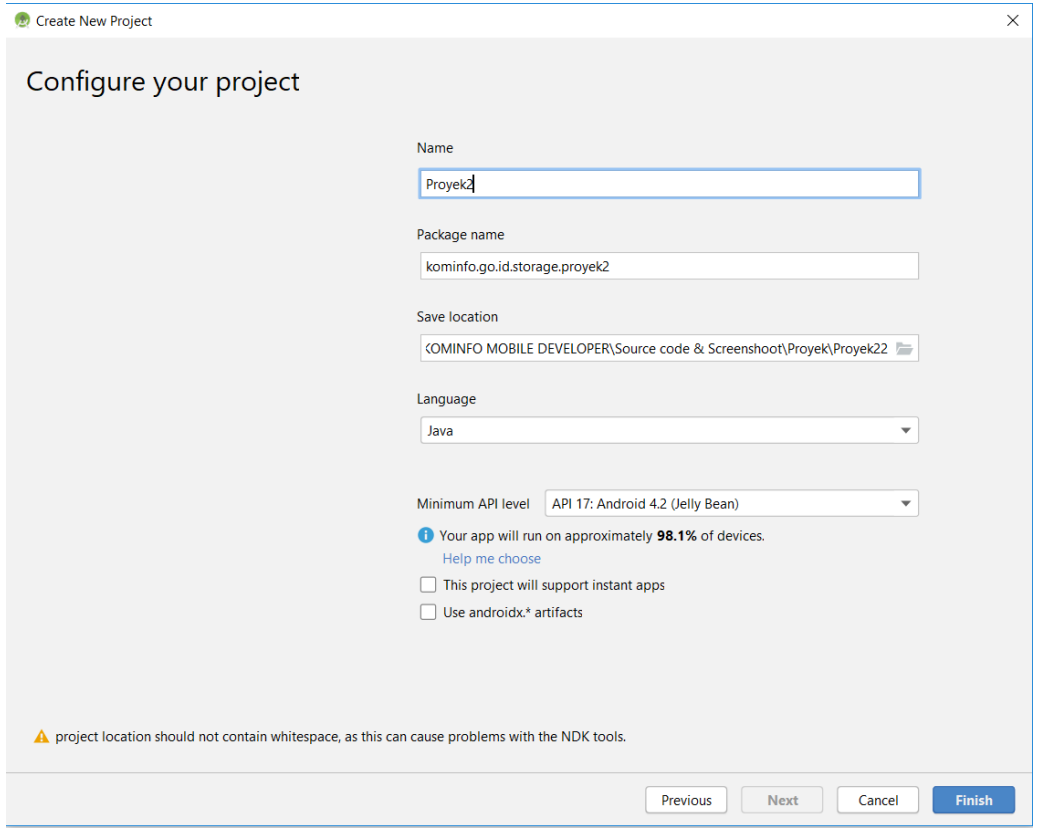
1. Buatlah sebuah proyek baru pada android studio, dan berikan nama pada proyek yang akan anda buat (sebagai contoh Proyek2).



Tambahkan Proyek Baru (Add No Activity)

