Pemrograman Mobile

Pertemuan 1

Instalasi Flutter SDK, Android Studio, Dart SDK

dan program hello world
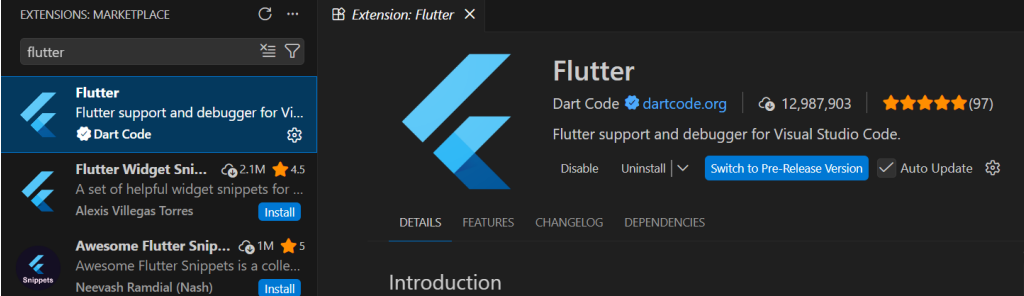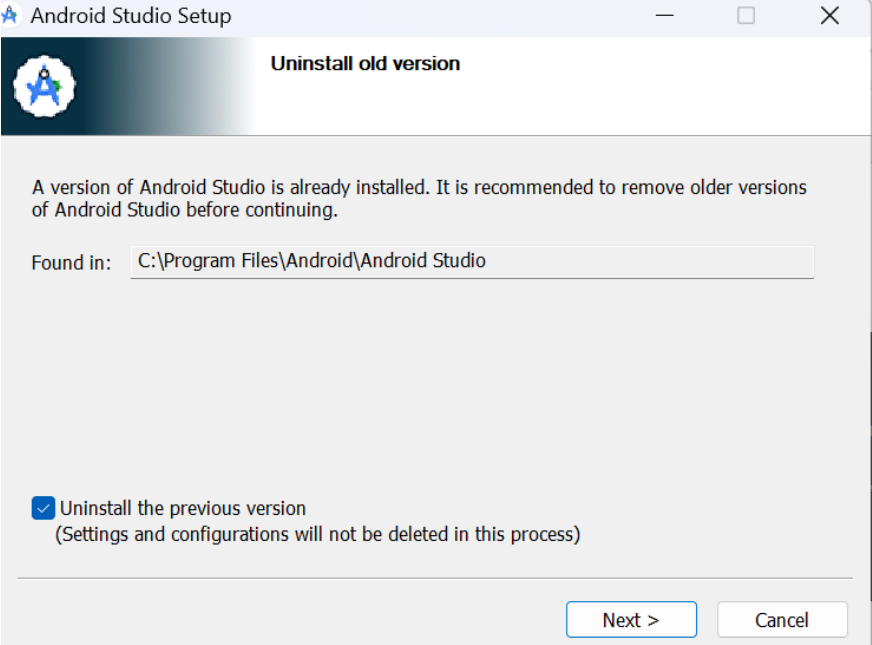

Disusun Oleh :

