

**LAPORAN HASIL PRAKTIKUM
PEMROGRAMAN WEB & MOBILE**



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KELAS : A
MODUL : V (React Native)

JURUSAN TEKNIK INFORMATIKA
FAKULTAS TEKNIK
UNIVERSITAS PALANGKA RAYA
2021

BAB I

LANDASAN TEORI

1.1. Landasan Teori

1.1.1. React Native

React Native adalah sebuah framework JavaScript yang digunakan untuk mengembangkan aplikasi mobile secara multi-platform (Benefita 2021). React Native diciptakan oleh Facebook pada tahun 2015 dan bersifat open source. Kode yang ditulis menggunakan framework ini dapat digunakan untuk aplikasi di berbagai platform mobile (iOS dan Android).

1.1.2. Kelebihan React Native

1. Instalasi Lebih Mudah dengan Package Installer

React Native menyediakan package installer (Node Package Installer (NPM)) untuk menginstal React Native hanya dengan memasukkan perintah pada Command Prompt tanpa harus mendownload secara eksternal dan menginstalnya secara manual.

2. Design UI yang Modular

Design UI yang modular memungkinkan seorang programmer merakit blok-blok penyusun UI untuk aplikais mobile. Sehingga, hal ini akan mempermudah seorang programmer dalam mengembangkan sebuah aplikasi.

3. Menyediakan Komponen Siap Pakai

React Native menyediakan komponen siap pakai yang telah dibuat oleh developer lain sehingga dapat mempersingkat waktu pengembangan aplikasi.

4. Menghemat Waktu Pengembangan

React Native bersifat cross-platform, sehingga programmer tidak perlu membuat codebase yang berbeda untuk setiap platform yang akan digunakan. Cukup dengan satu codebase sebuah aplikasi dapat digunakan di beberapa platform.

5. Mendukung Penggunaan Library dari Pihak Ketiga

React Native memungkinkan untuk menghubungkan plugin dari pihak ketiga dengan aplikasi yang dibuat. Plugin-plugin tersebut memungkinkan seorang programmer untuk menambahkan berbagai komponen UI seperti icons, logo loading, dan lainnya.

6. Fast Refresh

React Native dapat langsung menampilkan kode yang telah dituliskan dan pada setiap perubahan yang ada pada kode.

7. Meningkatkan Peforma Aplikasi

React Native menggunakan GPU (Graphic Processing Unit), sehingga peforma aplikasi mobile memungkinkan untuk jadi lebih cepat.

1.1.3. Kekurangan React Native

1. Membutuhkan Basic Knowledge yang Cukup Matang

Seseorang yang langsung menggunakan React Native tanpa pengetahuan JavaScript pasti akan kebingungan dalam menggunakan atau membuat aplikasi melalui framework ini.

2. Terlalu Sering Update

Jika menggunakan React Native, seorang programmer harus siap dengan banyaknya update React Native. Jika tidak melakukan update, maka kode yang ditulis pada versi sebelumnya kemungkinan tidak kompatibel di React Native versi terbaru.

3. Keamanan Masih Rawan

Adanya fitur bridging pada React Native, yang mana melibatkan pihak ketiga akan membuat celah pada perangkat yang digunakan. Hal ini sangat berisiko tercurinya data sensitif yang berkaitan dengan privasi.

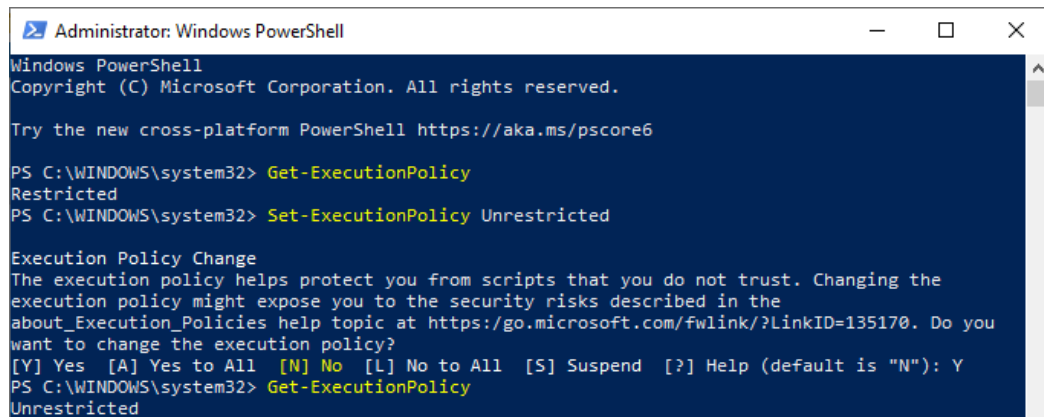
BAB II

PEMBAHASAN

Berikut ini langkah-langkah yang dilakukan untuk menginstall React Native pada Windows 10.

2.1. Install Chocolatey

Untuk menginstall *Chocolatey* dapat dilakukan dengan menggunakan *Windows PowerShell* secara *Administrator*. Pertama-tama, tuliskan perintah *Set-ExecutionPolicy Unrestricted* agar akses sistem tidak dibatasi. Apabila terdapat pertanyaan “Do you want to change the execution policy?” maka jawab dengan menuliskan “Y”. Kemudian, tuliskan lagi perintah *Get-ExecutionPolicy*. Maka akan muncul tulisan “Unrestricted” seperti berikut.



```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/powershell

PS C:\WINDOWS\system32> Get-ExecutionPolicy
Restricted
PS C:\WINDOWS\system32> Set-ExecutionPolicy Unrestricted

Execution Policy Change
The execution policy helps protect you from scripts that you do not trust. Changing the
execution policy might expose you to the security risks described in the
about_Execution_Policies help topic at https://go.microsoft.com/fwlink/?LinkID=135170. Do you
want to change the execution policy?
[Y] Yes  [A] Yes to All  [N] No  [L] No to All  [S] Suspend  [?] Help (default is "N"): Y
PS C:\WINDOWS\system32> Get-ExecutionPolicy
Unrestricted
```

Gambar 2.1. Atur Execution Policy Sistem.

Setelah itu, tuliskan perintah *Set-ExecutionPolicy Bypass -Scope Process -Force; [System.Net.ServicePointManager]::SecurityProtocol = [System.Net.ServicePointManager]::SecurityProtocol -bor 3072; iex ((New-Object System.Net.WebClient).DownloadString('https://chocolatey.org/install.ps1'))* untuk memulai pengunduhan Chocolatey beserta penginstallannya seperti berikut.

```

PS C:\WINDOWS\system32> Set-ExecutionPolicy Bypass -Scope Process -Force; [System.Net.ServiceP
ointManager]::SecurityProtocol = [System.Net.ServicePointManager]::SecurityProtocol -bor 3072;
iex ((New-Object System.Net.WebClient).DownloadString('https://chocolatey.org/install.ps1'))
Forcing web requests to allow TLS v1.2 (Required for requests to Chocolatey.org)
Getting latest version of the Chocolatey package for download.
Not using proxy.
Getting Chocolatey from https://community.chocolatey.org/api/v2/package/chocolatey/0.10.15.
Downloading https://community.chocolatey.org/api/v2/package/chocolatey/0.10.15 to C:\Users\ASU
S\AppData\Local\Temp\chocolatey\chocoInstall\chocolatey.zip
Not using proxy.
Extracting C:\Users\ASUS\AppData\Local\Temp\chocolatey\chocoInstall\chocolatey.zip to C:\Users
\ASUS\AppData\Local\Temp\chocolatey\chocoInstall
Installing Chocolatey on the local machine
Creating ChocolateyInstall as an environment variable (targeting 'Machine')
Setting ChocolateyInstall to 'C:\ProgramData\chocolatey'
WARNING: It's very likely you will need to close and reopen your shell
before you can use choco.
Restricting write permissions to Administrators
We are setting up the Chocolatey package repository.
The packages themselves go to 'C:\ProgramData\chocolatey\lib'
(i.e. C:\ProgramData\chocolatey\lib\yourPackageName).
A shim file for the command line goes to 'C:\ProgramData\chocolatey\bin'
and points to an executable in 'C:\ProgramData\chocolatey\lib\yourPackageName'.

Creating Chocolatey folders if they do not already exist.

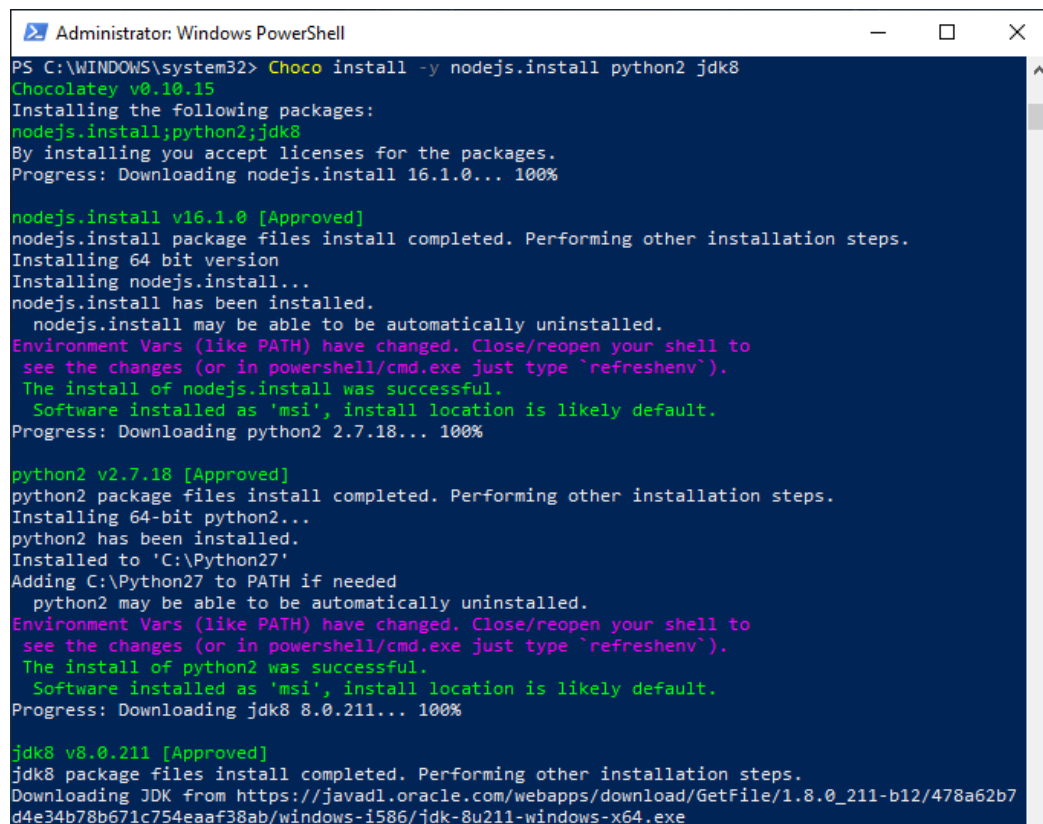
WARNING: You can safely ignore errors related to missing log files when
upgrading from a version of Chocolatey less than 0.9.9.
'Batch file could not be found' is also safe to ignore.
'The system cannot find the file specified' - also safe.
chocolatey.nupkg file not installed in lib.
Attempting to locate it from bootstrapper.
PATH environment variable does not have C:\ProgramData\chocolatey\bin in it. Adding...
WARNING: Not setting tab completion: Profile file does not exist at
'C:\Users\ASUS\Documents\WindowsPowerShell\Microsoft.PowerShell_profile.ps1'.
Chocolatey (choco.exe) is now ready.
You can call choco from anywhere, command line or powershell by typing choco.
Run choco /? for a list of functions.
You may need to shut down and restart powershell and/or consoles
first prior to using choco.
Ensuring Chocolatey commands are on the path
Ensuring chocolatey.nupkg is in the lib folder
PS C:\WINDOWS\system32>

```

Gambar 2.2. Download dan Install Chcolatey.