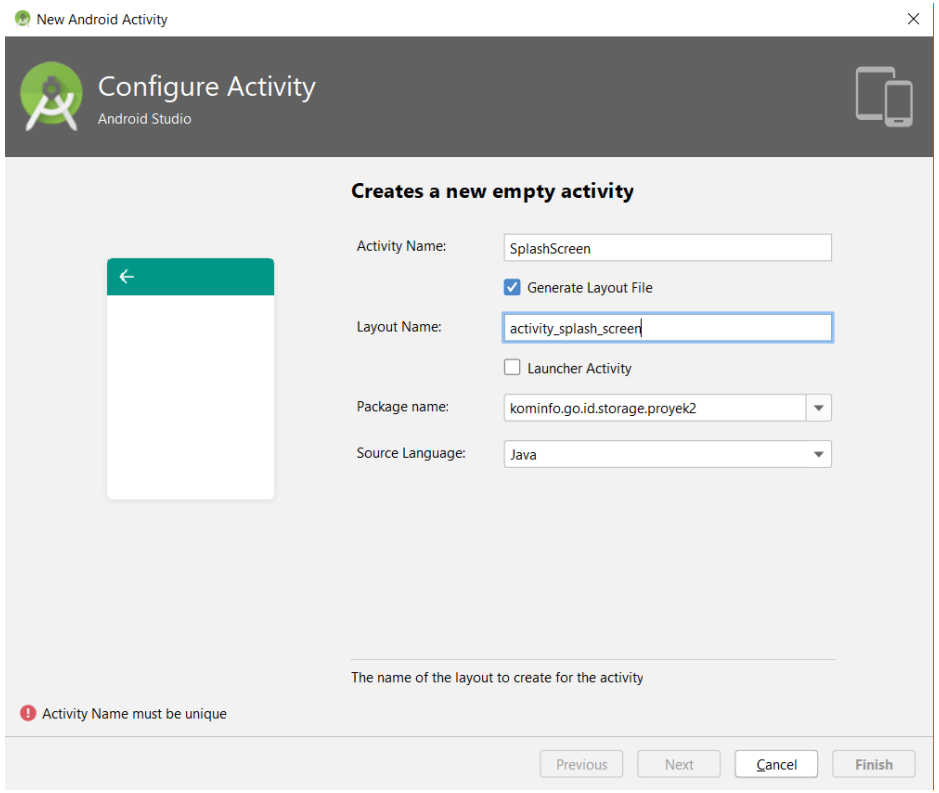
APLIKASI VALIDASI LOGIN

Tuliskan nama proyek dan package



APLIKASI VALIDASI LOGIN - Membuat Halaman Splashscreen

2. Buatlah sebuah *Activity*, beri nama kelas **`SplashScreen.java`** beserta file layout dengan nama **`activity_splash_screen.xml`**



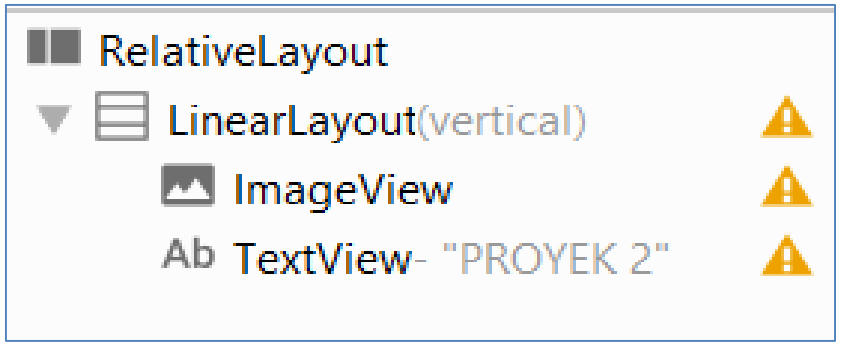
Tambahkan Activity SplashScreen

APLIKASI VALIDASI LOGIN - Membuat Halaman Splashscreen

3. Desainlah sebuah tampilan pada **activity_splash_screen** sebagaimana berikut ini :

Desain Tampilan SplashScreen

APLIKASI VALIDASI LOGIN - Membuat Halaman Splashscreen



Struktur Layout Komponennya

APLIKASI VALIDASI LOGIN - Membuat Halaman Splashscreen

Sesuaikan kode xml pada **activity_splash_screen.xml** sebagaimana berikut :

```
<?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:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".SplashScreen">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_centerInParent="true"
        android:orientation="vertical">

        <ImageView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:adjustViewBounds="true"
            android:fitsSystemWindows="true"
            android:src="@drawable/logo" />

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center_horizontal"
            android:text="PROYEK 2"
            android:textColor="#000"
            android:textSize="30sp" />
    </LinearLayout>

</RelativeLayout>
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Splashscreen

5. Pada kelas Java **SplashScreen.java**, tambahkan kode berikut ini :

```
package kominfo.go.id.storage.proyek2;

import android.content.Intent;
import android.os.Handler;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;

import java.io.BufferedReader;
import java.io.File;
import java.io.FileReader;
import java.io.IOException;

public class SplashScreen extends AppCompatActivity {

    public static final String FILENAME = "login";

