



MOBILE PROGRAMMING 1

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Pertemuan 2

Table of contents

01 First Project

Membuat Project Pertama

02 Environment

Menjelaskan environment
pada Pemrograman
Android

03 Running App

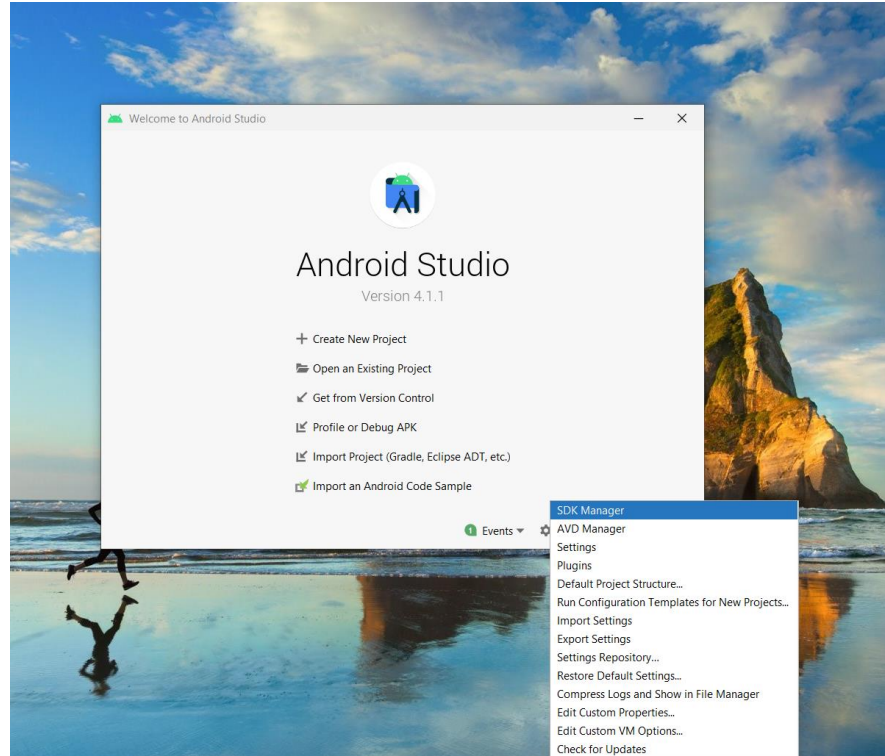
Menjalankan aplikasi
menggunakan emulator /
device sendiri

04 Diskusi

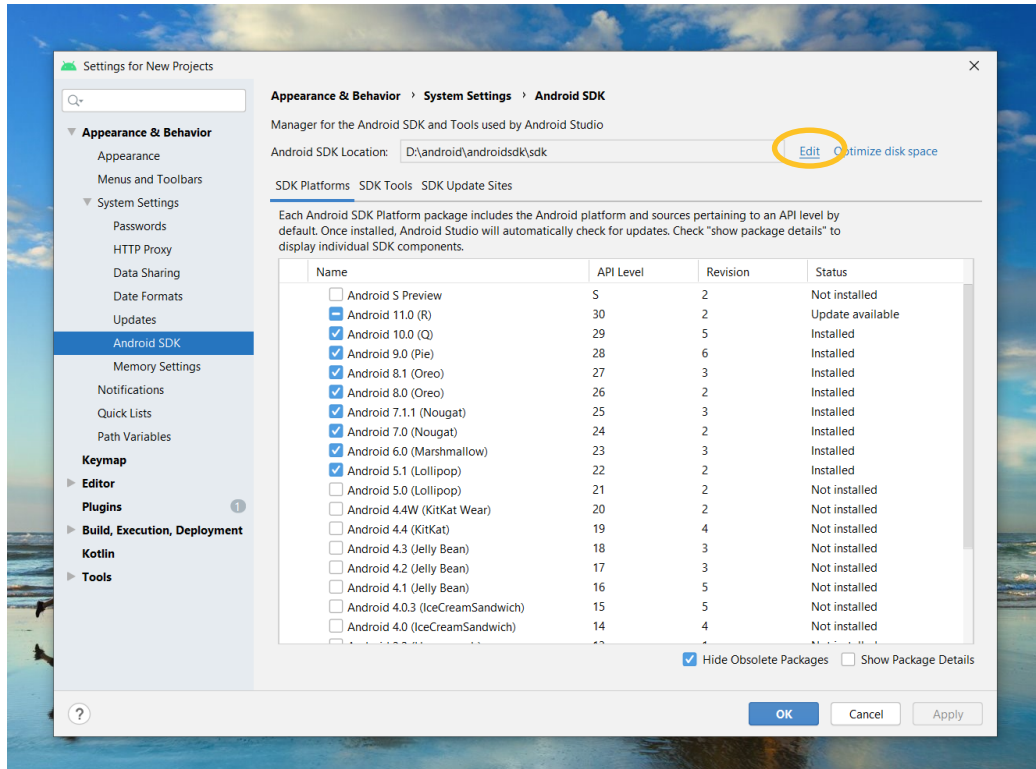
Diskusi mengenai cara
pengajaran Bersama
Mahasiswa