2.2. Install JDK, Node.JS, dan Python

Untuk menginstall JDK, Node.js dan Python dapat dilakukan dengan cara menuliskan perintah *Choco install -y nodejs.install python jdk8* seperti berikut.



```

Administrator: Windows PowerShell
PS C:\WINDOWS\system32> Choco install -y nodejs.install python2 jdk8
Chocolatey v0.10.15
Installing the following packages:
nodejs.install;python2;jdk8
By installing you accept licenses for the packages.
Progress: Downloading nodejs.install 16.1.0... 100%

nodejs.install v16.1.0 [Approved]
nodejs.install package files install completed. Performing other installation steps.
Installing 64 bit version
Installing nodejs.install...
nodejs.install has been installed.
nodejs.install may be able to be automatically uninstalled.
Environment Vars (like PATH) have changed. Close/reopen your shell to
see the changes (or in powershell/cmd.exe just type `refreshenv`).
The install of nodejs.install was successful.
Software installed as 'msi', install location is likely default.
Progress: Downloading python2 2.7.18... 100%

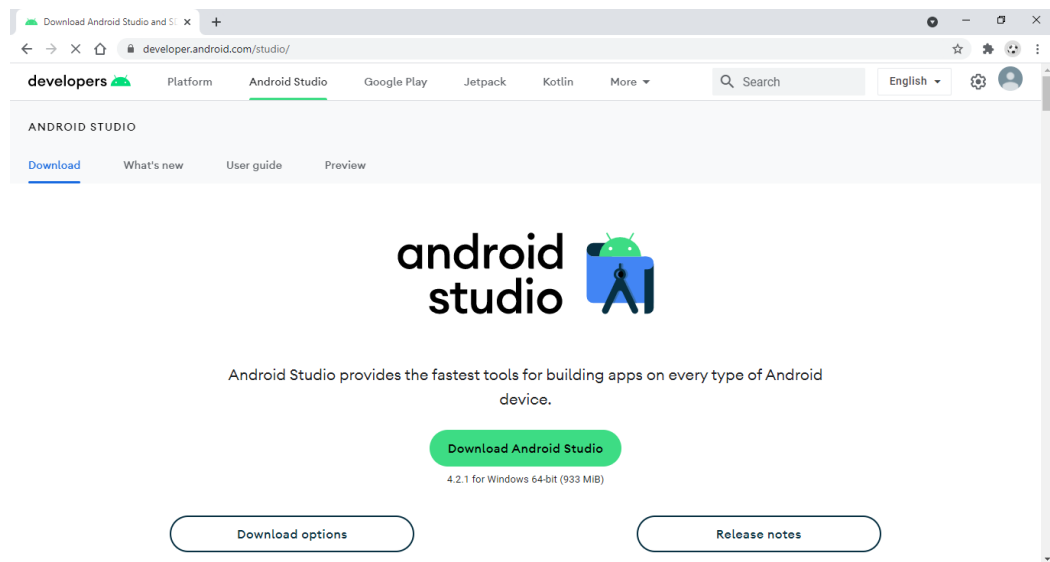
python2 v2.7.18 [Approved]
python2 package files install completed. Performing other installation steps.
Installing 64-bit python2...
python2 has been installed.
Installed to 'C:\Python27'
Adding C:\Python27 to PATH if needed
python2 may be able to be automatically uninstalled.
Environment Vars (like PATH) have changed. Close/reopen your shell to
see the changes (or in powershell/cmd.exe just type `refreshenv`).
The install of python2 was successful.
Software installed as 'msi', install location is likely default.
Progress: Downloading jdk8 8.0.211... 100%

jdk8 v8.0.211 [Approved]
jdk8 package files install completed. Performing other installation steps.
Downloading JDK from https://javadl.oracle.com/webapps/download/GetFile/1.8.0_211-b12/478a62b7
d4e34b78b671c754eaaf38ab/windows-1586/jdk-8u211-windows-x64.exe
  
```

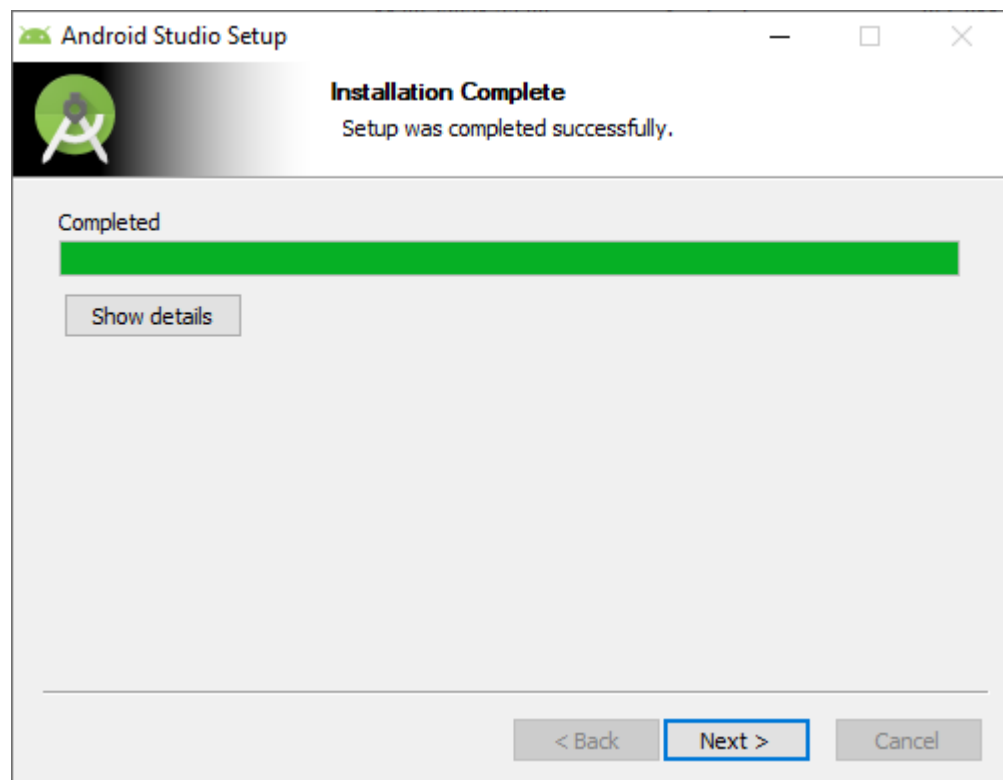
Gambar 2.3. Download dan Install JDK, Node.js dan Python.

2.3. Install Android Studio

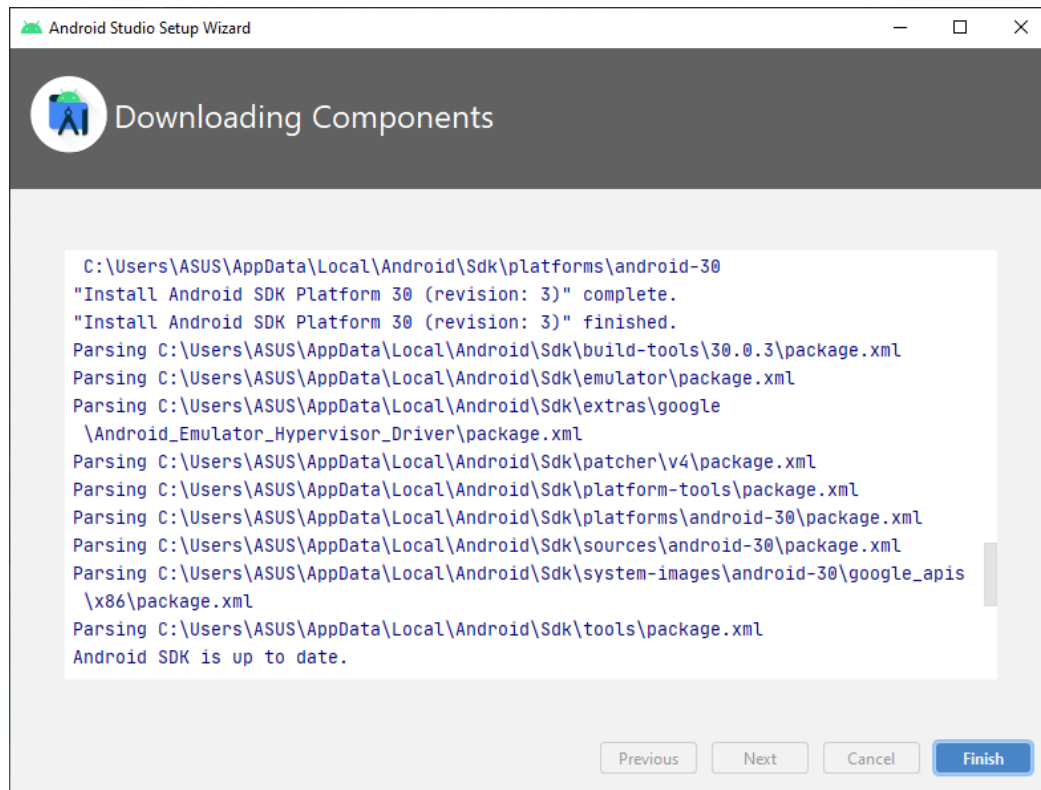
Untuk menginstall Android Studio dapat dilakukan dengan mengunduh terlebih dahulu aplikasi Android Studio pada halaman web <https://developer.android.com/studio/> dan lakukan instalasi program manual seperti berikut.



Gambar 2.4. Halaman Web untuk Mengunduh Aplikasi Android Studio.



Gambar 2.5. Aplikasi Android Studio Selesai Diinstall.



Gambar 2.6. Komponen Aplikasi Android Studio Selesai Diinstall.

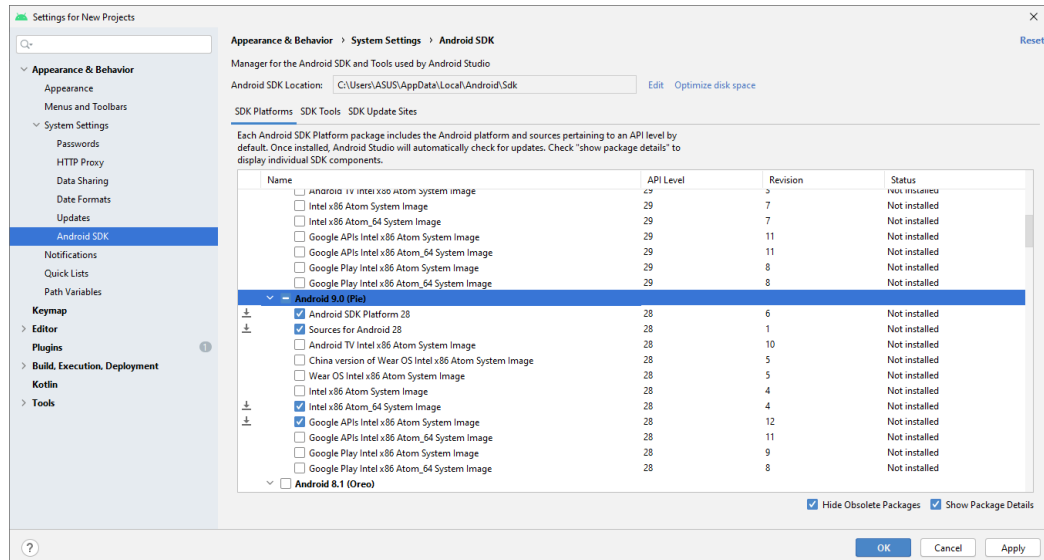
2.4. Install Android SDK

Untuk melakukan penginstallan *Android SDK* dapat dilakukan dengan cara membuka aplikasi *Android Studio*. Kemudian, pada saat di halaman “Welcome to Android Studio” klik bagian *Menu Configure* lalu pilih *SDK Manager*. Setelah itu, pilih tab *SDK Platforms* pada *SDK Manager* dan centang pada list *Android 9.0 (Pie)* dan *Android 8.0 (Oreo)*.