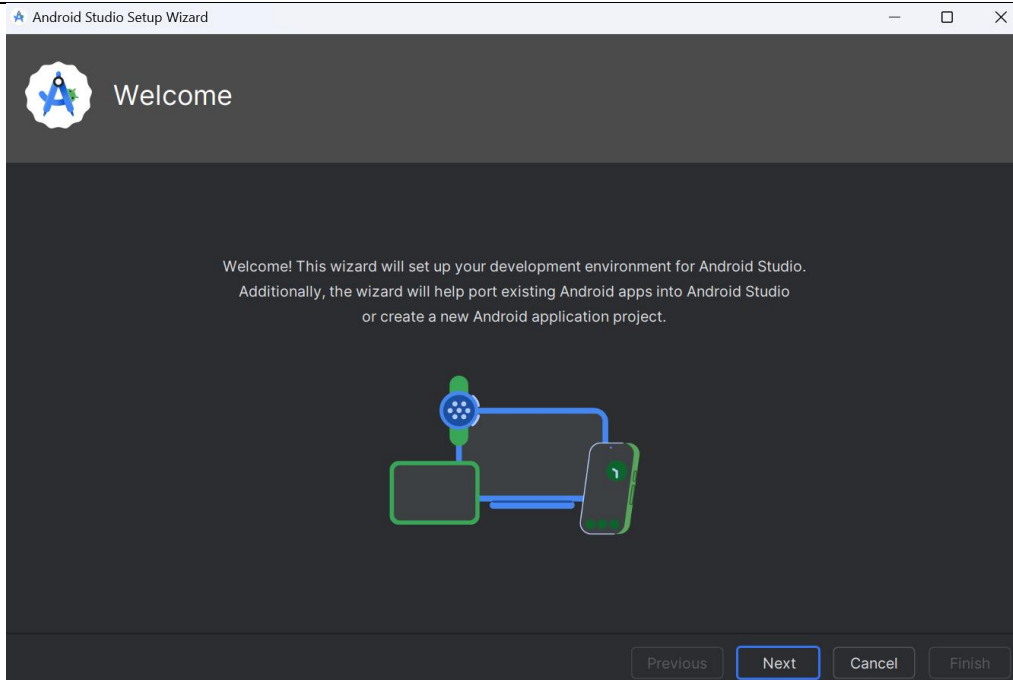Nama : Rafi Zeta Fauzan

Kelas : SIB-2F

NIM   : 244107060120

D-IV Sistem Informasi Bisnis

Jurusan Teknologi Informasi

Politeknik Negeri Malang

Instalasi Perangkat Lunak yang dibutuhkan

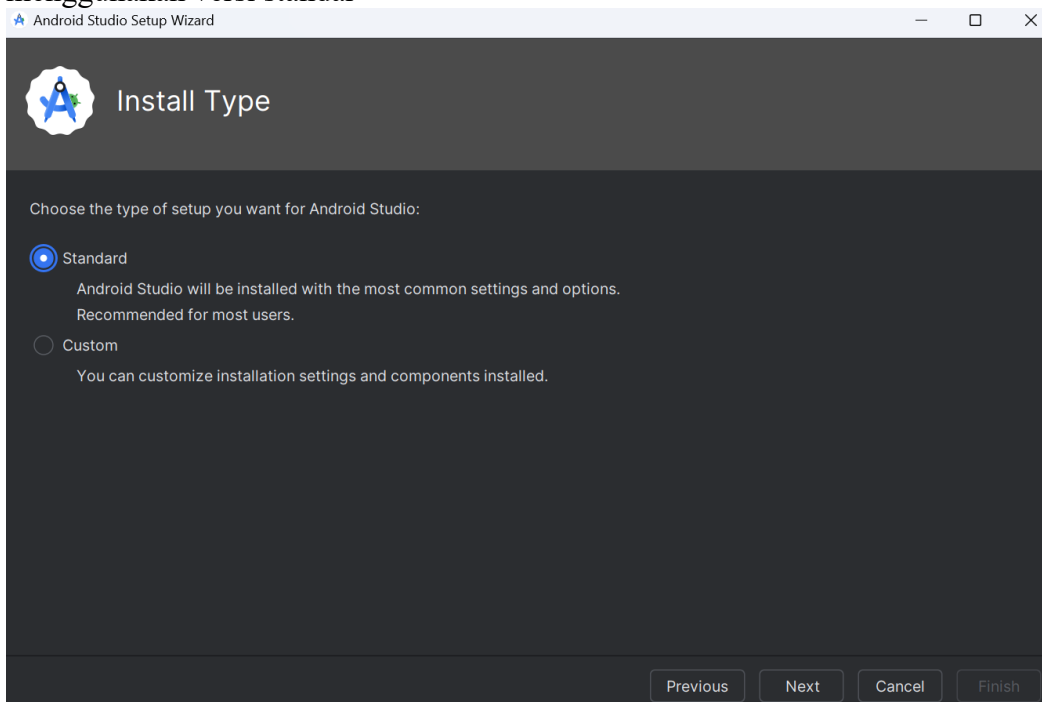| No	Keterangan
1	Instalasi Flutter SDK (Dart sudah terinstall sepaket dengan framework flutter) ``` Microsoft Windows [Version 10.0.22631.6060] (c) Microsoft Corporation. All rights reserved. C:\Users\LENOVO>git clone https://github.com/flutter/flutter.git -b stable Cloning into 'flutter'... remote: Enumerating objects: 1110230, done. remote: Counting objects: 100% (2558/2558), done. remote: Compressing objects: 100% (230/230), done. remote: Total 1110230 (delta 2336), reused 2328 (delta 2328), pack-reused 1107672 (from 2) Receiving objects: 100% (1110230/1110230), 418.75 MiB	862.00 KiB/s, done. Resolving deltas: 100% (793435/793435), done. Updating files: 100% (15104/15104), done. C:\Users\LENOVO>flutter doctor 'flutter' is not recognized as an internal or external command, operable program or batch file. C:\Users\LENOVO> ``` Instalasi Flutter menggunakan metode git clone dari repositori resmi framework flutter.
2	Melakukan pengecekan apakah flutter telah terinstall dengan benar atau belum: ``` C:\Users\LENOVO>flutter doctor Doctor summary (to see all details, run flutter doctor -v): [!] Flutter (Channel stable, 3.38.9, on Microsoft Windows [Version 10.0.22631.6060], locale en-US) ! Warning: `dart` on your path resolves to C:\tools\dart-sdk\bin\dart.exe, which is not inside your current Flutter SDK checkout at C:\src\flutter. Consider adding C:\src\flutter\bin to the