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

        new Handler().postDelayed(new Runnable() {
            @Override
            public void run() {
```

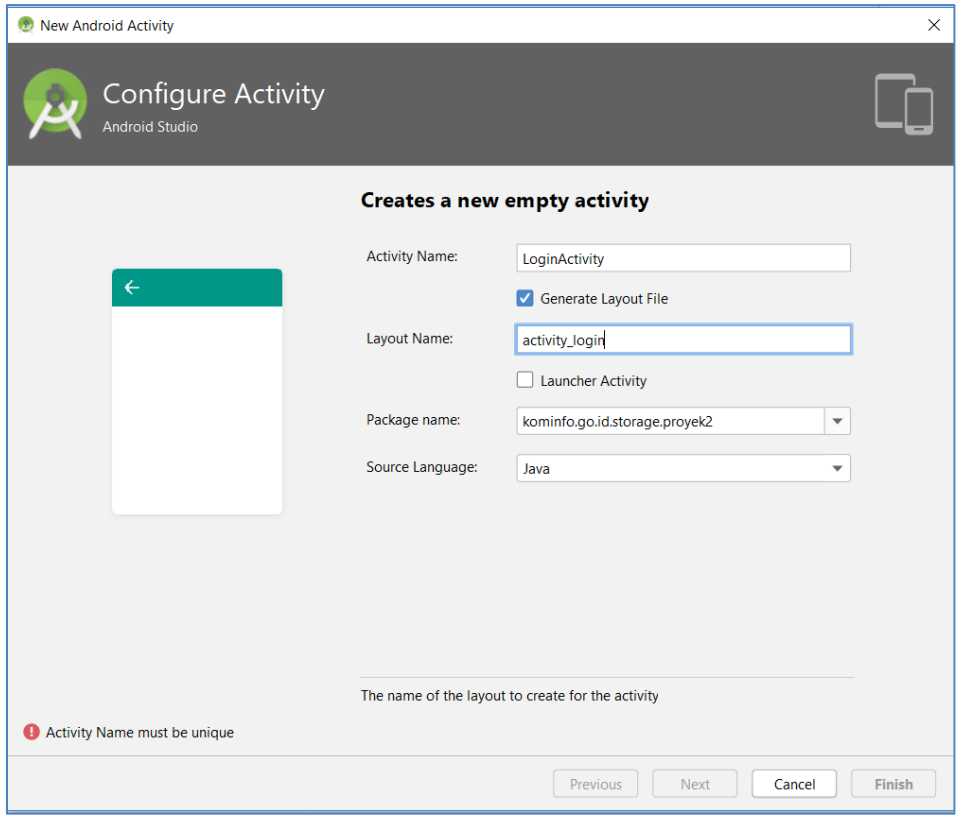
APLIKASI VALIDASI LOGIN - Membuat Halaman Splashscreen

5. Pada kelas Java **SplashScreen.java**, tambahkan kode berikut ini :

```
                if (isLogin()) {
                    Intent intent = new Intent(SplashScreen.this,
MainActivity.class);
                    startActivity(intent);

                } else {
                    Intent intent = new Intent(SplashScreen.this,
LoginActivity.class);
                    startActivity(intent);
                }

                finish();

            }
        }, 3000);
    }

    boolean isLogin() {
        File sdcard = getFilesDir();
        File file = new File(sdcard, FILENAME);
        if (file.exists()) {
            return true;
        } else {
            return false;
        }
    }
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Login

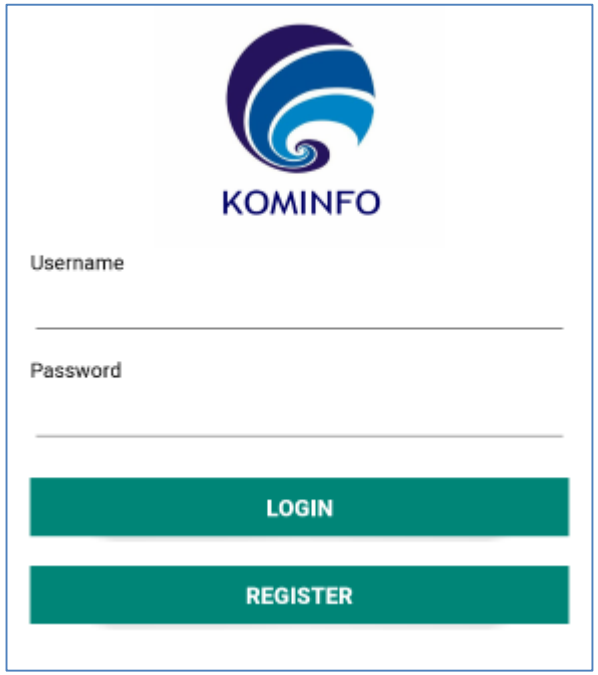
1. Buatlah sebuah *Activity*, beri nama kelas **LoginActivity.java** beserta file layout dengan nama **activity_login.xml**.