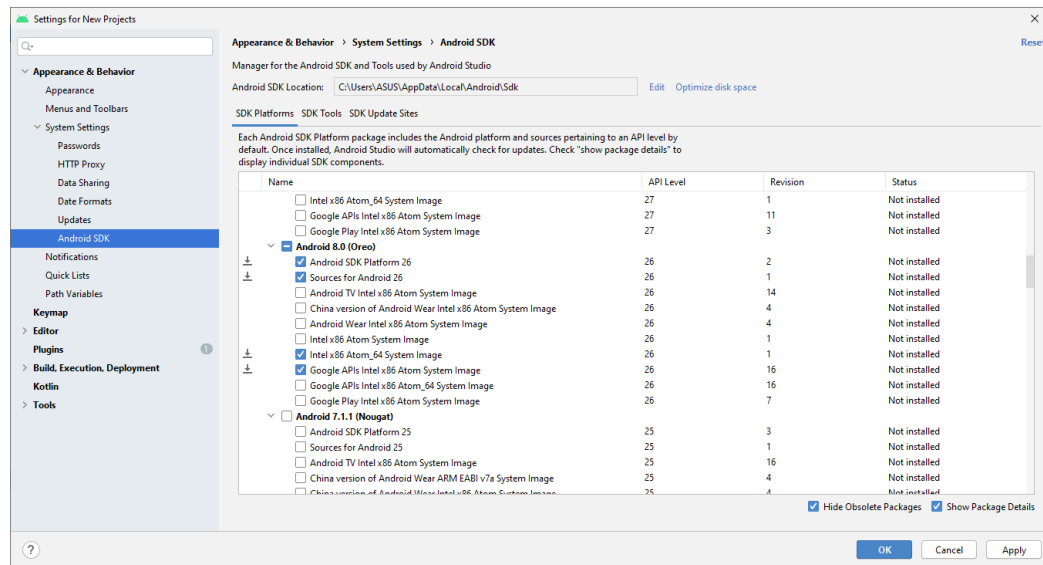
Selanjutnya, centang pada bagian *Show Package Details* dan centang *Android SDK Platform 28*, *Sources for Android 28* dan *Intel x86 Atom_64 System Image* atau *Google APIs Intel x64 Atom System Image* pada bagian *Android 9.0*. Sedangkan pada *Android 8.0*, centang *Android SDK Platform 26*, *Sources for Android 26* dan *Intel x86 Atom_64 System Image* atau *Google APIs Intel x86 Atom System Image*.

Kemudian, centang bagian *Show Package Details* pada tab *SDK Tools* dan centang 28.0.3 pada bagian *Android SDK Build-Tools*. Centang juga *Android Emulator*, *Android Emulator Hypervisor Driver for AMD Processors (installer)* dan *Android SDK Platform-Tools* atau *Intel x86 Emulator Accelerator (HAXM installer)*.

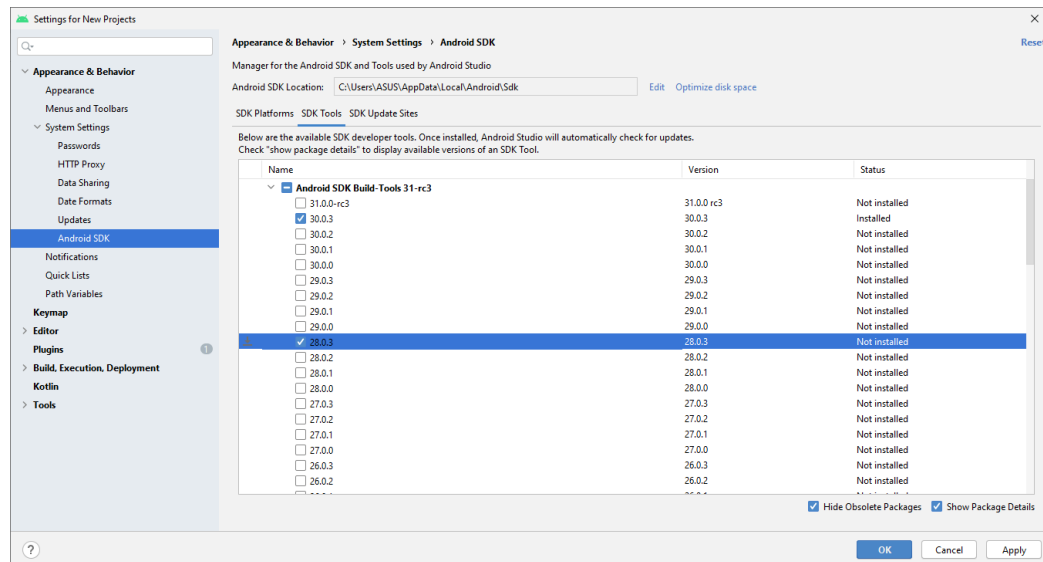
Lalu, klik *Apply* dan kemudian klik *OK* pada pemberitahuan download. Pada bagian *License Agreement*, accept semua *Licenses* yang tersedia dan klik *Next* yang mana pengunduhan akan dilakukan dan klik *Finish* apabila pengunduhan telah selesai dilakukan seperti berikut.



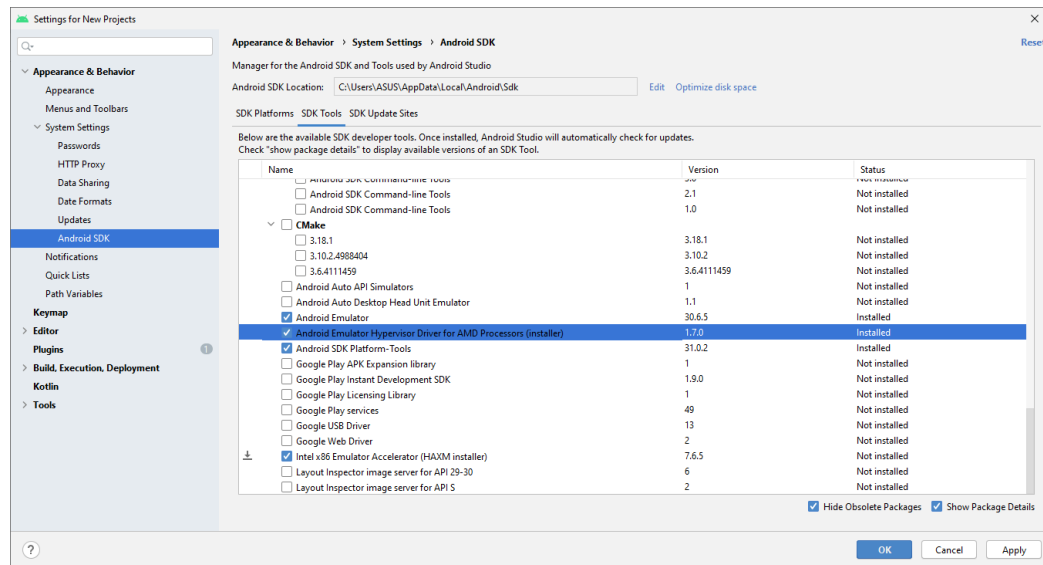
Gambar 2.7. Centang Komponen *Android SDK* pada *Android 9.0 (Pie)*.



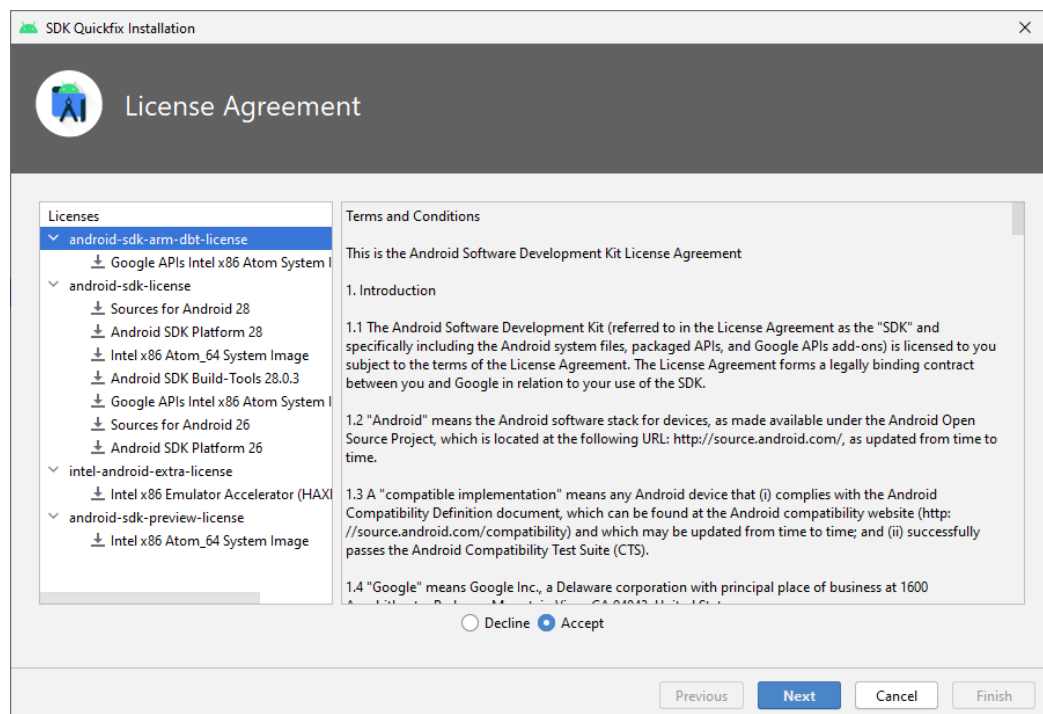
Gambar 2.8. Centang Komponen *Android SDK* pada *Android 8.0 (Oreo)*.



Gambar 2.9. Centang Komponen *Android SDK* pada *Android SDK Build-Tools*.



Gambar 2.10. Centang *Android Emulator*, *Android Emulator Hypervisor Driver for AMD Processors (installer)* dan *Android SDK Platform-Tools* atau *Intel x86 Emulator Accelerator (HAXM installer)*.

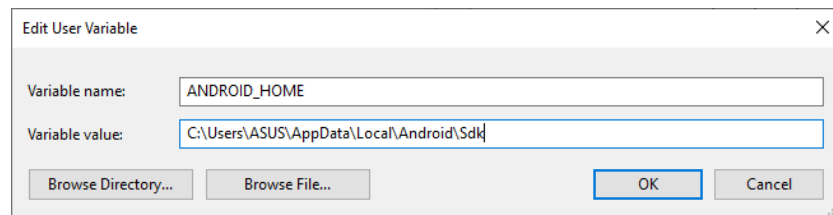


Gambar 2.11. Accept Semua Licenses yang Tersedia.

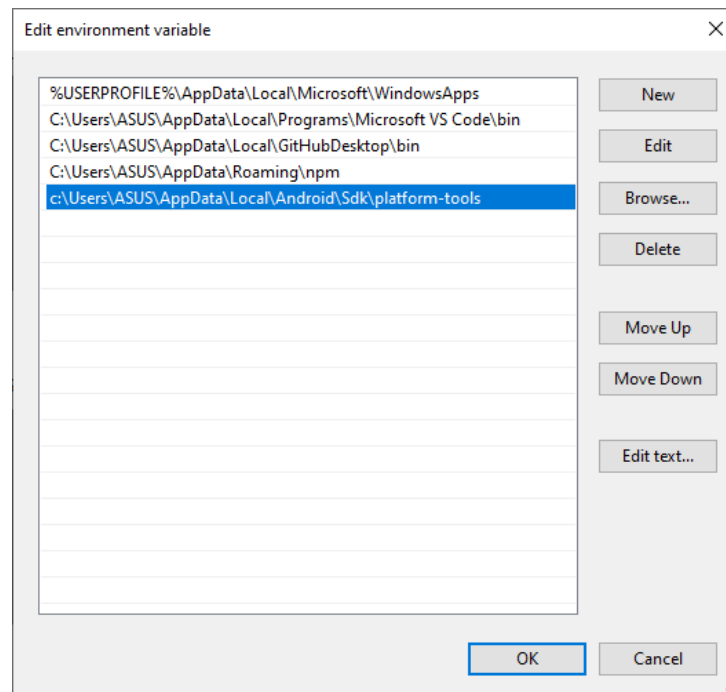
2.5. Setup Path Environment Variables

Untuk mengatur *Path Environment Variables* dapat dilakukan dengan cara membuka *Edit system environment variables*. Lalu klik *Advanced*, kemudian klik *Environment Variables...* dan tambahkan variable dengan nama *ANDROID_HOME* dan variable value yaitu *c:\Users\ASUS\AppData\Local\Android\Sdk*.