front of your path. [√] Windows Version (11 Home Single Language 64-bit, 23H2, 2009) [!] Android toolchain - develop for Android devices (Android SDK version 36.1.0) X cmdline-tools component is missing. Try installing or updating Android Studio. Alternatively, download the tools from https://developer.android.com/studio#command-line-tools-only and make sure to set the ANDROID_HOME environment variable. See https://developer.android.com/studio/command-line for more details. X Android license status unknown. Run `flutter doctor --android-licenses` to accept the SDK licenses. See https://flutter.dev/to/windows-android-setup for more details. [√] Chrome - develop for the web [X] Visual Studio - develop Windows apps X Visual Studio not installed; this is necessary to develop Windows apps. Download at https://visualstudio.microsoft.com/downloads/. Please install the "Desktop development with C++" workload, including all of its default components [√] Connected device (3 available) [!] Network resources X A network error occurred while checking "https://pub.dev/": Failed host lookup: 'pub.dev' X A network error occurred while checking "https://storage.googleapis.com/": Failed host lookup: 'storage.googleapis.com' X A network error occurred while checking "https://maven.google.com/": Failed host lookup: 'maven.google.com' X A network error occurred while checking "https://cocoapods.org/": Failed host lookup: 'cocoapods.org' X A network error occurred while checking "https://github.com/": Failed host lookup: 'github.com' ! Doctor found issues in 4 categories. C:\Users\LENOVO> ```
3	Instalasi extensions dart dan flutter pada visual studio code

