

**LAPORAN PRAKTIKUM
PEMROGRAMAN WEB & MOBILE I**



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MODUL : 5 (React Native)

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BAB I

LANDASAN TEORI

1.1 Landasan Teori

1.1.1 React Native

React Native adalah *framework mobile app development* yang memungkinkan pengembangan aplikasi secara multi-*platform* yaitu Android dan iOS. Sederhananya, React Native adalah *framework* yang memungkinkan *developer* membuat aplikasi untuk berbagai *platform* dengan menggunakan basis kode yang sama.

Penggabungan antara *native mobile app* dan React juga bisa dilakukan dengan mudah. Jadi, pengembang bisa membuat aplikasi Android dan iOS dengan lebih cepat.

React Native sendiri pertama kali dirilis pada tahun 2015 oleh Facebook dan menjadi bagian dari proyek *open source* mereka.

Kemudian, hanya dalam beberapa tahun saja, React Native telah menjadi andalan bagi banyak *developer* untuk mengembangkan aplikasi seluler.

Beberapa contoh aplikasi seluler yang menggunakan *framework* React Native adalah Instagram, Facebook, Pinterest, hingga Skype.

Ada beberapa alasan lain mengapa *React Native* begitu populer, antara lain:

- *Developer* hanya perlu membuat satu kode untuk mengembangkan aplikasi berbasis Android atau iOS. Jadi, *framework* ini benar-benar menghemat waktu.

- React Native adalah *framework* yang dibangun berdasarkan React, yaitu *library* dari JavaScript yang sudah populer.
- *Framework* ini mendorong *frontend developer* yang sebelumnya hanya dapat bekerja dengan teknologi berbasis web saja. Kini, mereka bisa dengan mudah untuk mengembangkan *mobile platform*.

Selain beberapa alasan di atas, *React Native* juga memiliki keunggulan lain yaitu tidak akan *me-render webviews* dalam kodenya. Jadi program akan dijalankan sesuai dengan tampilan dan komponen dari *native* yang awalnya digunakan.

1.1.2 Cara Kerja React Native

Setelah mengetahui pengertian dan beberapa alasan mengapa React Native begitu populer. Kini, coba ketahui dulu bagaimana kerjanya.

React Native adalah *framework* yang ditulis dengan campuran bahasa JavaScript dan JXL, sebuah kode *markup* khusus yang menyerupai XML.

Framework ini memiliki kemampuan untuk berkomunikasi dengan kedua ranah sekaligus, yaitu *threads* yang berbasis JavaScript dan *threads* dari *native app*.

Jadi, bagaimana caranya untuk berkomunikasi? Rupanya *React Native* menggunakan apa yang disebut dengan “*bridge*” atau jembatan.

JavaScript dan *threads native* memang ditulis dengan dua bahasa pemrograman yang berbeda. Namun, fitur *bridging* dari React Native tetap memungkinkan untuk komunikasi dua arah.

Itu artinya saat pengembang sudah memiliki aplikasi Android atau iOS, mereka masih tetap bisa menggunakan komponennya saat menggunakan React Native.

1.1.3 Kelebihan React Native

1. Digunakan oleh Perusahaan-Perusahaan Besar

Meskipun tergolong *framework* baru, React Native tercatat telah digunakan oleh sejumlah perusahaan besar dalam membuat aplikasi. Sebut saja aplikasi Facebook, Instagram, Airbnb, dan Baidu. Nyatanya, React Native memang dikembangkan oleh tim Facebook untuk membuat aplikasi *mobile*.

2. Kode yang digunakan lebih simpel

React Native lebih mudah dipelajari daripada ‘Native’. Hal ini dikarenakan kode yang digunakan lebih simpel. Untuk Anda yang terbiasa dengan Javascript, menggunakan HTML, dan sejenisnya tentu akan merasa sangat familiar ketika dihadapkan dengan React Native.

Selain kode yang digunakan lebih simpel, Anda tidak perlu lagi menguasai bahasa pemrograman lainnya demi bisa membuat aplikasi yang bisa berjalan di dua sistem operasi sekaligus.

3. Cocok untuk startup

Untuk perusahaan yang baru merintis, atau biasa disebut dengan *start up*, dan ingin mengembangkan aplikasi *mobile*, React Native bisa menjadi pilihan *framework* yang tepat. Kenapa?

Karena perusahaan hanya perlu merekrut satu orang *developer* yang menguasai React Native dan bisa menghasilkan aplikasi yang bisa berjalan di dua sistem operasi sekaligus. Sayangnya, masih jarang *developer* yang menguasai *framework* ini.

4. Lebih hemat

Karena bisa merekrut satu orang untuk dua tugas sekaligus, perusahaan akan hemat dalam menggaji karyawan. Anggaran yang seharusnya digunakan untuk menggaji dua *developer* bisa dialihkan untuk kebutuhan lainnya yang tak kalah penting.