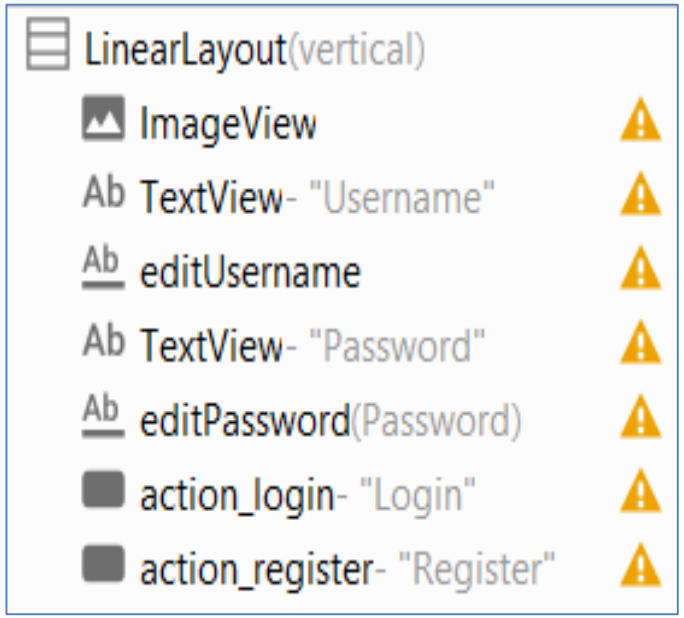
Tambahkan LoginActivity dan Layout activity_login

APLIKASI VALIDASI LOGIN - Membuat Halaman Login

2. Desainlah sebuah tampilan pada **activity_login** sebagaimana berikut :



Desain Tampilan pada activity_login



Struktur Layout pada activity_main

APLIKASI VALIDASI LOGIN - Membuat Halaman Login

3. Sesuaikan kode *xml* pada **`activity_login.xml`** sebagaimana berikut :

```
<?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:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#FFF"
    android:orientation="vertical"
    android:padding="20dp"
    tools:context=".LoginActivity">

    <ImageView
        android:layout_width="200dp"
        android:layout_height="wrap_content"
        android:layout_gravity="center_horizontal"
        android:layout_marginTop="40dp"
        android:adjustViewBounds="true"
        android:fitsSystemWindows="true"
        android:src="@drawable/logo" />


    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Username"
        android:textColor="#000"
        android:textSize="14sp" />

    <EditText
        android:id="@+id/editUsername"
        android:layout_width="match_parent"
        android:layout_height="40dp"
        android:layout_marginTop="5dp"
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Login

```
android:digits="ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz123
4567890"
        android:inputType="textFilter"
        android:textColor="#000"
        android:textSize="14sp" />

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="10dp"
        android:text="Password"
        android:textColor="#000"
        android:textSize="14sp" />

    <EditText
        android:id="@+id/editPassword"
        android:layout_width="match_parent"
        android:layout_height="40dp"
        android:layout_marginTop="5dp"
        android:inputType="textPassword"
        android:textColor="#000"
        android:textSize="14sp" />
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Login

```
    <Button
        android:id="@+id/action_login"
        android:layout_width="match_parent"
        android:layout_height="40dp"
        android:layout_marginTop="20dp"
        android:background="@color/colorPrimary"
        android:text="Login"
        android:textColor="#FFF"
        android:textSize="16sp"
        android:textStyle="bold"
        />

    <Button
        android:id="@+id/action_register"
        android:layout_width="match_parent"
        android:layout_height="40dp"
        android:layout_marginTop="20dp"
        android:background="@color/colorPrimary"
        android:text="Register"
        android:textColor="#FFF"
        android:textSize="16sp"
        android:textStyle="bold"
        />
</LinearLayout>
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Login

4. Pada kelas Java **LoginActivity.java**, tambahkan kode berikut ini :

```
package kominfo.go.id.storage.proyek2;

import android.content.Intent;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import java.io.BufferedReader;
import java.io.File;
import java.io.FileOutputStream;
import java.io.FileReader;
import java.io.IOException;

public class LoginActivity extends AppCompatActivity {
    public static final String FILENAME = "login";

    EditText editUsername, editPassword;
    Button btnLogin, btnRegister;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_login);
        editUsername = findViewById(R.id.editUsername);
        editPassword = findViewById(R.id.editPassword);
        btnLogin = findViewById(R.id.action_login);
        btnRegister = findViewById(R.id.action_register);
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Login