Setelah itu, klik variable *path* dan tambahkan *c:\Users\YOUR_USERNAME\AppData\Local\Android\Sdk\platform-tools* seperti berikut.



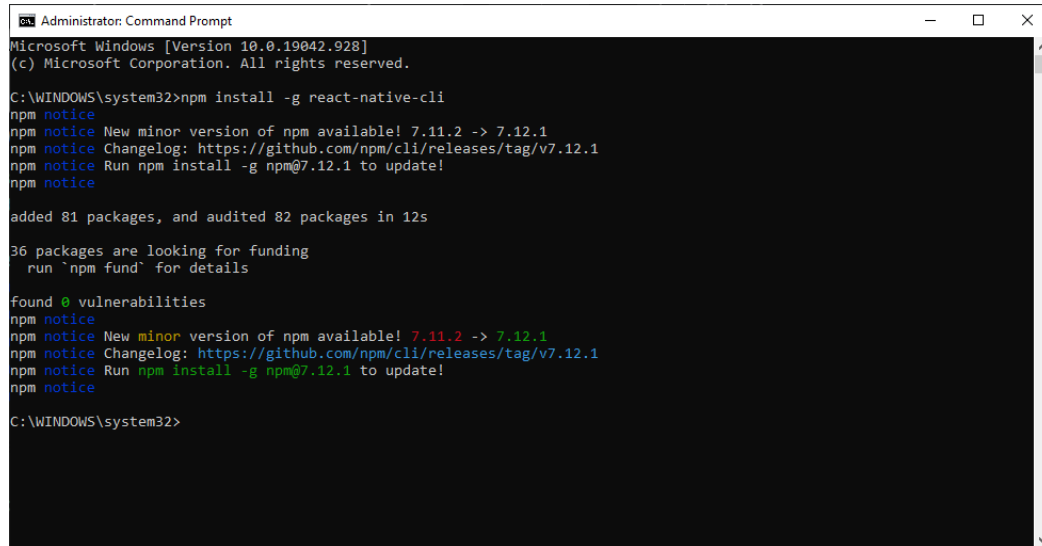
Gambar 2.12. Menambahkan Variabel *ANDROID_HOME*.



Gambar 2.13. Mengedit Variable *path*.

2.6. Install REACT NATIVE CLI

Untuk menginstall *React Native CLI* dapat dilakukan dengan cara membuka *CMD* dan menuliskan perintah *npm install -g react-native-cli* seperti berikut.

A screenshot of a Windows Command Prompt window titled "Administrator: Command Prompt". The window shows the execution of the command "npm install -g react-native-cli". The output includes several npm notices about a new minor version of npm (7.12.1) being available, a changelog link, and a recommendation to run "npm install -g npm@7.12.1" to update. It also shows that 81 packages were added and 82 packages were audited in 12 seconds, with 36 packages looking for funding. Finally, it states that 0 vulnerabilities were found. The prompt ends with "C:\WINDOWS\system32>".

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.19042.928]
(c) Microsoft Corporation. All rights reserved.

C:\WINDOWS\system32>npm install -g react-native-cli
npm notice
npm notice New minor version of npm available! 7.11.2 -> 7.12.1
npm notice Changelog: https://github.com/npm/cli/releases/tag/v7.12.1
npm notice Run npm install -g npm@7.12.1 to update!
npm notice

added 81 packages, and audited 82 packages in 12s

36 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
npm notice
npm notice New minor version of npm available! 7.11.2 -> 7.12.1
npm notice Changelog: https://github.com/npm/cli/releases/tag/v7.12.1
npm notice Run npm install -g npm@7.12.1 to update!
npm notice

C:\WINDOWS\system32>
```

Gambar 2.14. Download dan Install React Native CLI.

2.7. Buat Project Bernama “ProjectSaya”

Untuk membuat project bernama *ProjectSaya* dapat dilakukan dengan cara membuka *CMD* dan menuliskan perintah *react-native init ProjectSaya* seperti berikut.

```

C:\WINDOWS\system32\cmd.exe
C:\Users\ASUS>react-native init ProjectSaya
This will walk you through creating a new React Native project in C:\Users\ASUS\ProjectSaya
'yarn' is not recognized as an internal or external command,
operable program or batch file.
Installing react-native...
Consider installing yarn to make this faster: https://yarnpkg.com
npm WARN deprecated urix@0.1.0: Please see https://github.com/lydell/urix#deprecated
npm WARN deprecated resolve-url@0.2.1: https://github.com/lydell/resolve-url#deprecated
npm WARN deprecated uglify-es@3.3.9: support for ECMAScript is superseded by 'uglify-js' as of v3.13.0

added 718 packages, and audited 719 packages in 2m

19 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
info Setting up new React Native app in C:\Users\ASUS\ProjectSaya
(node:6104) Warning: Accessing non-existent property 'padLevels' of module exports inside circular dependency
(Use `node --trace-warnings ...` to show where the warning was created)
info Adding required dependencies
npm WARN deprecated request-promise-native@1.0.9: request-promise-native has been deprecated because it extends the now
deprecated request package, see https://github.com/request/request/issues/3142
npm WARN deprecated har-validator@5.1.5: this library is no longer supported
npm WARN deprecated babel-eslint@10.1.0: babel-eslint is now @babel/eslint-parser. This package will no longer receive u
pdates.
npm WARN deprecated request@2.88.2: request has been deprecated, see https://github.com/request/request/issues/3142

added 458 packages, and audited 1177 packages in 52s

71 packages are looking for funding

```

Gambar 2.15. Membuat Project Bernama *ProjectSaya*.

```

Select C:\WINDOWS\system32\cmd.exe
run `npm fund` for details

found 0 vulnerabilities
info Adding required dev dependencies

up to date, audited 1177 packages in 10s

71 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities

Run instructions for Android:
  • Have an Android emulator running (quickest way to get started), or a device connected.
  • cd "C:\Users\ASUS\ProjectSaya" && npx react-native run-android

Run instructions for Windows:
  • See https://aka.ms/ReactNativeGuideWindows for the latest up-to-date instructions.

C:\Users\ASUS>

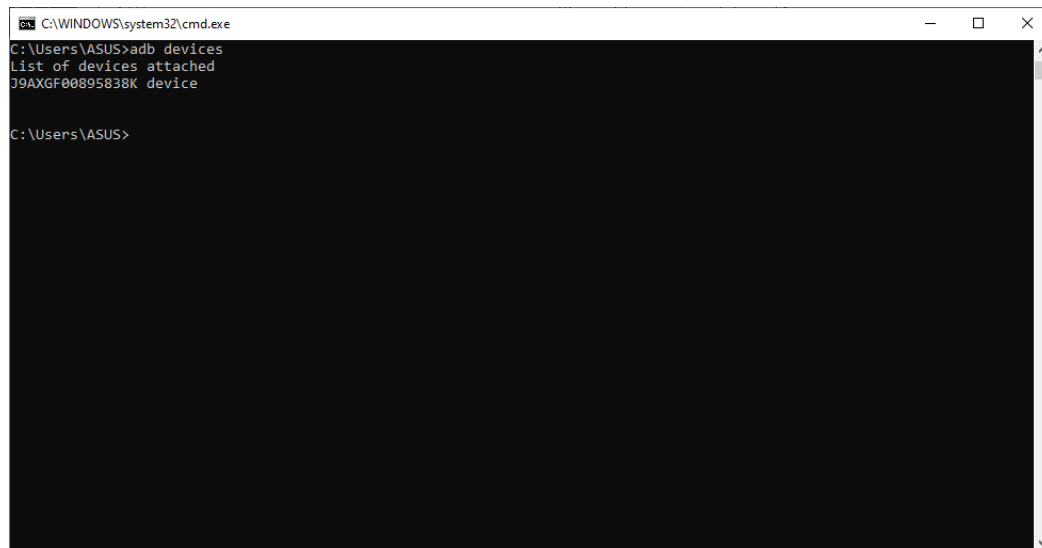
```

Gambar 2.16. Membuat Project Bernama *ProjectSaya* (1).

2.8. Setting Device/Emulator

Untuk mengatur device dapat dilakukan dengan menghubungkan HP ke PC menggunakan kabel USB dan aktifkan mode *USB Debugging* pada bagian *Opsi*

Pengembang. Lalu, cek pada *CMD* apakah device sudah terdeteksi atau tidak dengan cara menuliskan perintah *adb devices* seperti berikut.

A screenshot of a Windows Command Prompt window. The title bar reads 'C:\WINDOWS\system32\cmd.exe'. The command prompt shows the command 'C:\Users\ASUS>adb devices' and its output: 'List of devices attached' followed by 'J9AXGF00895838K device'. The prompt then returns to 'C:\Users\ASUS>'.

```
C:\WINDOWS\system32\cmd.exe
C:\Users\ASUS>adb devices
List of devices attached
J9AXGF00895838K device
C:\Users\ASUS>
```

Gambar 2.17. Cek Device yang Terhubung ke PC.

2.9. Menjalankan React Native App di HP

Untuk menjalankan aplikasi *React Native* melalui HP dapat dilakukan dengan menuliskan perintah *cd ProjectSaya* dan *react-native run-android* pada *CMD*. Apabila terdapat notifikasi izin instalasi pada HP, klik *Izinkan* dan aplikasi *React Native* akan dijalankan seperti berikut.


```

C:\WINDOWS\system32\cmd.exe - "node" "C:\Users\ASUS\AppData\Roaming\npm\node_modules\react-native-cli\index.js" run-android
C:\Users\ASUS>cd ProjectSaya
C:\Users\ASUS\ProjectSaya>react-native run-android
info Running jetifier to migrate libraries to AndroidX. You can disable it using "--no-jetifier" flag.
(node:4740) Warning: Accessing non-existent property 'padLevels' of module exports inside circular dependency
(Use `node --trace-warnings ...` to show where the warning was created)
Jetifier found 903 file(s) to forward-jetify. Using 2 workers...
info Starting JS server...
info Installing the app...

> Task :app:compileDebugJavaWithJavac

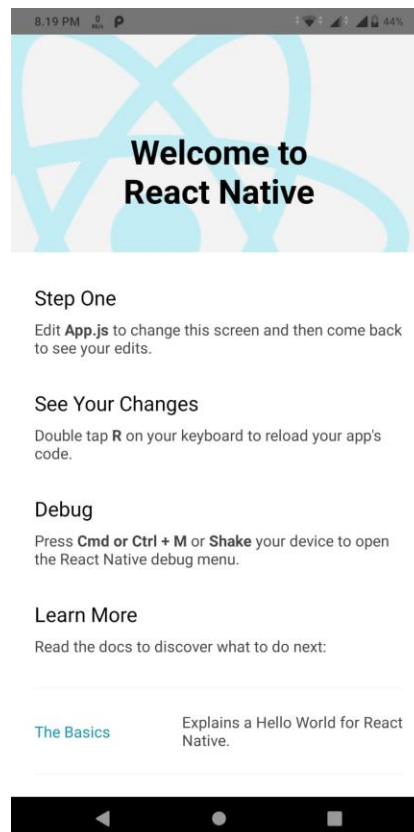
> Task :app:stripDebugDebugSymbols
Unable to strip the following libraries, packaging them as they are: libc++_shared.so, libevent-2.1.so, libevent_core-2.1.so, libevent_extra-2.1.so, libfb.so, libfbjni.so, libflipper.so, libfolly_futures.so, libfolly_json.so, libglog.so, libglog_init.so, libhermes-executor-common-debug.so, libhermes-executor-common-release.so, libhermes-executor-debug.so, libhermes-executor-release.so, libhermes-inspector.so, libimagepipeline.so, libjsc.so, libjscexecutor.so, libjsiexecutor.so, libjsiinspector.so, libnative-filters.so, libnative-image-transcoder.so, libreact_codegen_reactandroidspec.so, libreact_nativemodule_core.so, libreactnativeblob.so, libreactnativejni.so, libreactnativeutilsjni.so, libreactperffloggerjni.so, libturboModulejsi.so, libyoga.so.