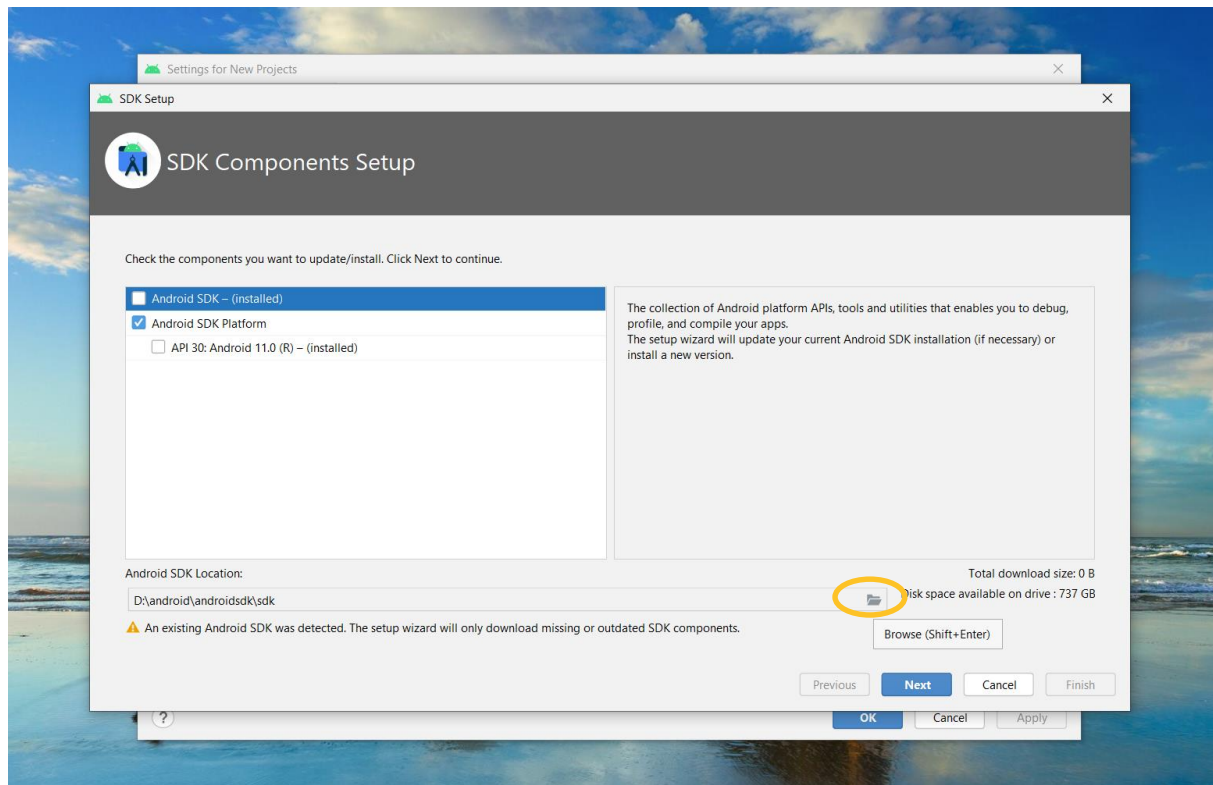
Setting SDK Eksternal



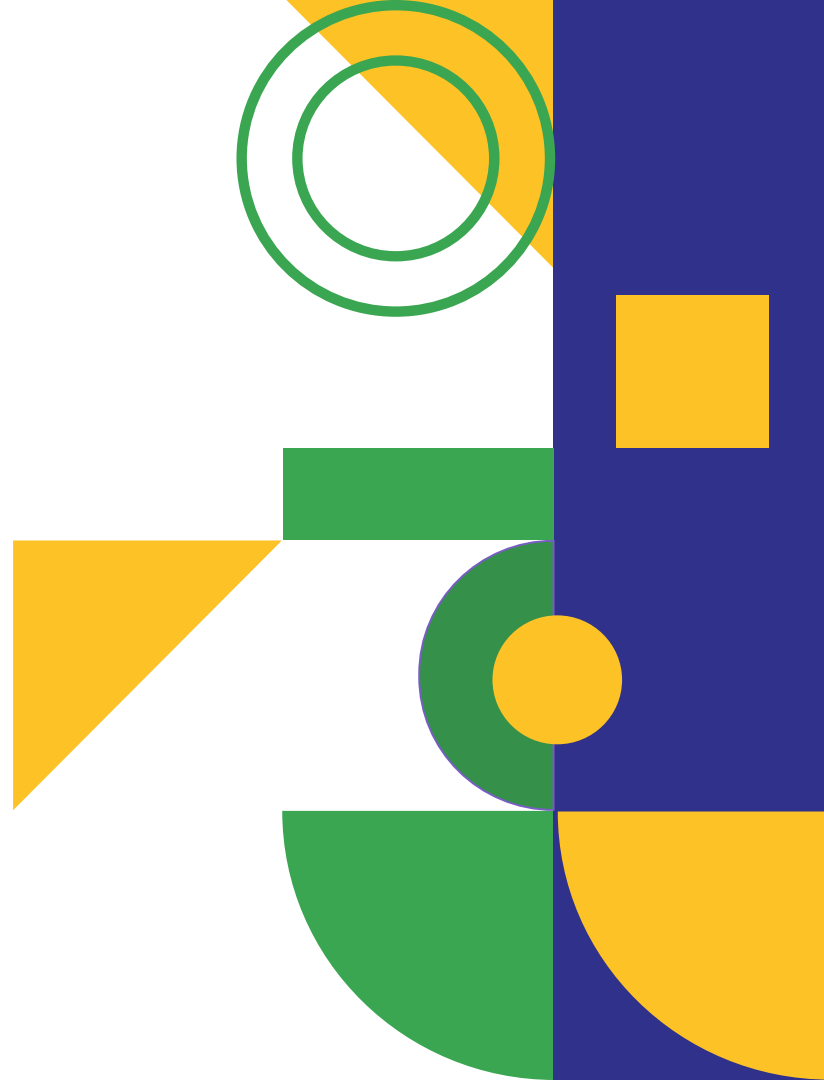
Setting SDK Eksternal

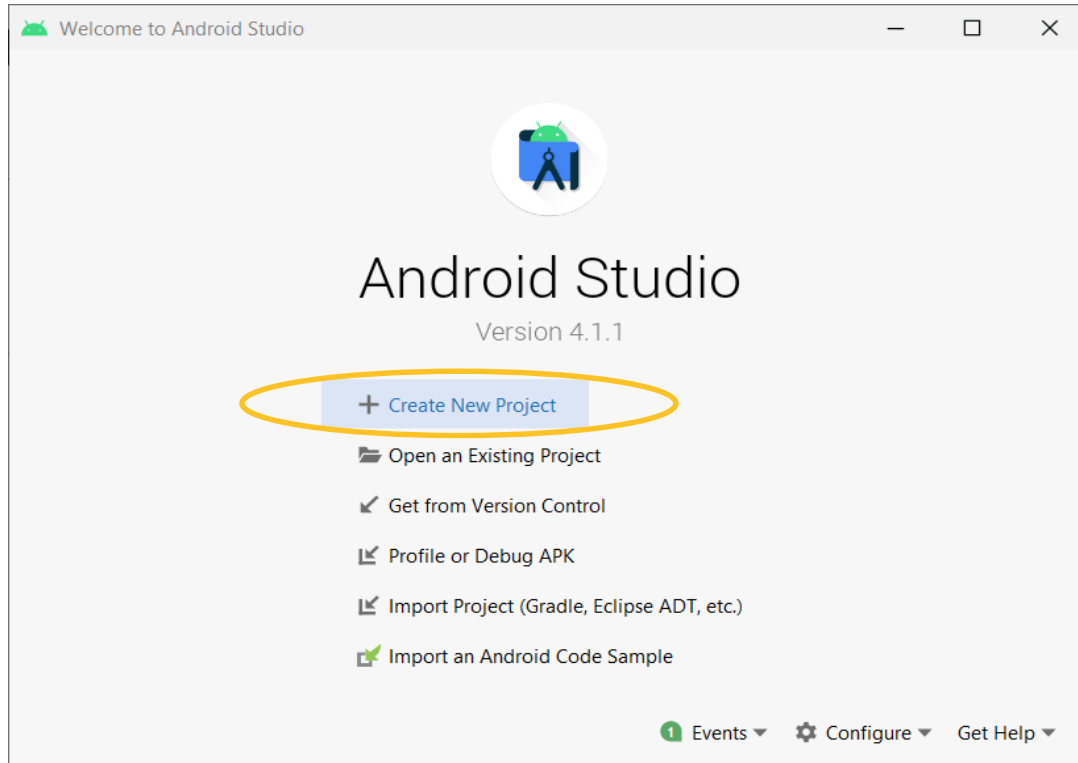


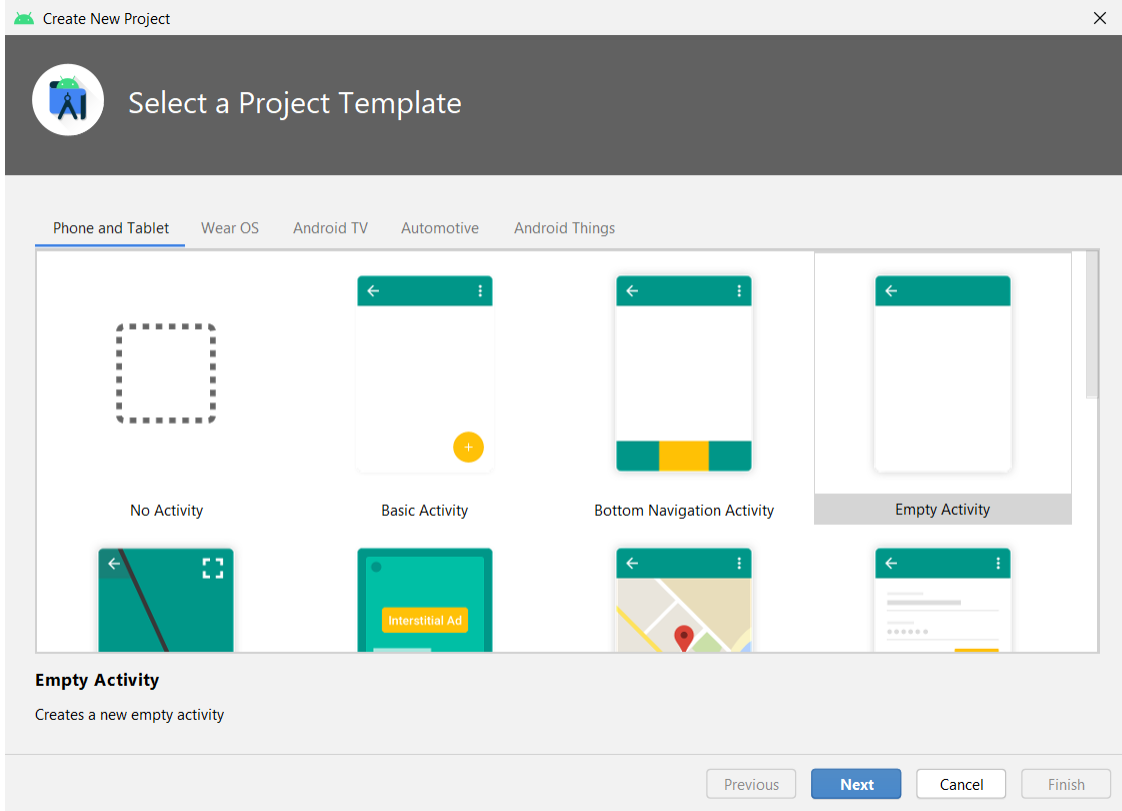
Setting SDK Eksternal



**Create
New
Project**







Create New Project

Configure Your Project

1 Name: My Application

2 Package name: com.example.myapplication

3 Save location: C:\Users\msi\AndroidStudioProjects\MyApplication

4 Language: Kotlin

5 Minimum SDK: API 16: Android 4.1 (Jelly Bean)

Your app will run on approximately 99.8% of devices.
[Help me choose](#)