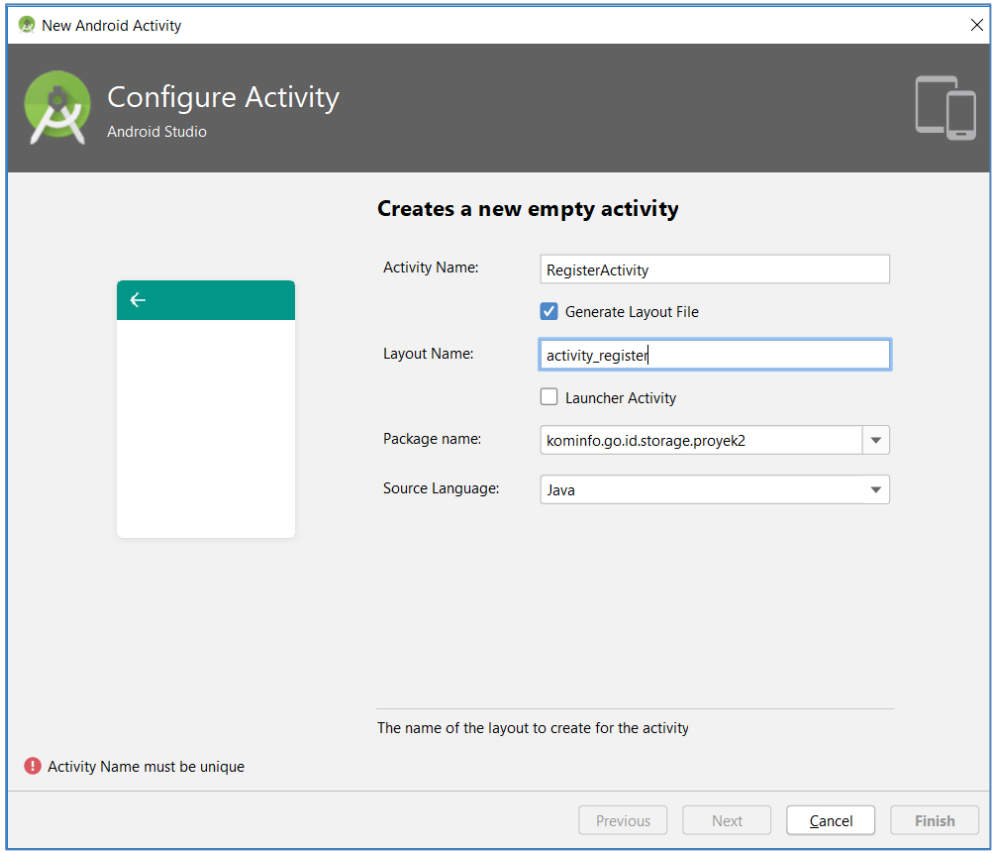
```
        btnLogin.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                login();
            }
        });

        btnRegister.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(LoginActivity.this,
RegisterActivity.class);
                startActivity(intent);
            }
        });
    }

    void simpanFileLogin() {
        String isiFile = editUsername.getText().toString() + ";" +
editPassword.getText().toString();
        File file = new File(getFilesDir(), FILENAME);

        FileOutputStream outputStream = null;
        try {
            file.createNewFile();
            outputStream = new FileOutputStream(file, false);
            outputStream.write(isiFile.getBytes());
            outputStream.flush();
            outputStream.close();
        } catch (Exception e) {
            e.printStackTrace();
        }
        Toast.makeText(this, "Login Berhasil",
Toast.LENGTH_SHORT).show();
        onBackPressed();
    }
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Login

```
    void login() {
        File sdcard = getFilesDir();
        File file = new File(sdcard,
editUsername.getText().toString());
        if (file.exists()) {
            StringBuilder text = new StringBuilder();
            try {
                BufferedReader br =
                        new BufferedReader(new FileReader(file));
                String line = br.readLine();
                while (line != null) {
                    text.append(line);
                    line = br.readLine();
                }
                br.close();
            } catch (IOException e) {
                System.out.println("Error " + e.getMessage());
            }
            String data = text.toString();
            String[] dataUser = data.split(";");

            if (dataUser[1].equals(editPassword.getText().toString()))
{
                simpanFileLogin();
                Intent intent = new Intent(this, MainActivity.class);
                startActivity(intent);
                finish();
            }else {
                Toast.makeText(this, "Password Tidak Sesuai",
Toast.LENGTH_SHORT).show();
            }
        } else {
            Toast.makeText(this, "User Tidak Ditemukan",
Toast.LENGTH_SHORT).show();
        }
    }
}
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Register

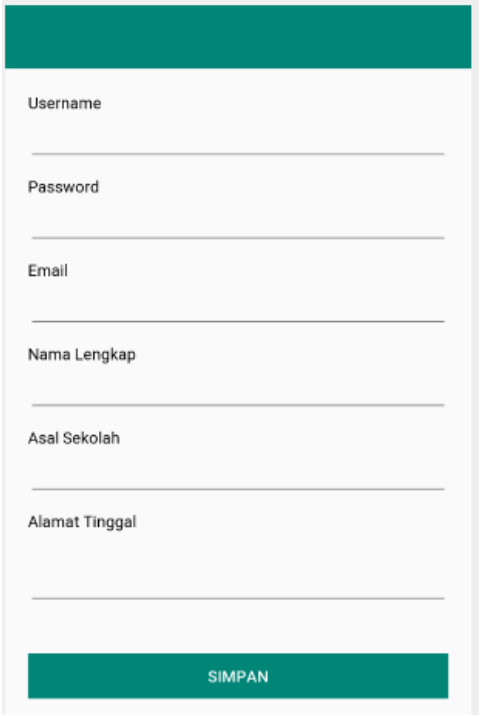
1. Selanjutnya, tambahkan *Activity* baru, berikan nama *Activity* dengan **`RegisterActivity`**, serta nama layout **`activity_register`**.