Misalnya seperti untuk konten, marketing, atau produk activation yang tentu bakal membutuhkan banyak sumber daya.

1.1.4 Kekurangan React Native

1. JavaScript yang Berkembang Sangat Cepat

JavaScript menjadi kelemahan dari React Native karena javascript berkembang begitu cepat sehingga efeknya menimbulkan beberapa hal tidak bisa dilakukan sesuai harapan.

2. Framework

Sama seperti JavaScript, framework React Native juga menjadi kelemahan tersendiri karena perubahan yang begitu cepat terjadi.

3. Platform

Sebagaimana kita ketahui, untuk bisa mengembangkan aplikasi mobile berbasis Ios maka developer juga harus menggunakan perangkat MAC OS karena sistem operasi ini eksklusif hanya tersedia di Mac, maka setidaknya Anda harus menyediakan Macbook.

4. Performance

Manusia memang tidak akan pernah puas soal performa, sehingga saat ini masih ada perdebatan terkait kinerja React Native secara umum di kalangan developer. Nah, bagi Anda yang memiliki pendapat kurang tentu hal ini menjadi poin negatif soal kekurangan React Native.

1.1.5 Android Studio

Android Studio adalah Integrated Development Environment (IDE) resmi untuk pengembangan aplikasi Android, yang didasarkan pada [IntelliJ IDEA](#). Selain sebagai editor kode dan fitur developer IntelliJ yang andal, Android Studio menawarkan banyak fitur yang meningkatkan produktivitas Anda dalam membuat aplikasi Android, seperti:

- Sistem build berbasis Gradle yang fleksibel
- Emulator yang cepat dan kaya fitur
- Lingkungan terpadu tempat Anda bisa mengembangkan aplikasi untuk semua perangkat Android

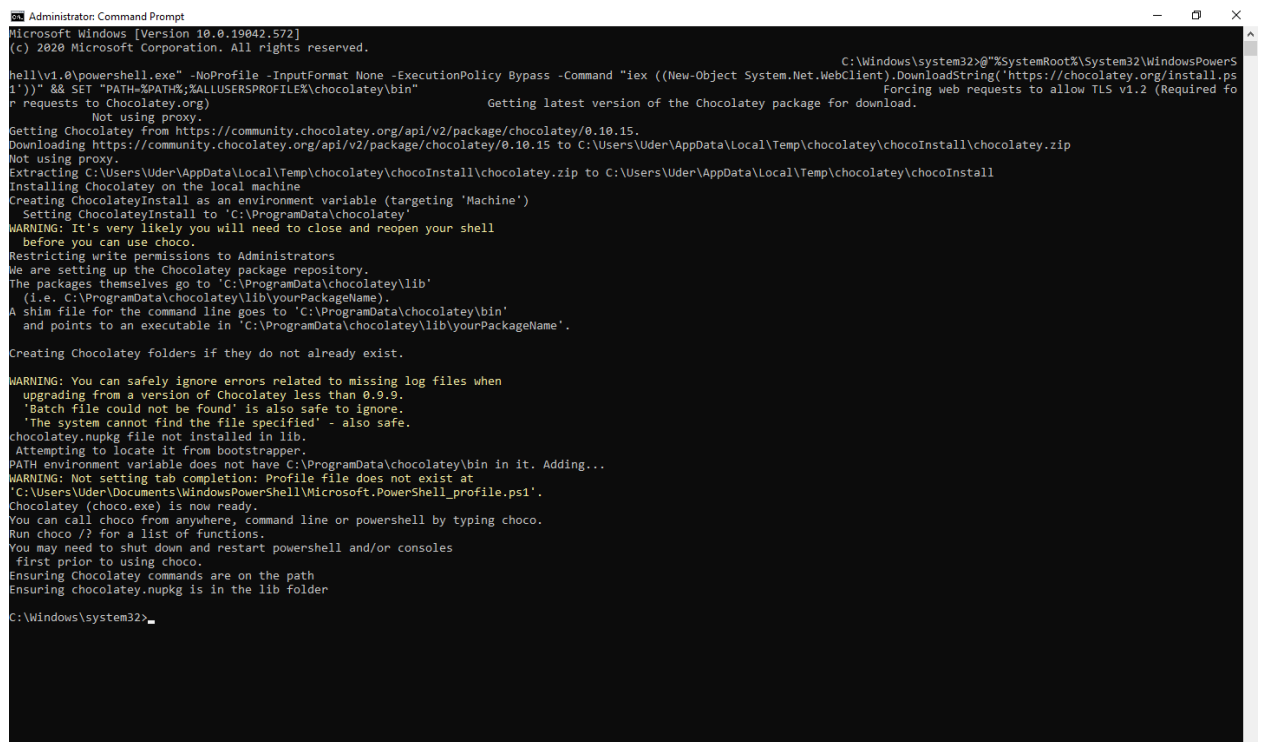
- Terapkan Perubahan untuk melakukan push pada perubahan kode dan resource ke aplikasi yang sedang berjalan tanpa memulai ulang aplikasi
- Template kode dan integrasi GitHub untuk membantu Anda membuat fitur aplikasi umum dan mengimpor kode sampel
- Framework dan alat pengujian yang lengkap
- Alat lint untuk merekam performa, kegunaan, kompatibilitas versi, dan masalah lainnya
- Dukungan C++ dan NDK
- Dukungan bawaan untuk Google Cloud Platform, yang memudahkan integrasi Google Cloud Messaging dan App Engine