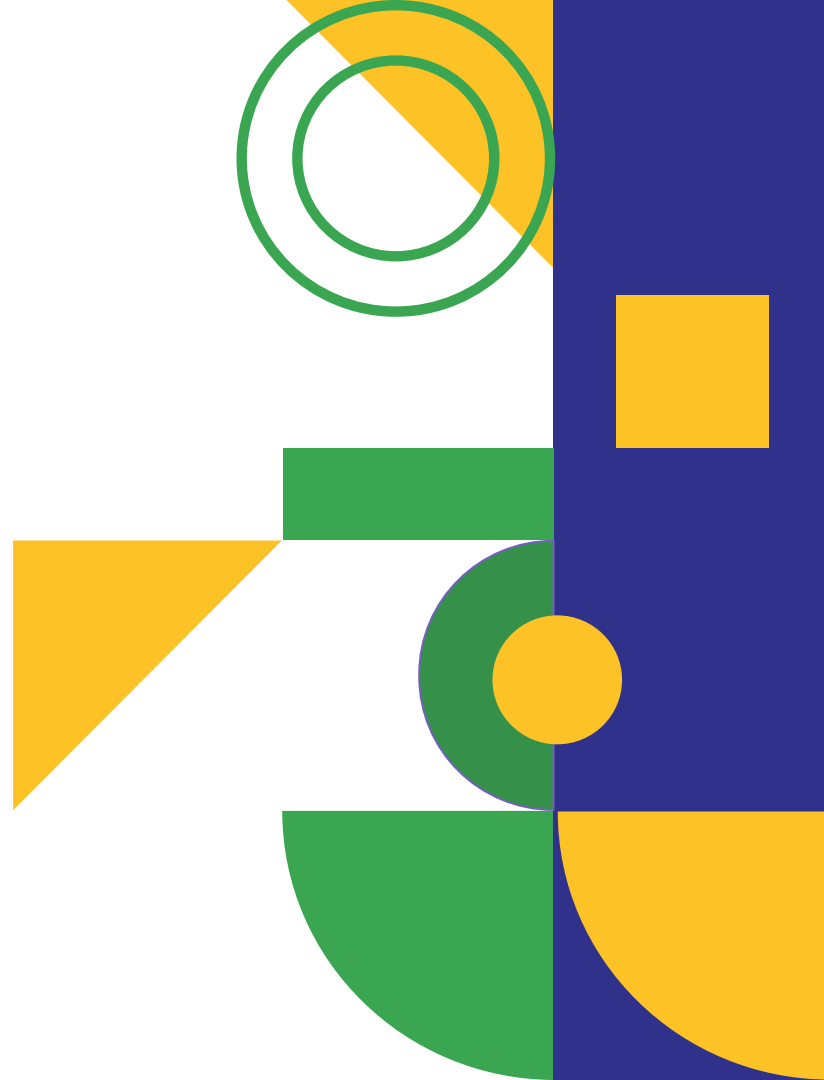
☐ Use legacy android.support libraries ?

Empty Activity
Creates a new empty activity

Previous Next Cancel Finish

1. Nama Aplikasi
2. Nama package (example nya diganti dengan nama bebas)
3. Lokasi menyimpan project
4. Bahasa yang digunakan (Pilih Java karena kita pakai java)
5. SDK minimum untuk project

Environment



File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help My Application - MainActivity.java [My_Application.app] - Android Studio

mobpro1 > app > src > main > java > com > niken > myapplication > MainActivity

Android ▾

1 AndroidManifest.xml

2 MainActivity

3 activity_main.xml

4 build.gradle (Project: My_Application)

build.gradle (Module: My_Application.app)

gradle-wrapper.properties (Gradle Version)

proguard-rules.pro (ProGuard Rules for My_Application.app)

gradle.properties (Project Properties)

settings.gradle (Project Settings)

local.properties (SDK Location)

activity_main.xml x MainActivity.java x

```
1 package com.niken.myapplication;
2
3 import ...
4
5
6
7 public class MainActivity extends AppCompatActivity {
8
9     @Override
10     protected void onCreate(Bundle savedInstanceState) {
11         super.onCreate(savedInstanceState);
12         setContentView(R.layout.activity_main);
13     }
14 }
```

Grade Assistant Emulator Device File Explorer

TODO Terminal Build Logcat Profiler Database Inspector

* daemon started successfully (7 minutes ago)