> Task :app:installDebug
Installing APK 'app-debug.apk' on 'ASUS_X00TD - 9' for app:debug
Installed on 1 device.

BUILD SUCCESSFUL in 6m 35s
29 actionable tasks: 29 executed
info Connecting to the development server...
info Starting the app on "J9AXGF00895838K"...
Starting: Intent { cmp=com.projectsaya/.MainActivity }

```

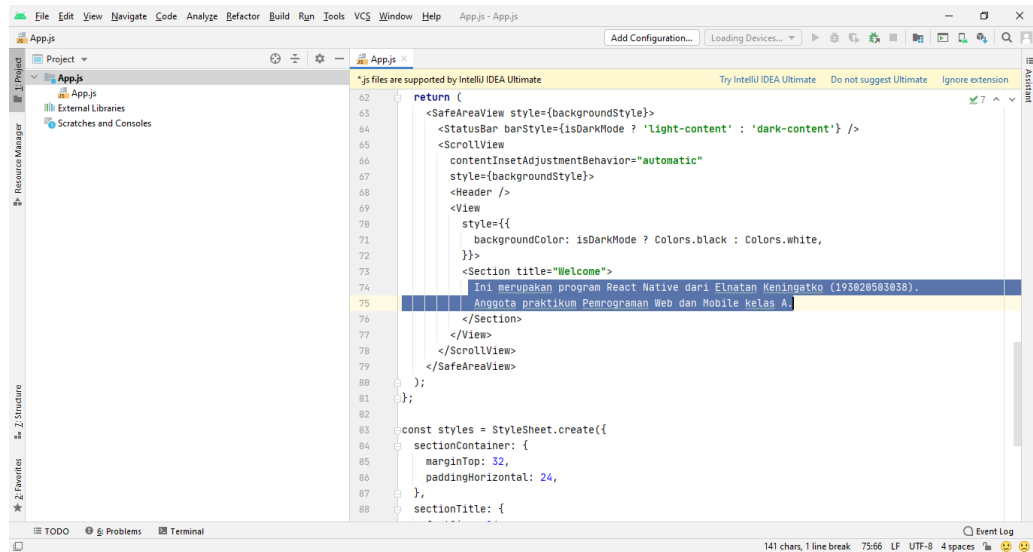
Gambar 2.18. Aplikasi *React Native* Berhasil Dijalankan.



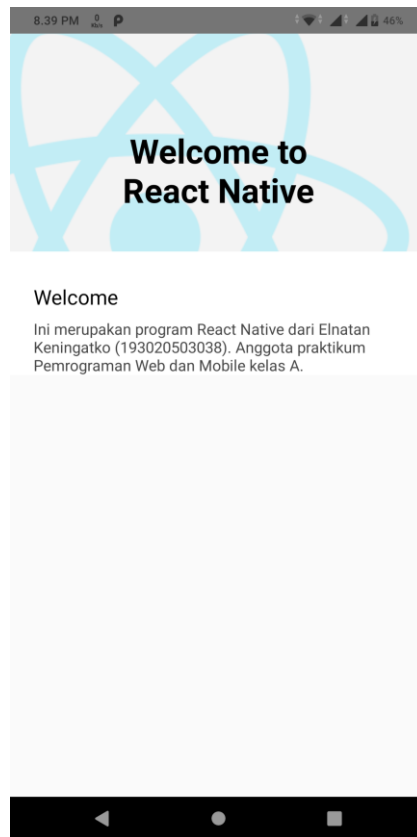
Gambar 2.19. Aplikasi *React Native* Muncul di HP.

2.10. Edit Source Code Program

Untuk mengedit source code program dapat dilakukan dengan cara mengubah source code yang terdapat pada *App.js* di dalam folder *ProjectSaya* seperti berikut.



Gambar 2.20. Mengedit Source Code pada File *App.js*.



Gambar 2.21. Tampilan Aplikasi *React Native* Setelah Source Code Diubah.

BAB III

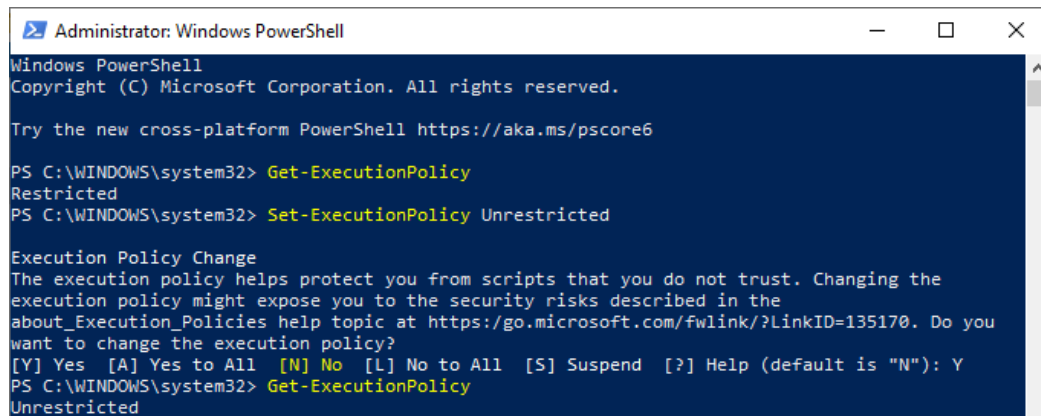
KESIMPULAN

React Native adalah framework *JavaScript* untuk membuat aplikasi mobile secara multi-platform. Meski begitu, *React Native* tetap memiliki pro dan kontra. Di luar kekurangannya, *React Native* tetap menjadi pilihan tepat untuk membuat aplikasi sederhana dalam waktu singkat.

DAFTAR PUSTAKA

- Benefita. 2021. *Apa Itu React Native? Simak Penjelasan Lengkapnya!*. Diakses dari <https://www.niagahoster.co.id/blog/apa-itu-react-native/>. Pada 16 Mei 2021.
- Rasupe. 2019. *Cara install react native di windows 10*. Diakses dari <https://rasupe.com/cara-install-react-native-di-windows-10/>. Pada 16 Mei 2021.

LAMPIRAN



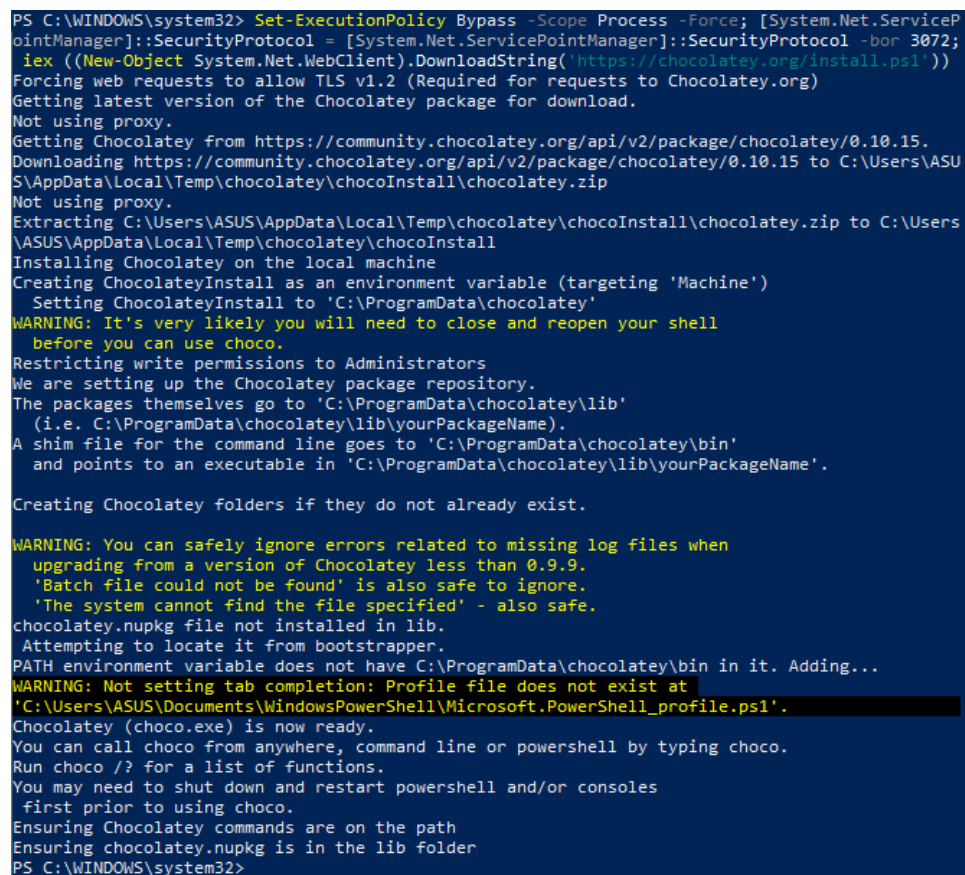
```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\WINDOWS\system32> Get-ExecutionPolicy
Restricted
PS C:\WINDOWS\system32> Set-ExecutionPolicy Unrestricted

Execution Policy Change
The execution policy helps protect you from scripts that you do not trust. Changing the
execution policy might expose you to the security risks described in the
about_Execution_Policies help topic at https://go.microsoft.com/fwlink/?LinkID=135170. Do you
want to change the execution policy?
[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help (default is "N"): Y
PS C:\WINDOWS\system32> Get-ExecutionPolicy
Unrestricted
```

Gambar 2.1. Atur Execution Policy Sistem.



```
PS C:\WINDOWS\system32> Set-ExecutionPolicy Bypass -Scope Process -Force; [System.Net.ServiceP
ointManager]::SecurityProtocol = [System.Net.ServicePointManager]::SecurityProtocol -bor 3072;
iex ((New-Object System.Net.WebClient).DownloadString('https://chocolatey.org/install.ps1'))
Forcing web requests to allow TLS v1.2 (Required for requests to Chocolatey.org)
Getting latest version of the Chocolatey package for download.
Not using proxy.
Getting Chocolatey from https://community.chocolatey.org/api/v2/package/chocolatey/0.10.15.
Downloading https://community.chocolatey.org/api/v2/package/chocolatey/0.10.15 to C:\Users\ASU
S\AppData\Local\Temp\chocolatey\chocoInstall\chocolatey.zip
Not using proxy.
Extracting C:\Users\ASUS\AppData\Local\Temp\chocolatey\chocoInstall\chocolatey.zip to C:\Users
\ASUS\AppData\Local\Temp\chocolatey\chocoInstall
Installing Chocolatey on the local machine
Creating ChocolateyInstall as an environment variable (targeting 'Machine')
Setting ChocolateyInstall to 'C:\ProgramData\chocolatey'
WARNING: It's very likely you will need to close and reopen your shell
before you can use choco.
Restricting write permissions to Administrators
We are setting up the Chocolatey package repository.
The packages themselves go to 'C:\ProgramData\chocolatey\lib'
(i.e. C:\ProgramData\chocolatey\lib\yourPackageName).
A shim file for the command line goes to 'C:\ProgramData\chocolatey\bin'
and points to an executable in 'C:\ProgramData\chocolatey\lib\yourPackageName'.

Creating Chocolatey folders if they do not already exist.