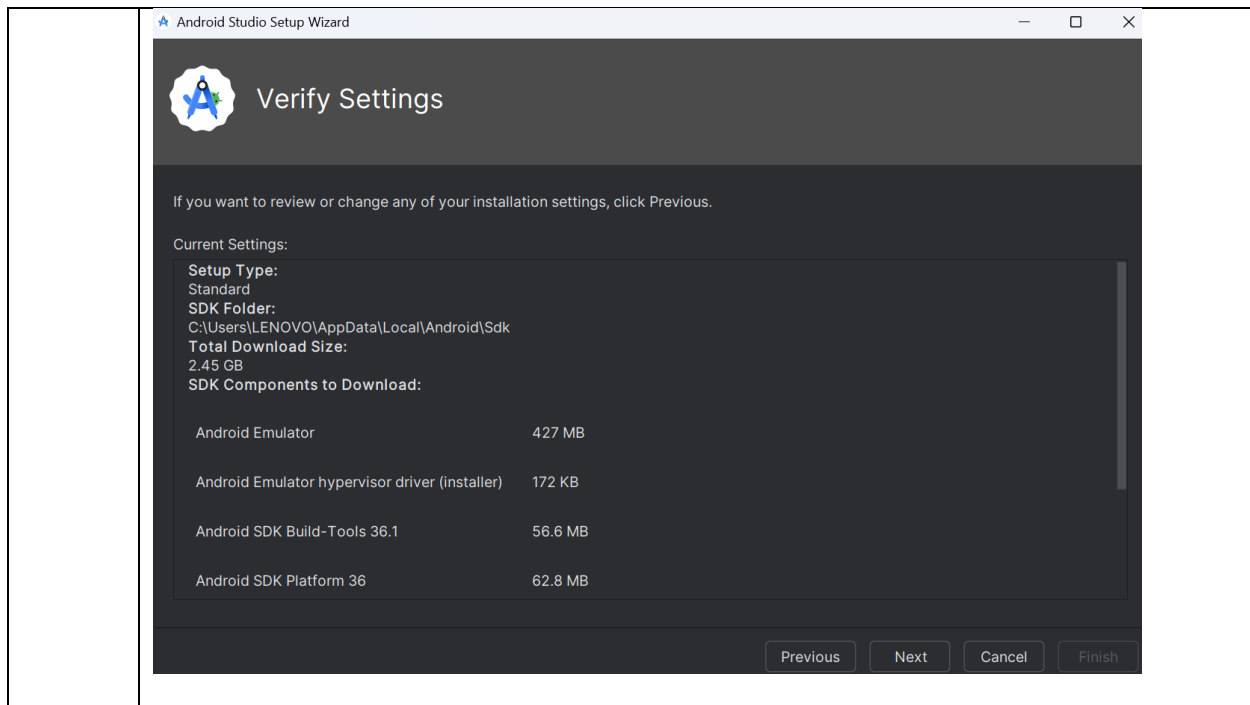|		
4	Instalasi Android Studio SDK	
	Melakukan Instalasi Android Studio layaknya saat kita menginstall aplikasi pada umumnya, yaitu yang pertama pasti kita akan diberi opsi untuk memilih direktori local yang ingin kita gunakan untuk menyimpan program. Kemudian dilanjutkan dengan persetujuan Term of Agreement.	
5	Setelah diinstall maka kita lanjut ke Android Studio Setup Wizard	