14:2 CRLF UTF-8 4 spaces

01

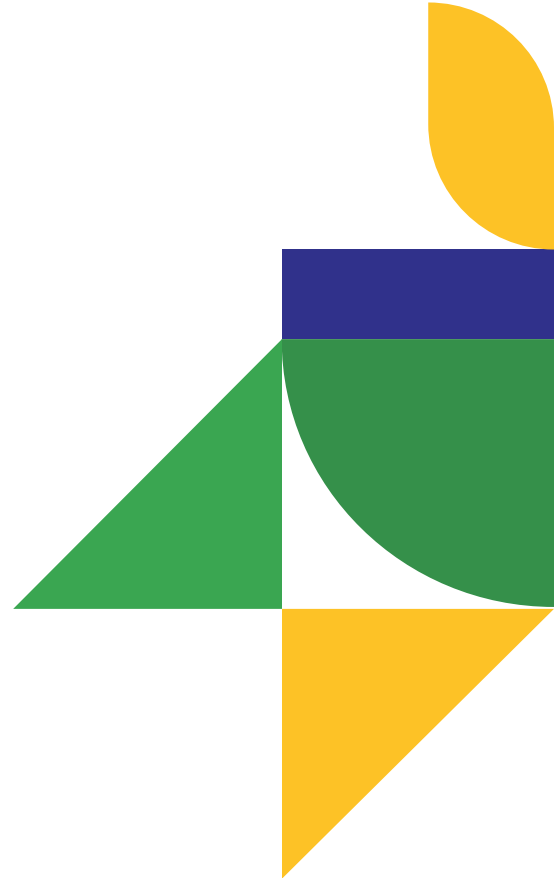
Android Manifest

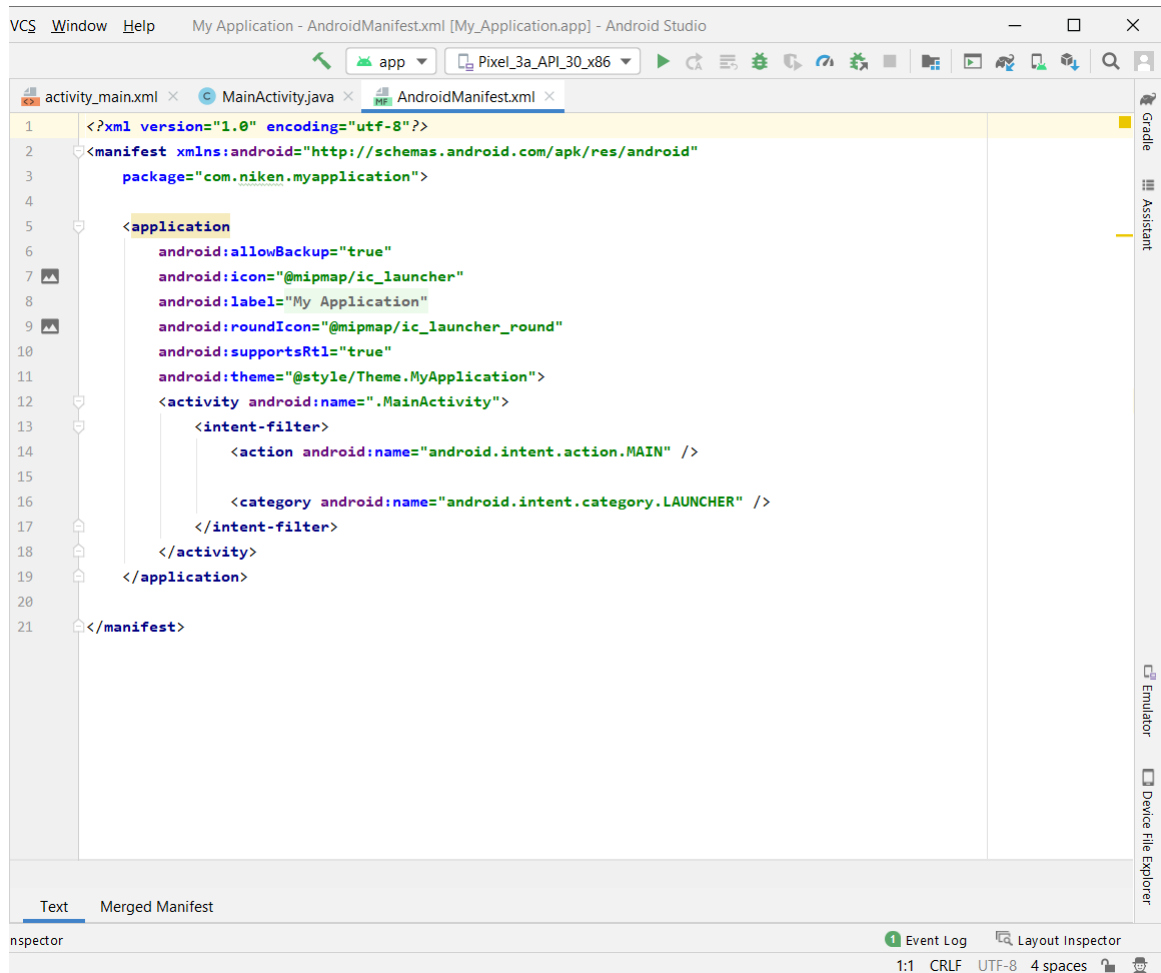
Pada bagian ini berisi tentang package (paket) pada proyek kita.

Xml ini berisi tentang *Activity* ,*Services* ,*User Permission* , *Content Provider* dll. Jika kita membuat sebuah *activity* baru, pastikan nama *activity* tersebut sudah berada didalam bagian xml ini. serta jika aplikasi kalian membutuhkan koneksi ***Internet*** , kalian harus mengisi *User Permission* di file ini.

Mengganti judul ,icon ,gaya theme ,serta membuat ***Splashscreen*** dll.

Kenapa harus ada? jawabannya simple. kalau kalian tidak memberi permission atau memberi nama activity disini, maka activity atau permission tersebut tidak akan terbaca, dan activity yang kita panggil juga tidak akan bisa terbuka.





02

MainActivity.java

File ini merupakan Activity utama (entry point dari aplikasi yang akan kita buat). Ketika kalian akan Build dan Run aplikasinya, system akan mengeluarkan Activity ini beserta layout nya.



03 activity_main.x ml

XML file ini mendeskripsikan tampilan atau UI untuk file java MainActivity.