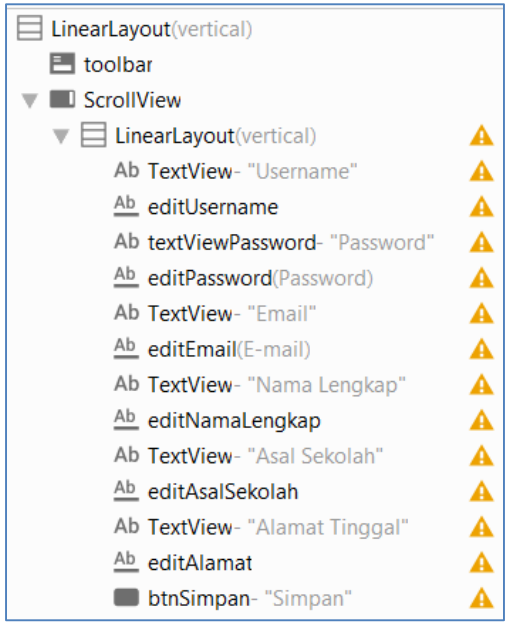
Tambahkan RegisterActivity

APLIKASI VALIDASI LOGIN - Membuat Halaman Register

2. Buatlah sebuah desain layout, dengan tampilan sebagaimana berikut :



Desain Tampilan RegisterActivity



. Struktur Layout RegisterActivity

APLIKASI VALIDASI LOGIN - Membuat Halaman Register

3. Sesuaikan kode *xml* **`activity_register.xml`** sebagaimana berikut ini :

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

    <android.support.v7.widget.Toolbar
        android:id="@+id/toolbar"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:background="?attr/colorPrimary"
        android:minHeight="?attr/actionBarSize"
        android:theme="?attr/actionBarTheme" />

    <ScrollView
        android:layout_width="match_parent"
        android:layout_height="match_parent">

        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:orientation="vertical"
            android:padding="20dp">

            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="Username"
                android:textColor="#000"
                android:textSize="14sp" />
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Register

3. Sesuaikan kode *xml* **`activity_register.xml`** sebagaimana berikut ini :

```
<EditText
    android:id="@+id/editUsername"
    android:layout_width="match_parent"
    android:layout_height="40dp"
    android:layout_marginTop="5dp"
    android:digits="abcdefghijklmnopqrstuvwxyz1234567890"
    android:inputType="textFilter"
    android:textColor="#000"
    android:textSize="14sp" />

<TextView
    android:id="@+id/textViewPassword"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="10dp"
    android:text="Password"
    android:textColor="#000"
    android:textSize="14sp" />

<EditText
    android:id="@+id/editPassword"
    android:layout_width="match_parent"
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Register

3. Sesuaikan kode *xml* **`activity_register.xml`** sebagaimana berikut ini :

```
            android:layout_height="40dp"
            android:layout_marginTop="5dp"
            android:inputType="textPassword"
            android:textColor="#000"
            android:textSize="14sp" />

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginTop="10dp"
            android:text="Email"
            android:textColor="#000"
            android:textSize="14sp" />

        <EditText
            android:id="@+id/editEmail"
            android:layout_width="match_parent"
            android:layout_height="40dp"
            android:layout_marginTop="5dp"
            android:inputType="textEmailAddress"
            android:textColor="#000"
            android:textSize="14sp" />

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginTop="10dp"
            android:text="Nama Lengkap"
            android:textColor="#000"
            android:textSize="14sp" />
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Register

3. Sesuaikan kode *xml* **`activity_register.xml`** sebagaimana berikut ini :

```
<EditText
    android:id="@+id/editNamaLengkap"
    android:layout_width="match_parent"
    android:layout_height="40dp"
    android:layout_marginTop="5dp"
    android:textColor="#000"
    android:textSize="14sp" />

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="10dp"
    android:text="Asal Sekolah"
    android:textColor="#000"
    android:textSize="14sp" />

<EditText
    android:id="@+id/editAsalSekolah"
    android:layout_width="match_parent"
    android:layout_height="40dp"
    android:layout_marginTop="5dp"
    android:textColor="#000"
    android:textSize="14sp" />

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

APLIKASI VALIDASI LOGIN - Membuat Halaman Register

3. Sesuaikan kode *xml* **`activity_register.xml`** sebagaimana berikut ini :