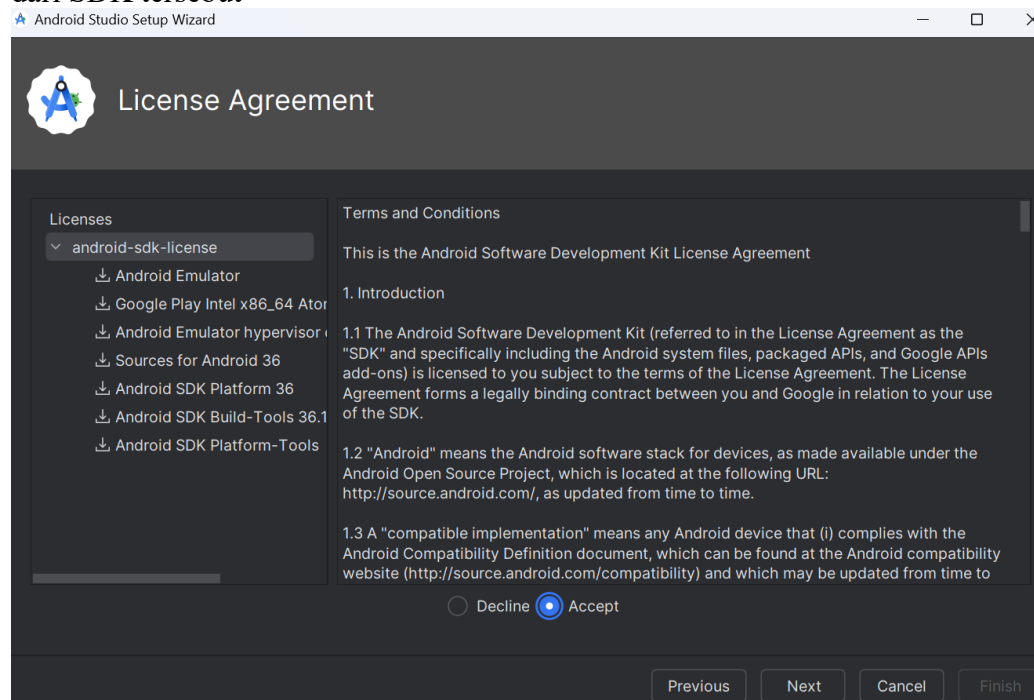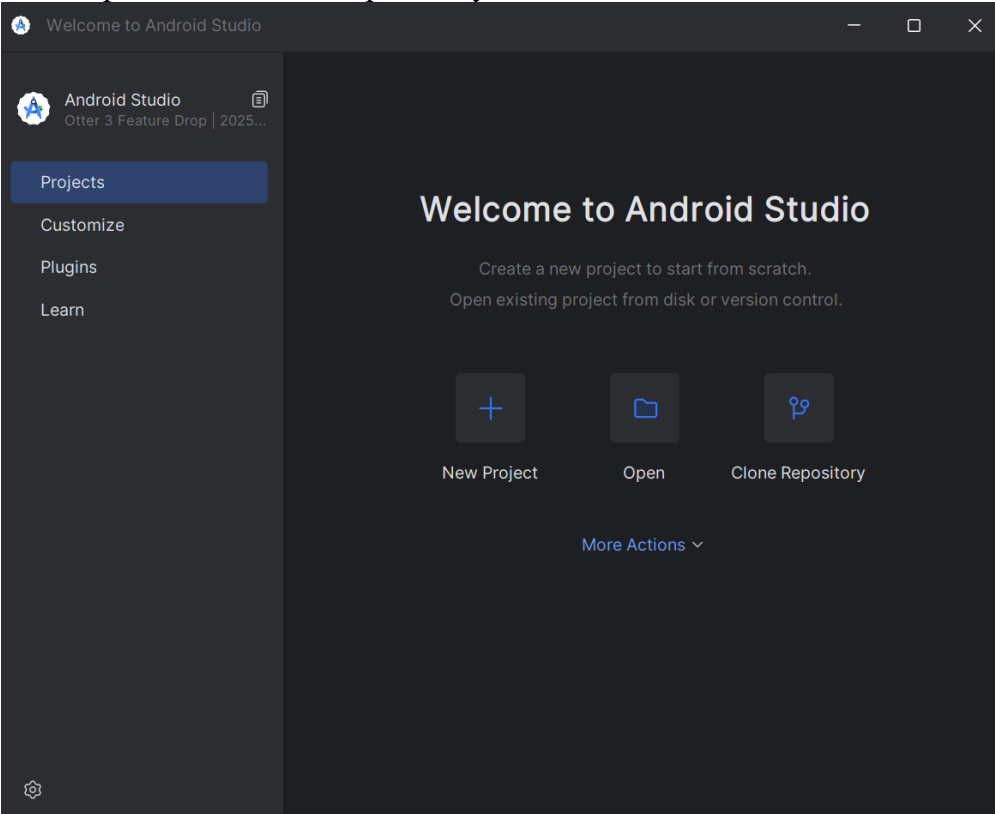|		
	Disini kita tekan next untuk melanjutkan proses instalasi.	
6	Kemudian kita akan memilih tipe instalasi apa yang kita butuhkan, disini saya menggunakan versi standar Verifikasi pengaturan instalasi	