WARNING: You can safely ignore errors related to missing log files when
upgrading from a version of Chocolatey less than 0.9.9.
'Batch file could not be found' is also safe to ignore.
'The system cannot find the file specified' - also safe.
chocolatey.nupkg file not installed in lib.
Attempting to locate it from bootstrapper.
PATH environment variable does not have C:\ProgramData\chocolatey\bin in it. Adding...
WARNING: Not setting tab completion: Profile file does not exist at
'C:\Users\ASUS\Documents\WindowsPowerShell\Microsoft.PowerShell_profile.ps1'.
Chocolatey (choco.exe) is now ready.
You can call choco from anywhere, command line or powershell by typing choco.
Run choco /? for a list of functions.
You may need to shut down and restart powershell and/or consoles
first prior to using choco.
Ensuring Chocolatey commands are on the path
Ensuring chocolatey.nupkg is in the lib folder
PS C:\WINDOWS\system32>
```

Gambar 2.2. Download dan Install Chcolatey.

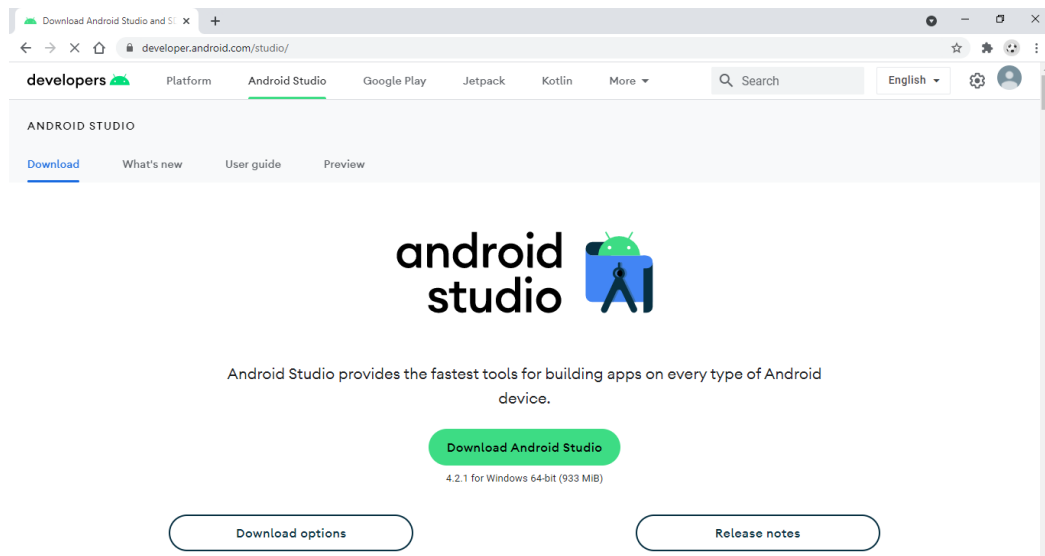
```
Administrator: Windows PowerShell
PS C:\WINDOWS\system32> Choco install -y nodejs.install python2 jdk8
Chocolatey v0.10.15
Installing the following packages:
nodejs.install;python2;jdk8
By installing you accept licenses for the packages.
Progress: Downloading nodejs.install 16.1.0... 100%

nodejs.install v16.1.0 [Approved]
nodejs.install package files install completed. Performing other installation steps.
Installing 64 bit version
Installing nodejs.install...
nodejs.install has been installed.
nodejs.install may be able to be automatically uninstalled.
Environment Vars (like PATH) have changed. Close/reopen your shell to
see the changes (or in powershell/cmd.exe just type `refreshenv`).
The install of nodejs.install was successful.
Software installed as 'msi', install location is likely default.
Progress: Downloading python2 2.7.18... 100%

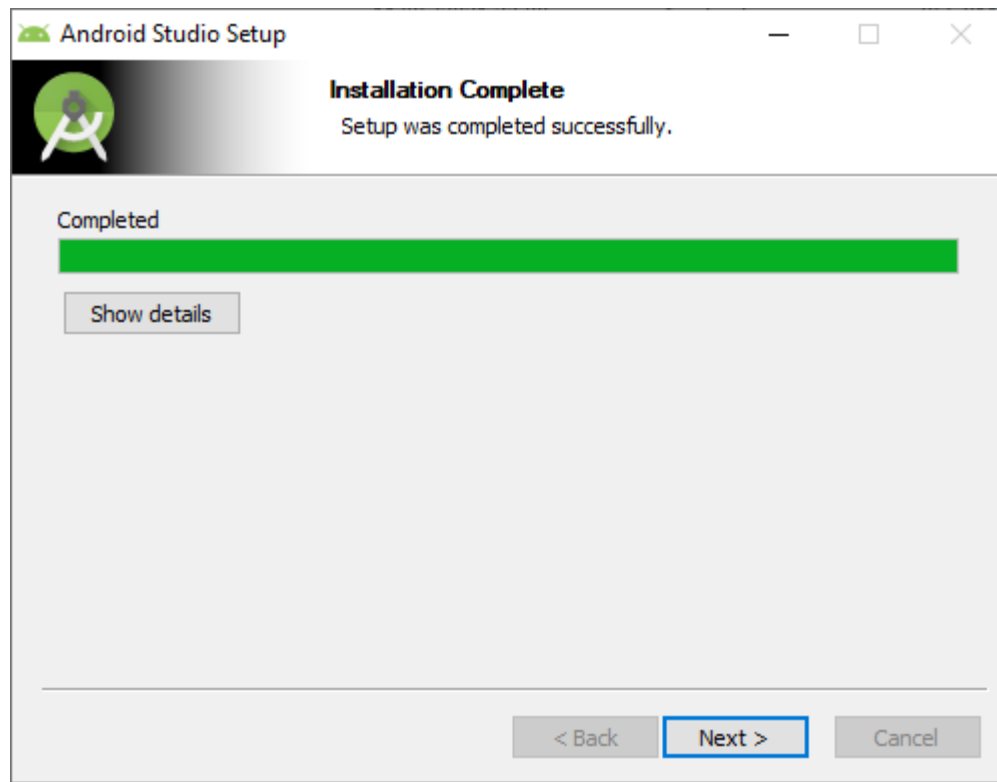
python2 v2.7.18 [Approved]
python2 package files install completed. Performing other installation steps.
Installing 64-bit python2...
python2 has been installed.
Installed to 'C:\Python27'
Adding C:\Python27 to PATH if needed
python2 may be able to be automatically uninstalled.
Environment Vars (like PATH) have changed. Close/reopen your shell to
see the changes (or in powershell/cmd.exe just type `refreshenv`).
The install of python2 was successful.
Software installed as 'msi', install location is likely default.
Progress: Downloading jdk8 8.0.211... 100%