```
                android:layout_height="wrap_content"
                android:layout_marginTop="10dp"
                android:text="Alamat Tinggal"
                android:textColor="#000"
                android:textSize="14sp" />

            <EditText
                android:id="@+id/editAlamat"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:layout_marginTop="5dp"
                android:gravity="top|left"
                android:lines="3"
                android:padding="5dp"
                android:singleLine="false"
                android:textColor="#000"
                android:textSize="14sp" />

            <Button
                android:id="@+id/btnSimpan"
                android:layout_width="match_parent"
                android:layout_height="40dp"
                android:layout_marginTop="40dp"
                android:background="@color/colorPrimary"
                android:text="Simpan"
                android:textColor="#FFF"
                android:textSize="14sp" />
        </LinearLayout>
    </ScrollView>


</LinearLayout>
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Register

4. Pada kelas Java **`RegisterActivity.java`**, tambahkan kode berikut ini :

```
package kominfo.go.id.storage.proyek2;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.support.v7.widget.Toolbar;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import java.io.File;
import java.io.FileOutputStream;

public class RegisterActivity extends AppCompatActivity {

    EditText editUsername, editPassword, editEmail, editNamaLengkap,
editAsalSekolah, editAlamat;
    Button btnSimpan;


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

        Toolbar toolbar = findViewById(R.id.toolbar);
        setSupportActionBar(toolbar);

        getSupportActionBar().setDisplayHomeAsUpEnabled(true);
        getSupportActionBar().setDisplayShowHomeEnabled(true);

        getSupportActionBar().setTitle("Register");
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Register

4. Pada kelas Java **`RegisterActivity.java`**, tambahkan kode berikut ini :

```
        editUsername = findViewById(R.id.editUsername);
        editPassword = findViewById(R.id.editPassword);
        editEmail = findViewById(R.id.editEmail);
        editNamaLengkap = findViewById(R.id.editNamaLengkap);
        editAsalSekolah = findViewById(R.id.editAsalSekolah);
        editAlamat = findViewById(R.id.editAlamat);
        btnSimpan = findViewById(R.id.btnSimpan);
        btnSimpan.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if (isValidation()) {
                    simpanFileData();
                } else {
                    Toast.makeText(RegisterActivity.this, "Mohon
Lengkapi Seluruh Data", Toast.LENGTH_SHORT).show();
                }
            }
        });
    }

    boolean isValidation() {
        if (editUsername.getText().toString().equals("") ||
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Register

4. Pada kelas Java **`RegisterActivity.java`**, tambahkan kode berikut ini :

```
editPassword.getText().toString().equals("") ||
editEmail.getText().toString().equals("") ||
editNamaLengkap.getText().toString().equals("") ||
editAsalSekolah.getText().toString().equals("") ||
editAlamat.getText().toString().equals("")) {
            return false;
        } else {
            return true;
        }
    }

    void simpanFileData() {
        String isiFile = editUsername.getText().toString() + ";" +
editPassword.getText().toString() + ";" +
editEmail.getText().toString() + ";" +
editNamaLengkap.getText().toString() + ";" +
editAsalSekolah.getText().toString() + ";" +
editAlamat.getText().toString();
        File file = new File(getFilesDir(),
editUsername.getText().toString());

        FileOutputStream outputStream = null;
        try {
            file.createNewFile();
            outputStream = new FileOutputStream(file, false);
            outputStream.write(isiFile.getBytes());
            outputStream.flush();
            outputStream.close();
        } catch (Exception e) {
            e.printStackTrace();
        }
        Toast.makeText(this, "Register Berhasil",
Toast.LENGTH_SHORT).show();
        onBackPressed();
    }
}
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Register

5. Selanjutnya tambahkan kode java **MainActivity** sebagaimana berikut ini :

```
package kominfo.go.id.storage.proyek2;

import android.content.DialogInterface;
import android.content.Intent;
import android.support.v7.app.AlertDialog;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.support.v7.widget.Toolbar;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

import java.io.BufferedReader;
import java.io.File;
import java.io.FileReader;
import java.io.IOException;

public class MainActivity extends AppCompatActivity {
    EditText editUsername, editPassword, editEmail, editNamaLengkap,
editAsalSekolah, editAlamat;
    Button btnSimpan;
    TextView textViewPassword;

    public static final String FILENAME = "login";
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Register