Biasanya untuk awal penggunaan, terdapat 1 komponen yaitu TextView dengan bertuliskan “Hello World” pada activity_main.xml



04

build.gradle

build.gradle (Project: JudulAplikasi)

Ini adalah file yang mengatasi proyek kalian yang dibuat otomatis oleh Android Studio. Disarankan jangan mengedit apapun pada file ini karena dapat merusak sinkronisasi antara file java dan xml.

build.gradle (Module: app)

Ini adalah file yang menampung informasi tentang paket yang kalian gunakan untuk mengembangkan android. Seperti Sdk yang digunakan, versi gradle yang digunakan, dependensi yang dibutuhkan dan masih banyak lagi.



File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help My Application - MainActivity.java [My_Application.app] - Android Studio

mobpro1 > app > src > main > java > com > niken > myapplication > MainActivity

Android

1: Project

- app
 - manifests
 - AndroidManifest.xml
 - java
 - com.niken.myapplication
 - MainActivity
 - com.niken.myapplication (androidTest)
 - com.niken.myapplication (test)
 - res
 - drawable
 - layout
 - activity_main.xml
 - mipmap
 - values
 - Gradle Scripts
 - build.gradle (Project: My_Application)
 - build.gradle (Module: My_Application.app)
 - gradle-wrapper.properties (Gradle Version)
 - proguard-rules.pro (ProGuard Rules for My_Application.app)
 - gradle.properties (Project Properties)
 - settings.gradle (Project Settings)
 - local.properties (SDK Location)

2

activity_main.xml x MainActivity.java x

```
1 package com.niken.myapplication;
2
3 import ...
4
5
6
7 public class MainActivity extends AppCompatActivity {
8
9     @Override
10    protected void onCreate(Bundle savedInstanceState) {
11        super.onCreate(savedInstanceState);
12        setContentView(R.layout.activity_main);
13    }
14
```

Grade Assistant

Emulator Device File Explorer

TODO Terminal Build Logcat Profiler Database Inspector

* daemon started successfully (7 minutes ago)

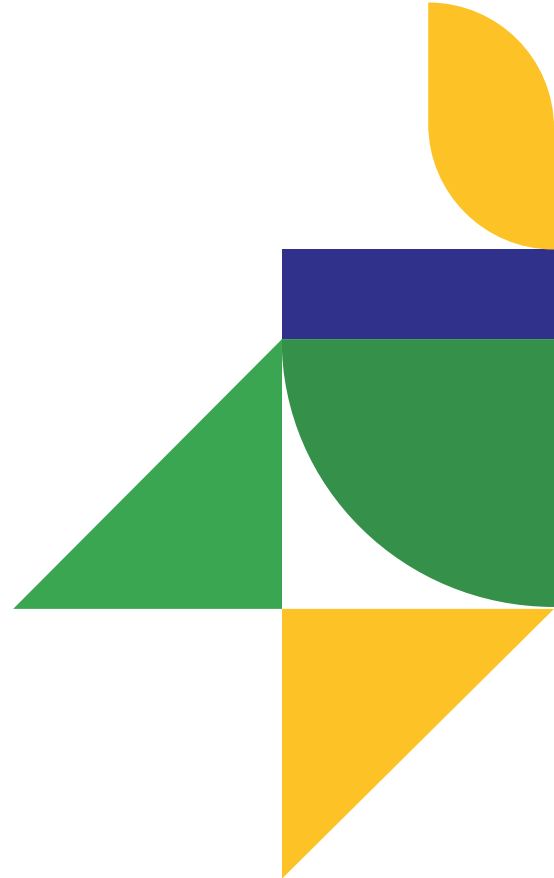
Event Log Layout Inspector

14:2 CRLF UTF-8 4 spaces

01

Folder Java

Pada folder java ini berisi file-file project dengan ekstensi .java
Semua coding yang dibuat dalam java akan disimpan pada folder ini.



02

Folder Res (resource)

Digunakan untuk menyimpan asset gambar, kata, dan warna

1. Drawable

folder ini merupakan tempat menyimpan file gambar .jpg atau .png

2. Mipmap

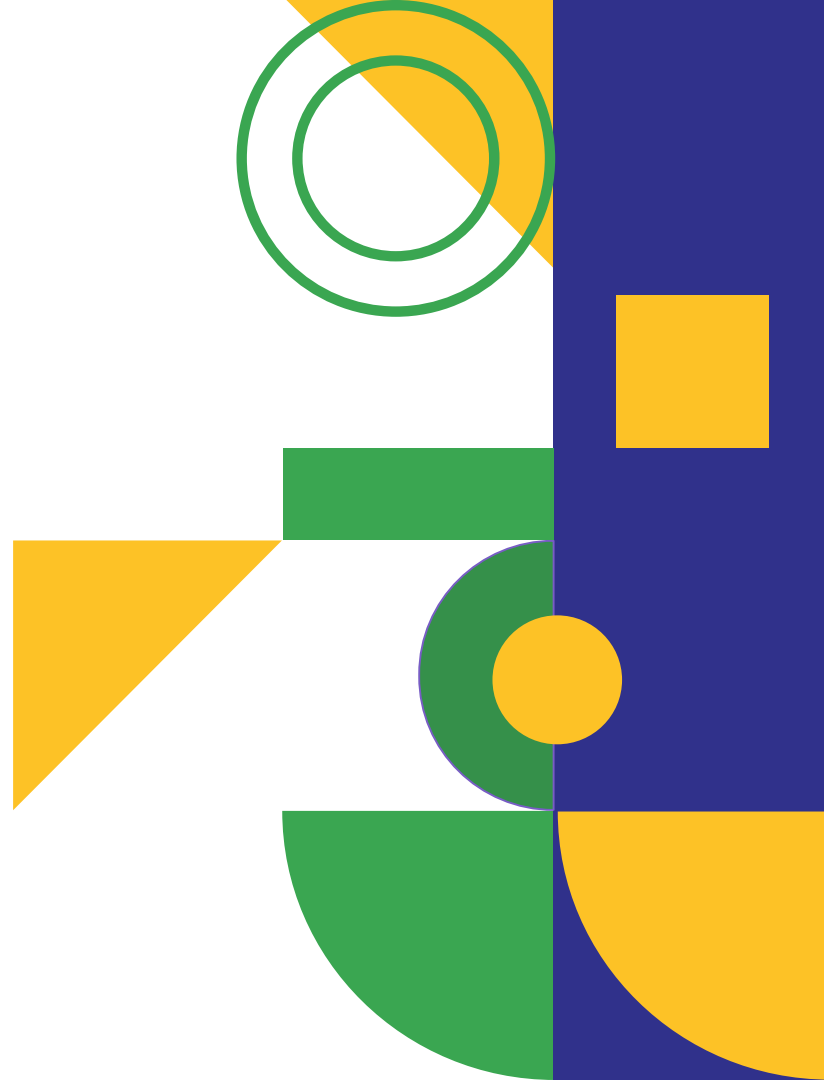
folder ini digunakan untuk menyimpan file gambar icon aplikasi