7	Selanjutnya kita akan diarahkan pada persetujuan untuk mengikuti standar lisensi dari SDK tersebut
	Kemudian kita akan diarahkan untuk mendownload Kembali dependensi yang dibutuhkan, contohnya yaitu emulator android untuk cpu yang menggunakan arsitektur x86_64 bit. Mengapa harus menginstall emulator, karena pada dasarnya arsitekur cpu untuk perangkat android dan computer secara garis besar berbeda, sehingga tidak memungkinkan menjalankan program android secara native di perangkat windows dsbnya .

		Perangkat-perangkat komputer biasanya menggunakan arsitektur x86 64 bit milik intel & amd, sedangkan android biasanya menggunakan arsitektur arm64 milik ARM. Set intruksi computer yang digunakan oleh dua arsitektur ini pun berbeda x86 menggunakan CISC (complex instructions set computing) sedangkan arm64 menggunakan RISC (reduced instructions set computing) sehingga tidak memungkinkan menjalankan aplikasi android secara native di perangkat berbasis x86 tanpa emulator begitu pun sebaliknya.
8		Setelah prosesi download dependency maka instalasi sudah berhasil

Membuat project dan menjalankan hello_world menggunakan Flutter

No	Keterangan
1	Membuat terlebih dahulu file project yang ingin kita buat. Disini saya menggunakan terminal dari Microsoft vscode untuk membuat project dari flutter

```
PS C:\Users\LENOVO> flutter create hello_world
Creating project hello_world...
Resolving dependencies in `hello_world`... (1.4s)
Downloading packages... (3.8s)
Got dependencies in `hello_world`.
Wrote 130 files.

All done!
You can find general documentation for Flutter at: https://docs.flutter.dev/
Detailed API documentation is available at: https://api.flutter.dev/
If you prefer video documentation, consider: https://www.youtube.com/c/flutterdev
```

2	Kemudian kita ketik cd hello_world untuk mengakses langsung direktori project kita
|   | ```
PS C:\Users\LENOVO> cd hello_world
PS C:\Users\LENOVO\hello_world>
``` |
| 3 | Kemudian kita jalankan flutter run, dan kita pilih nomor 3 karena kita akan menjalankan flutter di web menggunakan Microsoft edge sebagai peramban utama |
|   | ```
PS C:\Users\LENOVO> cd hello_world
PS C:\Users\LENOVO\hello_world> flutter run
Downloading Web SDK...                                     26.4s
Downloading windows-x64-debug/windows-x64-flutter tools...      68.7s
Downloading windows-x64/flutter-cpp-client-wrapper tools...     59ms
Downloading windows-x64-profile/windows-x64-flutter tools...    57.4s
Downloading windows-x64-release/windows-x64-flutter tools...    59.7s
Connected devices:
Windows (desktop) • windows • windows-x64    • Microsoft Windows [Version 10.0.22631.6060]
Chrome (web)      • chrome  • web-javascript • Google Chrome 143.0.7499.41
Edge (web)        • edge    • web-javascript • Microsoft Edge 144.0.3719.115
[1]: Windows (windows)
[2]: Chrome (chrome)
[3]: Edge (edge)
Please choose one (or "q" to quit): 3
Launching lib\main.dart on Edge in debug mode...
Waiting for connection from debug service on Edge...        41.2s

Flutter run key commands.
r Hot reload.
R Hot restart.
h List all available interactive commands.
d Detach (terminate "flutter run" but leave application running).
c Clear the screen
q Quit (terminate the application on the device).
``` |
| 4 | Jendela baru dari edge akan secara otomatis terbuka dan langsung mengarahkan kita kepada localhost dari perangkat kita dan project flutter kita. |

Selesai.