5. Selanjutnya tambahkan kode java **MainActivity** sebagaimana berikut ini :

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

    Toolbar toolbar = findViewById(R.id.toolbar);
    setSupportActionBar(toolbar);


    getSupportActionBar().setTitle("Halaman Depan");

    editUsername = findViewById(R.id.editUsername);
    textViewPassword = findViewById(R.id.textViewPassword);
    editPassword = findViewById(R.id.editPassword);
    editEmail = findViewById(R.id.editEmail);
    editNamaLengkap = findViewById(R.id.editNamaLengkap);
    editAsalSekolah = findViewById(R.id.editAsalSekolah);
    editAlamat = findViewById(R.id.editAlamat);
    btnSimpan = findViewById(R.id.btnSimpan);

    btnSimpan.setVisibility(View.GONE);
    editUsername.setEnabled(false);
    editPassword.setVisibility(View.GONE);
    textViewPassword.setVisibility(View.GONE);
    editEmail.setEnabled(false);
    editNamaLengkap.setEnabled(false);
    editAsalSekolah.setEnabled(false);
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Register

5. Selanjutnya tambahkan kode java **MainActivity** sebagaimana berikut ini :

```
        editAlamat.setEnabled(false);

        bacaFileLogin();
    }

    void bacaFileLogin() {
        File sdcard = getFilesDir();
        File file = new File(sdcard, FILENAME);
        if (file.exists()) {
            StringBuilder text = new StringBuilder();
            try {
                BufferedReader br =
                        new BufferedReader(new FileReader(file));
                String line = br.readLine();
                while (line != null) {
                    text.append(line);
                    line = br.readLine();
                }
                br.close();
            } catch (IOException e) {
                System.out.println("Error " + e.getMessage());
            }
            String data = text.toString();
            String[] dataUser = data.split(";");
            bacaDataUser(dataUser[0]);

        }
    }
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Register

5. Selanjutnya tambahkan kode java **MainActivity** sebagaimana berikut ini :

```
void bacaDataUser(String fileName) {
    File sdcard = getFilesDir();
    File file = new File(sdcard, fileName);
    if (file.exists()) {
        StringBuilder text = new StringBuilder();
        try {
            BufferedReader br =
                    new BufferedReader(new FileReader(file));
            String line = br.readLine();
            while (line != null) {
                text.append(line);
                line = br.readLine();
            }
            br.close();
        } catch (IOException e) {
            System.out.println("Error " + e.getMessage());
        }
        String data = text.toString();
        String[] dataUser = data.split(";");

        editUsername.setText(dataUser[0]);
        editEmail.setText(dataUser[2]);
        editNamaLengkap.setText(dataUser[3]);
        editAsalSekolah.setText(dataUser[4]);
        editAlamat.setText(dataUser[5]);

    } else {
        Toast.makeText(this, "User Tidak Ditemukan",
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Register

5. Selanjutnya tambahkan kode java **MainActivity** sebagaimana berikut ini :

```
Toast.LENGTH_SHORT).show();
        }
    }

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

    @Override
    public boolean onOptionsItemSelected(MenuItem item) {
        switch (item.getItemId()) {
            case R.id.action_logout:
                tampilkanDialogKonfirmasiLogout();
                break;
        }
        return super.onOptionsItemSelected(item);
    }

    void hapusFile() {
        File file = new File(getFilesDir(), FILENAME);
        if (file.exists()) {
            file.delete();
        }
    }
```

APLIKASI VALIDASI LOGIN - Membuat Halaman Register

5. Selanjutnya tambahkan kode java **MainActivity** sebagaimana berikut ini :

```
    void tampilkanDialogKonfirmasiLogout() {
        new AlertDialog.Builder(this)
                .setTitle("Logout")
                .setMessage("Apakah Anda yakin ingin Logout?")
                .setIcon(android.R.drawable.ic_dialog_alert)
                .setPositiveButton(android.R.string.yes, new
DialogInterface.OnClickListener() {

                    public void onClick(DialogInterface dialog, int
whichButton) {
                        hapusFile();
                        Intent intent = new Intent(MainActivity.this,
LoginActivity.class);
                        startActivity(intent);
                        finish();
                    }
                })
                .setNegativeButton(android.R.string.no, null).show();
    }
}
```

APLIKASI VALIDASI LOGIN - Menguji Aplikasi Proyek 2

1. Jalankan aplikasi, lalu
2. Uji fungsionalitas registrasi, login dan logout.

KESIMPULAN

- Proyek1, anda membuat aplikasi catatan harian dimana proses penyimpanannya menggunakan *external storage*.
- Proyek2, anda membuat aplikasi validasi login, dimana data user disimpan pada *internal storage*.
- Data persistence dapat digunakan untuk menyimpan data apapun sesuai kebutuhan dalam bentuk file. Data ini bersifat tetap dan tidak akan hilang selama tidak dihapus.

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