3. Values

folder ini digunakan untuk menyimpan style, string, dan color



Create Emulator



File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help My Application - AndroidManifest.xml [My_Application.app] - Android Studio

mobpro1 > app > src > main > AndroidManifest.xml

Android

1- Project

- app
 - manifests
 - AndroidManifest.xml
 - java
 - com.niken.myapplication
 - MainActivity
 - com.niken.myapplication (androidTest)
 - com.niken.myapplication (test)
 - java (generated)
 - res
 - drawable
 - layout
 - activity_main.xml
 - mipmap
 - values
 - res (generated)
 - Gradle Scripts
 - build.gradle (Project: My_Application)
 - build.gradle (Module: My_Application.app)
 - gradle-wrapper.properties (Gradle Version)
 - proguard-rules.pro (ProGuard Rules for My_Application.app)
 - gradle.properties (Project Properties)
 - settings.gradle (Project Settings)
 - local.properties (SDK Location)

2- Favorites

Build Variants

Resource Manager

activity_main.xml x MainActivity.java x AndroidManifest.xml

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

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

Available devices

- Pixel_3a_API_30_x86
- Run on Multiple Devices
- AVD Manager
- Troubleshoot Device Connections

Gradle Assistant Emulator Device File Explorer

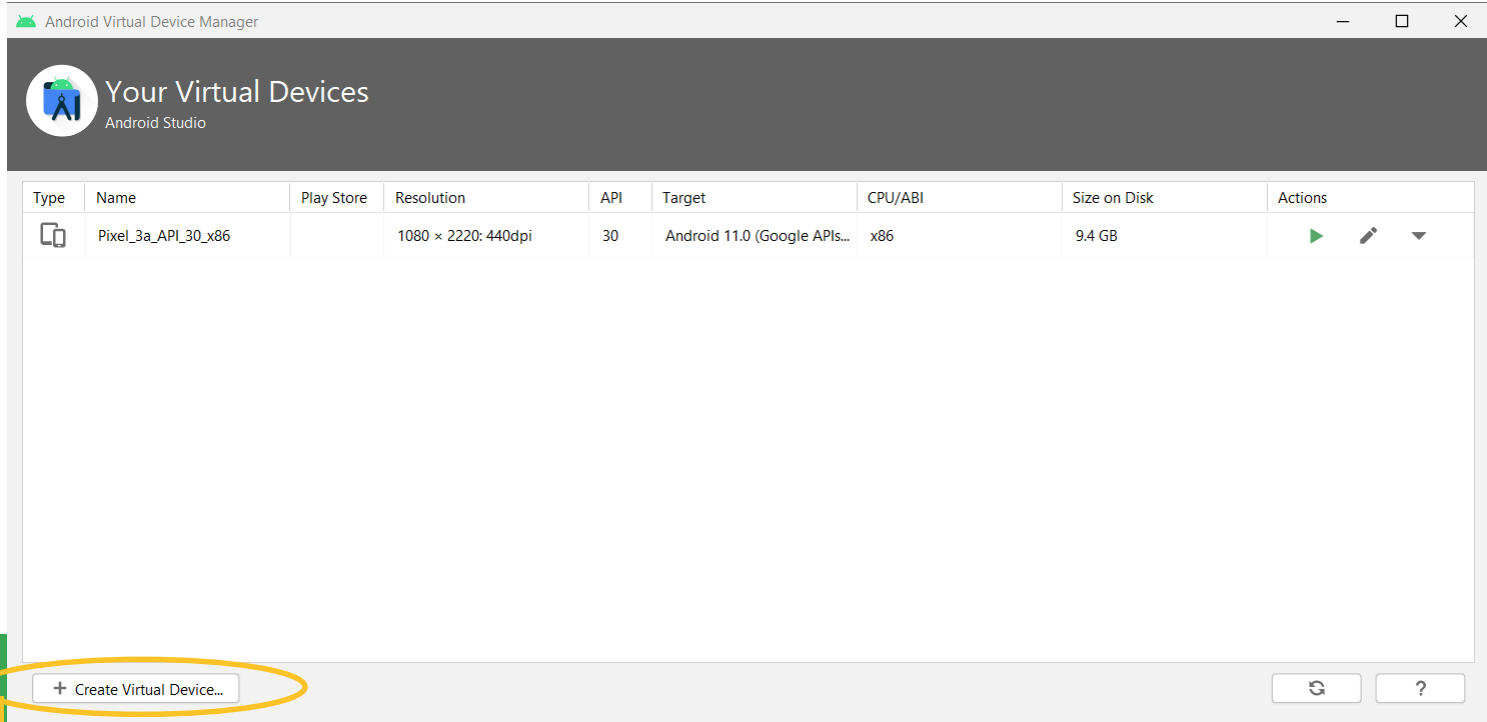
Text Merged Manifest

TODO Terminal Build Logcat Profiler Database Inspector 4: Run

Event Log Layout Inspector

1:1 CRLF UTF-8 4 spaces

Opens the Android virtual device (AVD) manager which manages emulator images and snapshots