jdk8 v8.0.211 [Approved]
jdk8 package files install completed. Performing other installation steps.
Downloading JDK from https://javadl.oracle.com/webapps/download/GetFile/1.8.0_211-b12/478a62b7
d4e34b78b671c754eaf38ab/windows-i586/jdk-8u211-windows-x64.exe
```

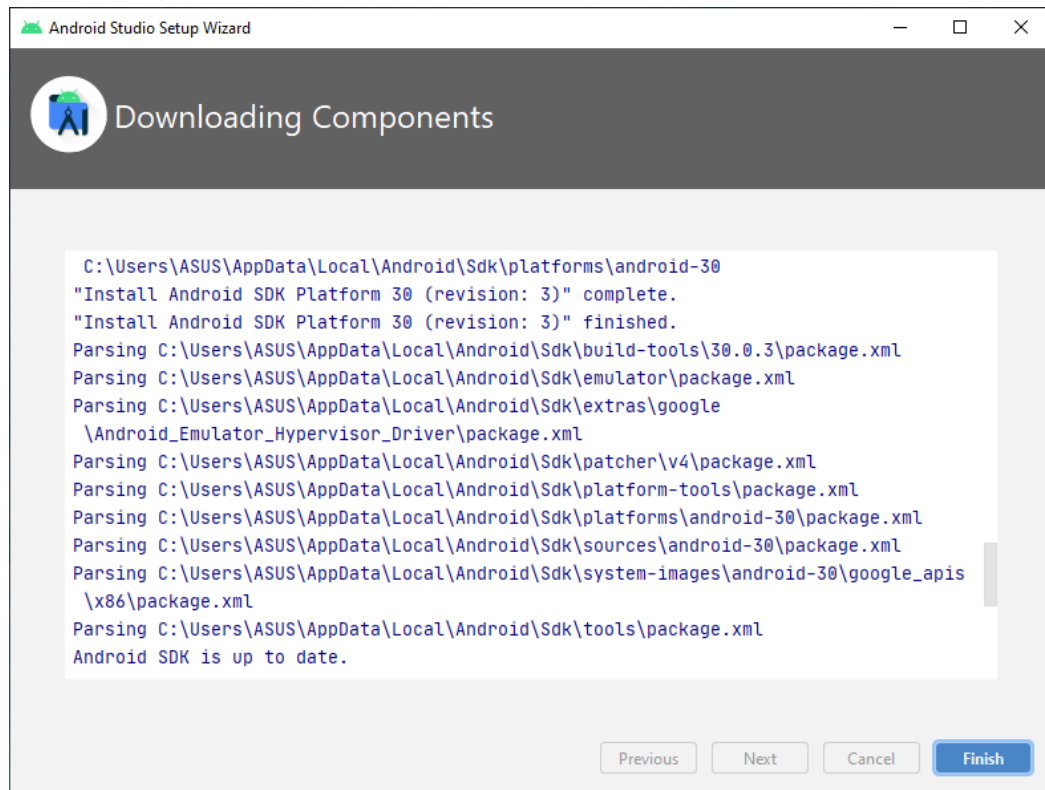
Gambar 2.3. Download dan Install JDK, Node.js dan Python.



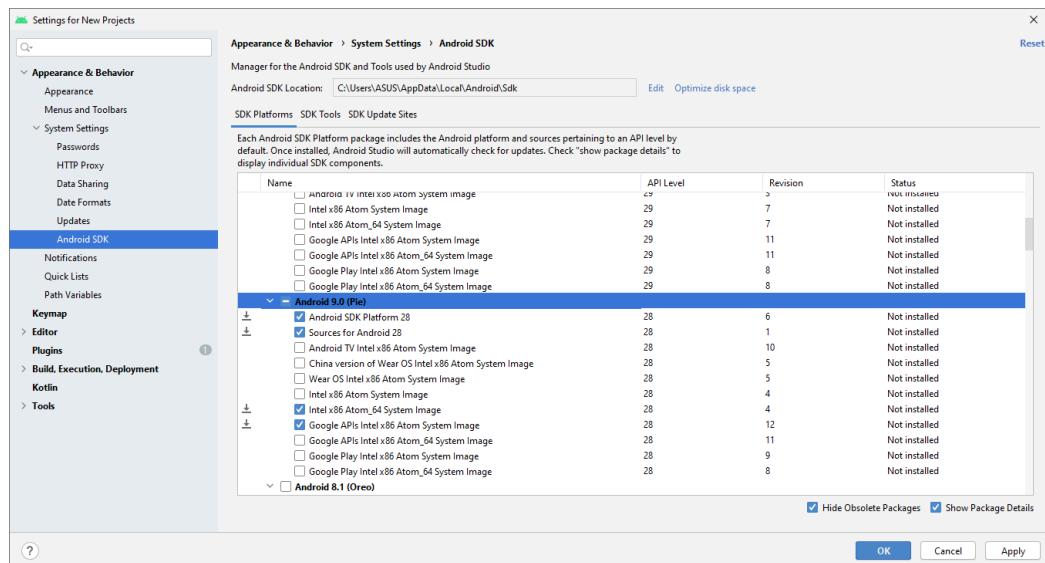
Gambar 2.4. Halaman Web untuk Mengunduh Aplikasi Android Studio.



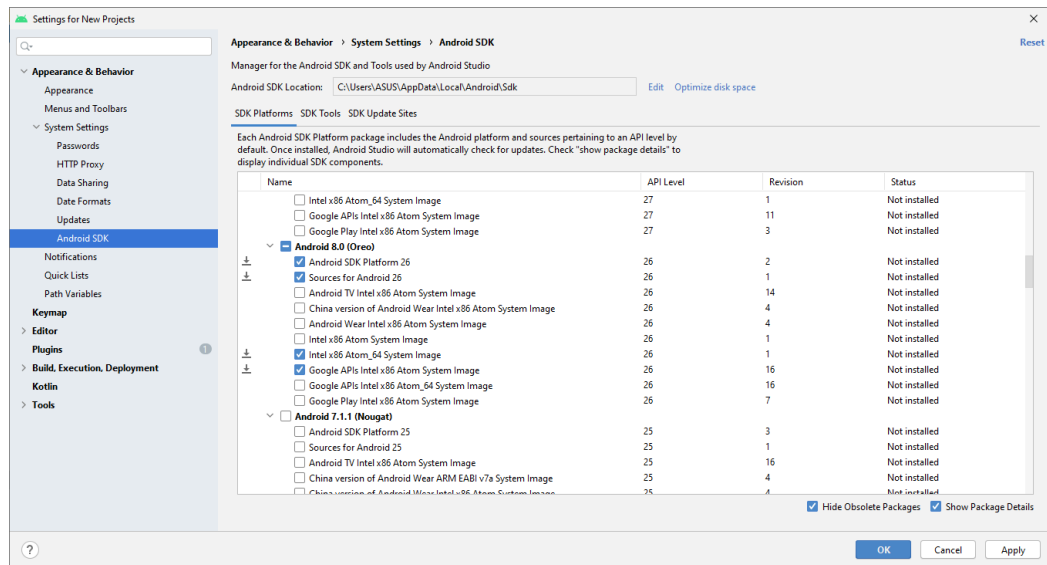
Gambar 2.5. Aplikasi Android Studio Selesai Diinstall.



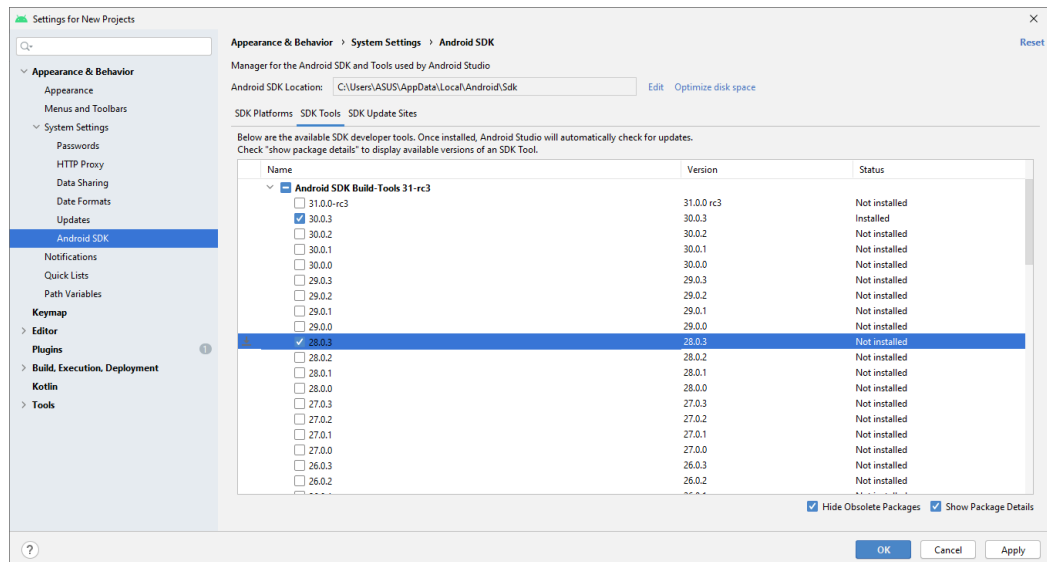
Gambar 2.6. Komponen Aplikasi Android Studio Selesai Diinstall.



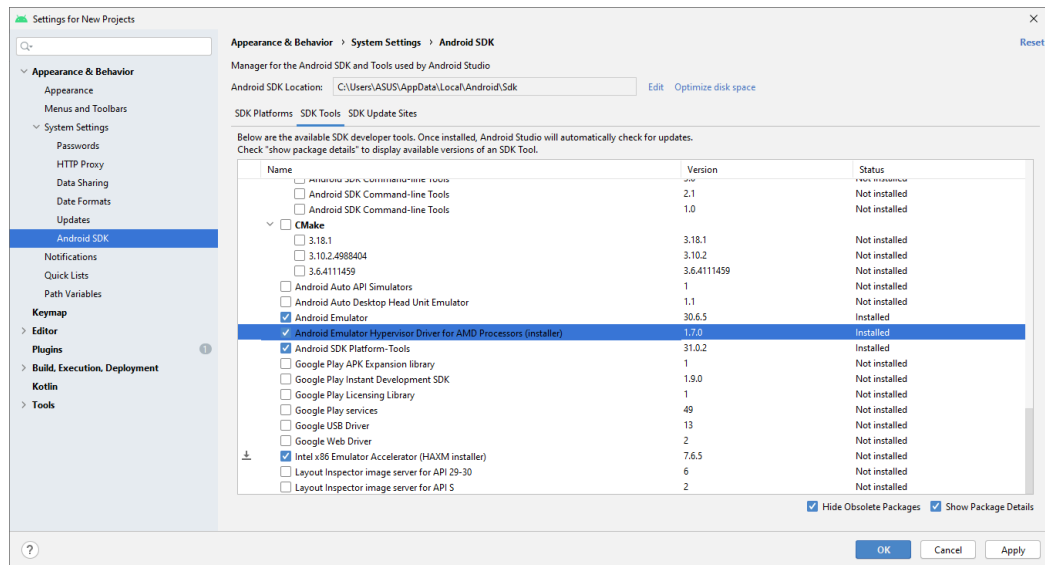
Gambar 2.7. Centang Komponen *Android SDK* pada *Android 9.0 (Pie)*.



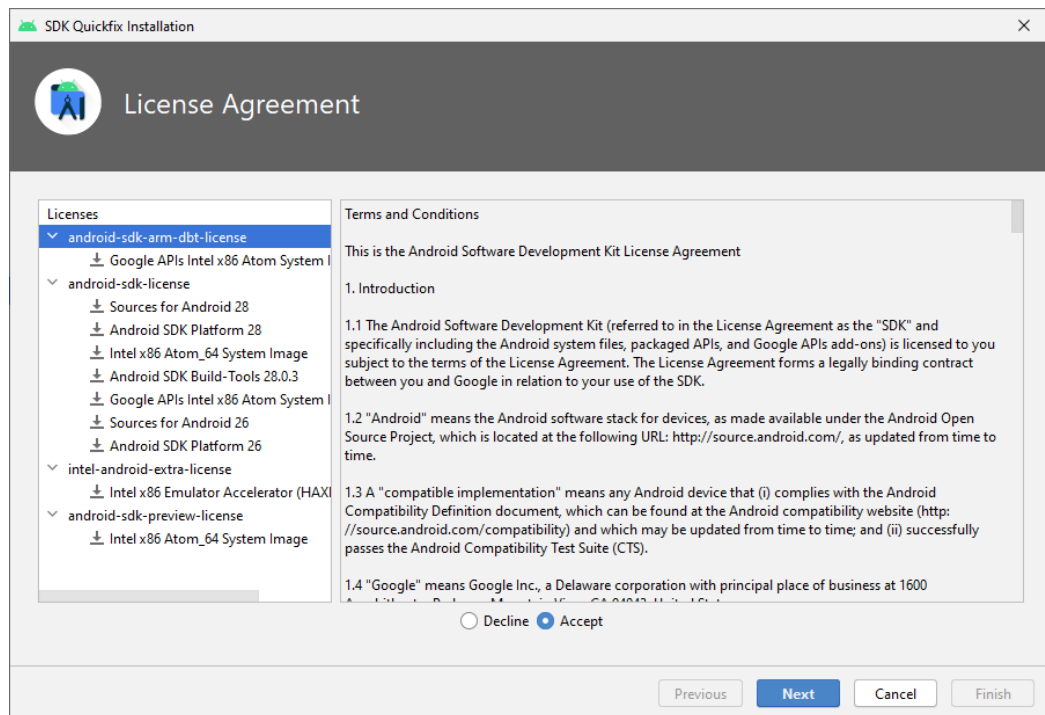
Gambar 2.8. Centang Komponen *Android SDK* pada *Android 8.0 (Oreo)*.



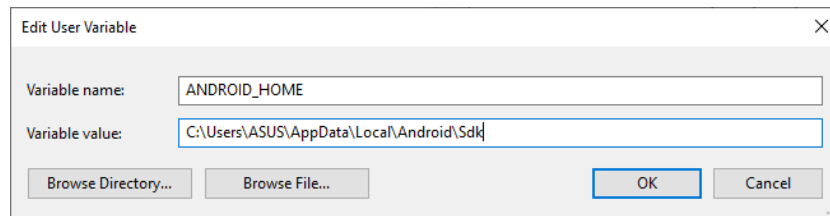
Gambar 2.9. Centang Komponen *Android SDK* pada *Android SDK Build-Tools*.



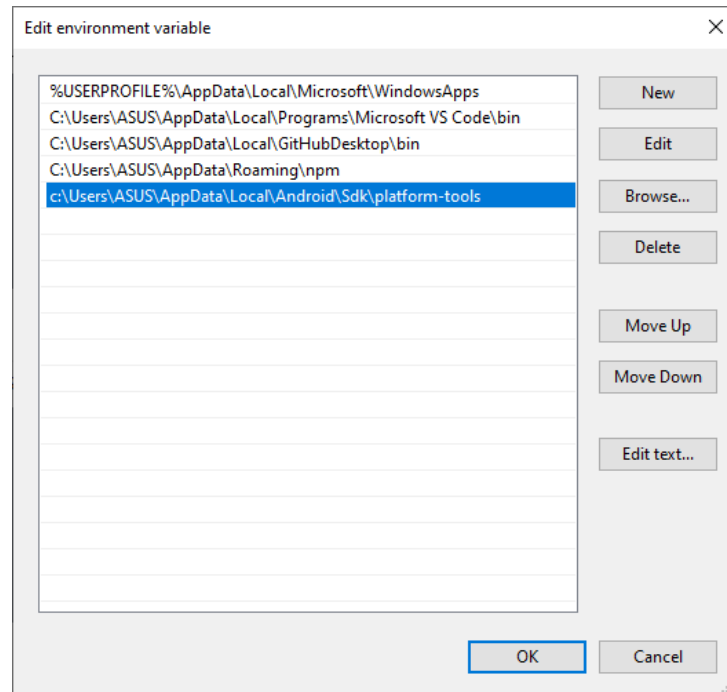
Gambar 2.10. Centang *Android Emulator*, *Android Emulator Hypervisor Driver for AMD Processors (installer)* dan *Android SDK Platform-Tools* atau *Intel x86 Emulator Accelerator (HAXM installer)*.



Gambar 2.11. Accept Semua Licenses yang Tersedia.



Gambar 2.12. Menambahkan Variabel *ANDROID_HOME*.



Gambar 2.13. Mengedit Variable *path*.

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.19042.928]
(c) Microsoft Corporation. All rights reserved.

C:\WINDOWS\system32>npm install -g react-native-cli
npm notice
npm notice New minor version of npm available! 7.11.2 -> 7.12.1
npm notice Changelog: https://github.com/npm/cli/releases/tag/v7.12.1
npm notice Run npm install -g npm@7.12.1 to update!
npm notice

added 81 packages, and audited 82 packages in 12s

36 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
npm notice
npm notice New minor version of npm available! 7.11.2 -> 7.12.1
npm notice Changelog: https://github.com/npm/cli/releases/tag/v7.12.1
npm notice Run npm install -g npm@7.12.1 to update!
npm notice

C:\WINDOWS\system32>
```