Select Hardware

Choose a device definition

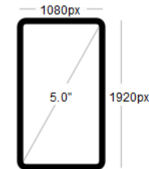
Category	Name ▾	Play Store	Size	Resolution	Density
TV	Pixel 3		5.46"	1080x2160	440dpi
Phone	Pixel 2 XL		5.99"	1440x2880	560dpi
Wear OS	Pixel 2		5.0"	1080x1920	420dpi
Tablet	Pixel		5.0"	1080x1920	420dpi
Automotive	Nexus S		4.0"	480x800	hdpi
	Nexus One		3.7"	480x800	hdpi
	Nexus 6P		5.7"	1440x2560	560dpi

New Hardware Profile

Import Hardware Profiles



Pixel 2



Size: large
Ratio: long
Density: 420dpi

Clone Device...




Previous

Next

Cancel

Finish

Virtual Device Configuration


System Image

Select a system image

Recommendedx86 ImagesOther Images

Release Name	API Level	ABI	Target
R	30	x86	Android 11.0 (Google Play)
Q Download	29	x86	Android 10.0 (Google Play)
Pie Download	28	x86	Android 9.0 (Google Play)
Oreo Download	27	x86	Android 8.1 (Google Play)
Oreo Download	26	x86	Android 8.0 (Google Play)
Nougat Download	25	x86	Android 7.1.1 (Google Play)
Nougat Download	24	x86	Android 7.0 (Google Play)

R



API Level
30

Android
11.0

Google Inc.

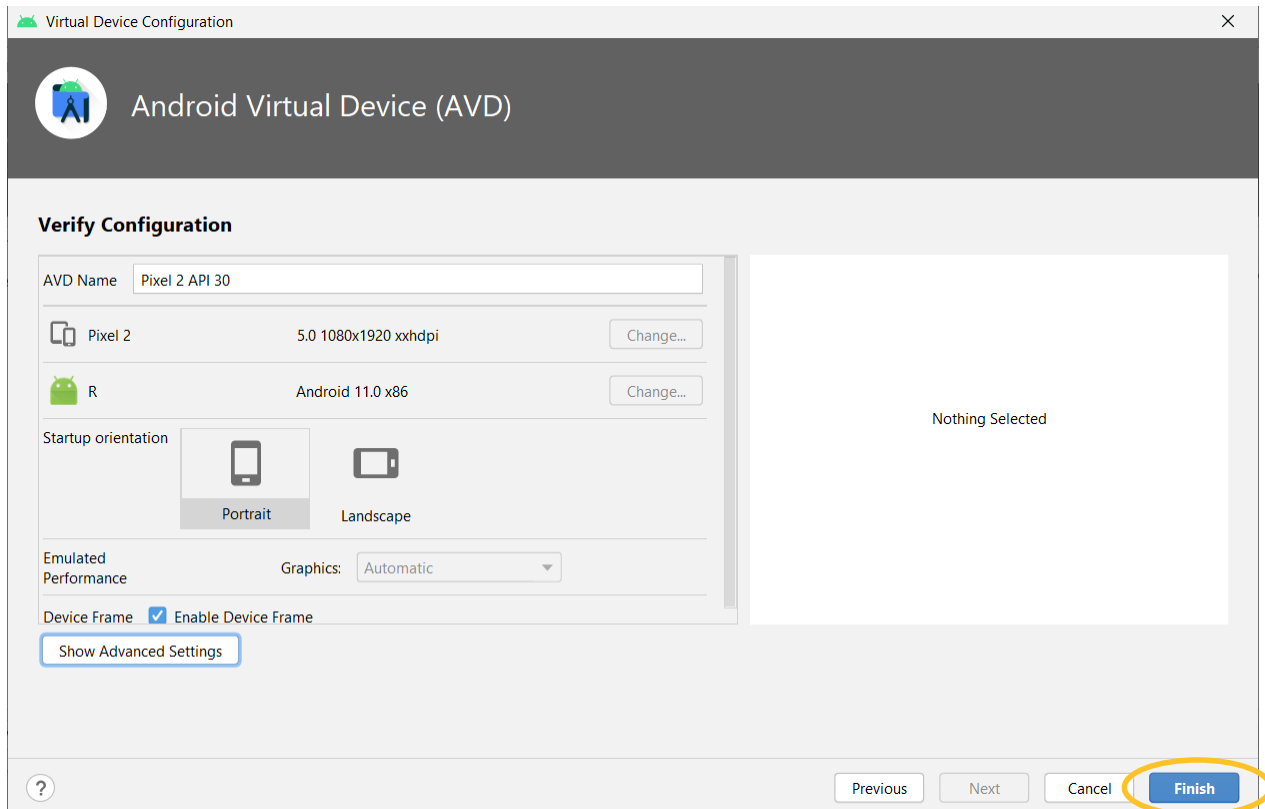
System Image
x86

We recommend these Google Play images because this device is compatible with Google Play.

Questions on API level?

?

PreviousNextCancelFinish



File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help My Application - AndroidManifest.xml [My_Application.app] - Android Studio

mobpro1 > app > src > main > AndroidManifest.xml

AndroidManifest.xml

My Application

Hello World!

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

    <application
        android:allowBackup="true"
        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">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

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

Success
Operation succeeded

Event Log Layout Inspector
1:1 CRLF UTF-8 4 spaces

Thanks!

Do you have any questions?

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