Gambar 2.14. Download dan Install React Native CLI.

```
C:\WINDOWS\system32\cmd.exe
C:\Users\ASUS>react-native init ProjectSaya
This will walk you through creating a new React Native project in C:\Users\ASUS\ProjectSaya
'yarn' is not recognized as an internal or external command,
operable program or batch file.
Installing react-native...
Consider installing yarn to make this faster: https://yarnpkg.com
npm WARN deprecated urix@0.1.0: Please see https://github.com/lydell/urix#deprecated
npm WARN deprecated resolve-url@0.2.1: https://github.com/lydell/resolve-url#deprecated
npm WARN deprecated uglify-es@3.3.9: support for ECMAScript is superseded by `uglify-js` as of v3.13.0

added 718 packages, and audited 719 packages in 2m

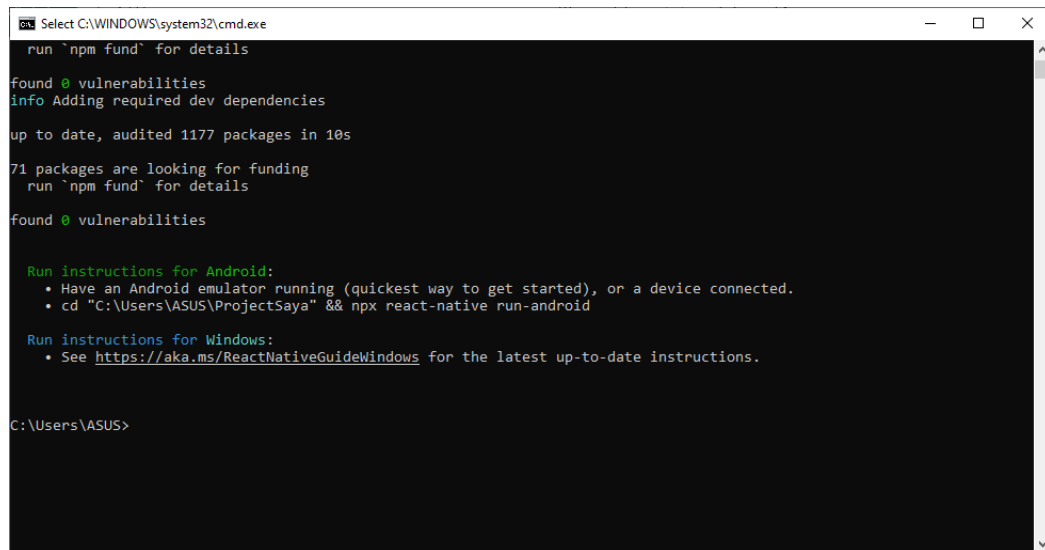
19 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
info Setting up new React Native app in C:\Users\ASUS\ProjectSaya
(node:6104) Warning: Accessing non-existent property 'padLevels' of module exports inside circular dependency
(Use `node --trace-warnings ...` to show where the warning was created)
info Adding required dependencies
npm WARN deprecated request-promise-native@1.0.9: request-promise-native has been deprecated because it extends the now
deprecated request package, see https://github.com/request/request/issues/3142
npm WARN deprecated har-validator@5.1.5: this library is no longer supported
npm WARN deprecated babel-eslint@10.1.0: babel-eslint is now @babel/eslint-parser. This package will no longer receive u
pdates.
npm WARN deprecated request@2.88.2: request has been deprecated, see https://github.com/request/request/issues/3142

added 458 packages, and audited 1177 packages in 52s

71 packages are looking for funding
```

Gambar 2.15. Membuat Project Bernama *ProjectSaya*.



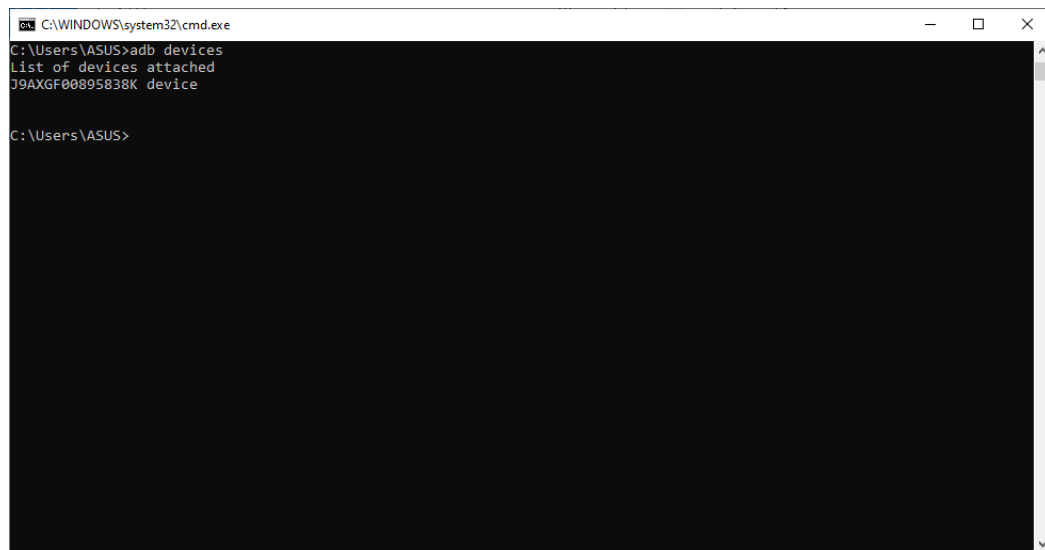
```
Select C:\WINDOWS\system32\cmd.exe
run "npm fund" for details
found 0 vulnerabilities
info Adding required dev dependencies
up to date, audited 1177 packages in 10s
71 packages are looking for funding
  run "npm fund" for details
found 0 vulnerabilities

Run instructions for Android:
  • Have an Android emulator running (quickest way to get started), or a device connected.
  • cd "C:\Users\ASUS\ProjectSaya" && npx react-native run-android

Run instructions for Windows:
  • See https://aka.ms/ReactNativeGuideWindows for the latest up-to-date instructions.

C:\Users\ASUS>
```

Gambar 2.16. Membuat Project Bernama *ProjectSaya* (1).



```
C:\WINDOWS\system32\cmd.exe
C:\Users\ASUS>adb devices
List of devices attached
09AXGF00895838K device

C:\Users\ASUS>
```

Gambar 2.17. Cek Device yang Terhubung ke PC.

```
C:\WINDOWS\system32\cmd.exe - "node" "C:\Users\ASUS\AppData\Roaming\npm\node_modules\react-native-cli\index.js" run-android
C:\Users\ASUS>cd ProjectSaya
C:\Users\ASUS\ProjectSaya>react-native run-android
info Running jetifier to migrate libraries to AndroidX. You can disable it using "--no-jetifier" flag.
(node:4740) Warning: Accessing non-existent property 'padLevels' of module exports inside circular dependency
(Use `node --trace-warnings ...` to show where the warning was created)
Jetifier found 903 file(s) to forward-jetify. Using 2 workers...
info Starting JS server...
info Installing the app...

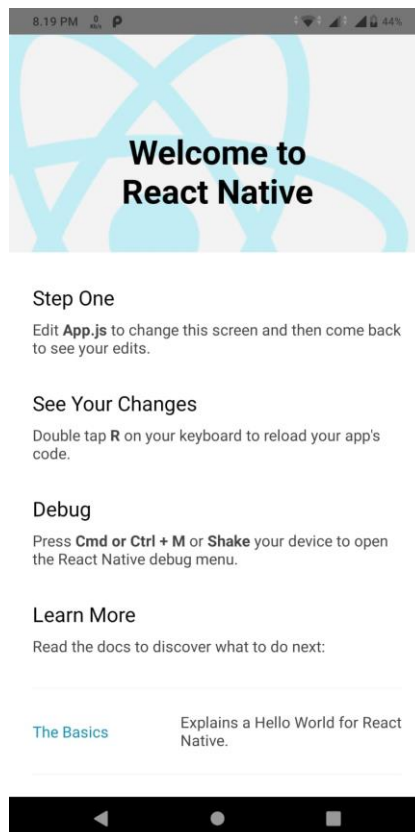
> Task :app:compileDebugJavaWithJavac

> Task :app:stripDebugDebugSymbols
Unable to strip the following libraries, packaging them as they are: libc++_shared.so, libevent-2.1.so, libevent_core-2.1.so, libevent_extra-2.1.so, libfb.so, libfbjni.so, libflipper.so, libfolly_futures.so, libfolly_json.so, liblog.so, liblog_init.so, libhermes-executor-common-debug.so, libhermes-executor-common-release.so, libhermes-executor-debug.so, libhermes-executor-release.so, libhermes-inspector.so, libimagepipeline.so, libjsc.so, libjscexecutor.so, libjsiheap.so, libjsiinspectors.so, libnative-filters.so, libnative-image-transcoder.so, libreact_codegen_reactandroidspec.so, libreact_nativemodule_core.so, libreactnativeblob.so, libreactnativejni.so, libreactnativeutilsjni.so, libreactperfloggerjni.so, libturboModulejsi.so, libyoga.so.

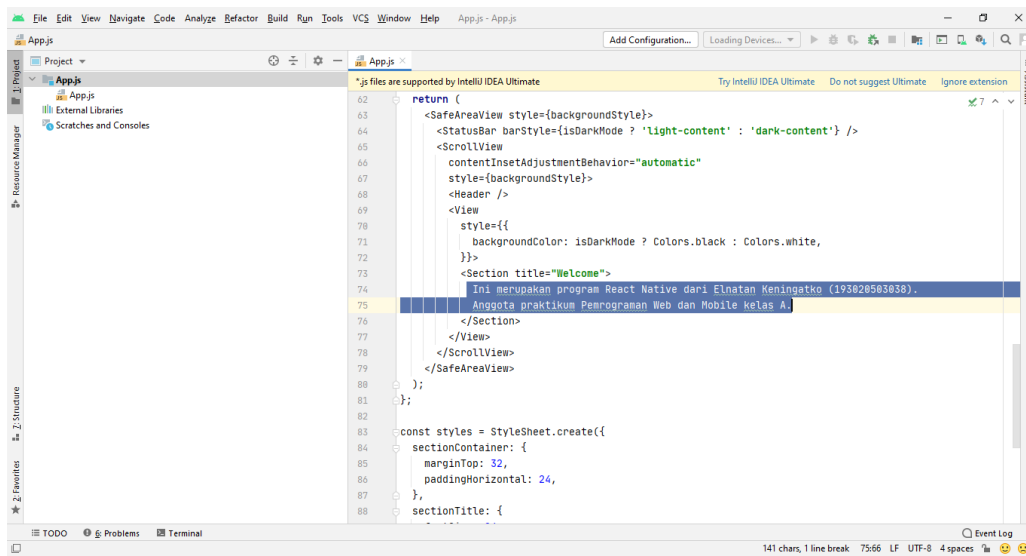
> Task :app:installDebug
Installing APK 'app-debug.apk' on 'ASUS_X00TD - 9' for app:debug
Installed on 1 device.

BUILD SUCCESSFUL in 6m 35s
29 actionable tasks: 29 executed
info Connecting to the development server...
info Starting the app on "J9AXGF00895838K"...
Starting: Intent { cmp=com.projectsaya/.MainActivity }
```

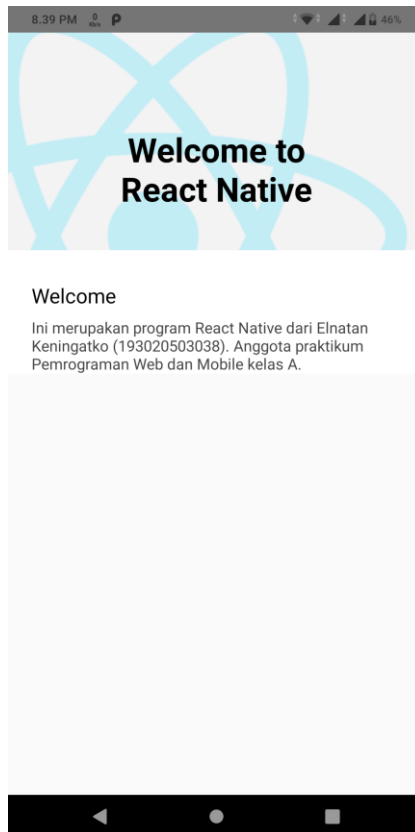
Gambar 2.18. Aplikasi *React Native* Berhasil Dijalankan.



Gambar 2.19. Aplikasi *React Native* Muncul di HP.



Gambar 2.20. Mengedit Source Code pada File *App.js*.



Gambar 2.21. Tampilan Aplikasi *React Native* Setelah Source Code Diubah.