BAB II

PEMBAHASAN

Pada tugas yang pertama kita diminta untuk melakukan instalasi chocolatey menggunakan CMD yaitu dengan cara, membuka CMD, kemudian run as administrator, kemudian masukan kode berikut :

```
@ "%SystemRoot%\System32\WindowsPowerShell\v1.0\powershell.exe" -NoProfile -InputFormat None -ExecutionPolicy Bypass -Command "iex ((New-Object System.Net.WebClient).DownloadString('https://chocolatey.org/install.ps1'))" && SET "PATH=%PATH%;%ALLUSERSPROFILE%\chocolatey\bin"
```



```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.19042.572]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Windows\system32>@"%SystemRoot%\System32\WindowsPowerShell\v1.0\powershell.exe" -NoProfile -InputFormat None -ExecutionPolicy Bypass -Command "iex ((New-Object System.Net.WebClient).DownloadString('https://chocolatey.org/install.ps1'))" && SET "PATH=%PATH%;%ALLUSERSPROFILE%\chocolatey\bin"
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\Uder\AppData\Local\Temp\chocolatey\chocoInstall\chocolatey.zip
Extracting C:\Users\Uder\AppData\Local\Temp\chocolatey\chocoInstall\chocolatey.zip to C:\Users\Uder\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\Uder\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

C:\Windows\system32>
```

Gambar 2.1 Instal Chocolatey

Setelah selesai Langkah diatas maka lanjut ke tugas nomor 2 yang dimana kita diminta untuk menginstal JDK, Node.js , dan Phyton dengan cara lanjutkan menulis kode pada cmd seperti kode cmd di bawah ini :

```
choco install -y nodejs.install python2 jdk8
```



```
Administrator Command Prompt
Ensuring Chocolatey commands are on the path
Ensuring chocolatey.nupkg is in the lib folder

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%

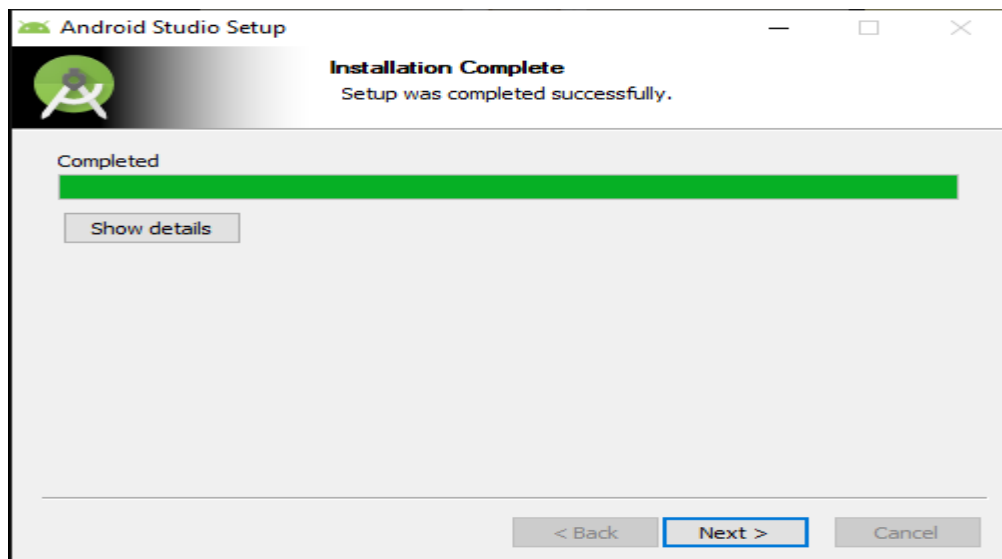
jdk8 v8.0.211 [Approved]
jdk8 package files install completed. Performing other installation steps.
Downloading JDK from https://java.dl.oracle.com/webapps/download/GetFile/1.8.0_211-b12/478a62b7d4e34b78b671c754eaf38ab/windows-i586/jdk-8u211-windows-x64.exe
Installing jdk8...
jdk8 has been installed.
PATH environment variable does not have C:\Program Files\Java\jdk1.8.0_211\bin in it. Adding...
jdk8 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 jdk8 was successful.
Software installed to 'C:\Program Files\Java\jdk1.8.0_211\'

Chocolatey installed 3/3 packages.
See the log for details (C:\ProgramData\chocolatey\logs\chocolatey.log).

C:\Windows\system32>
```

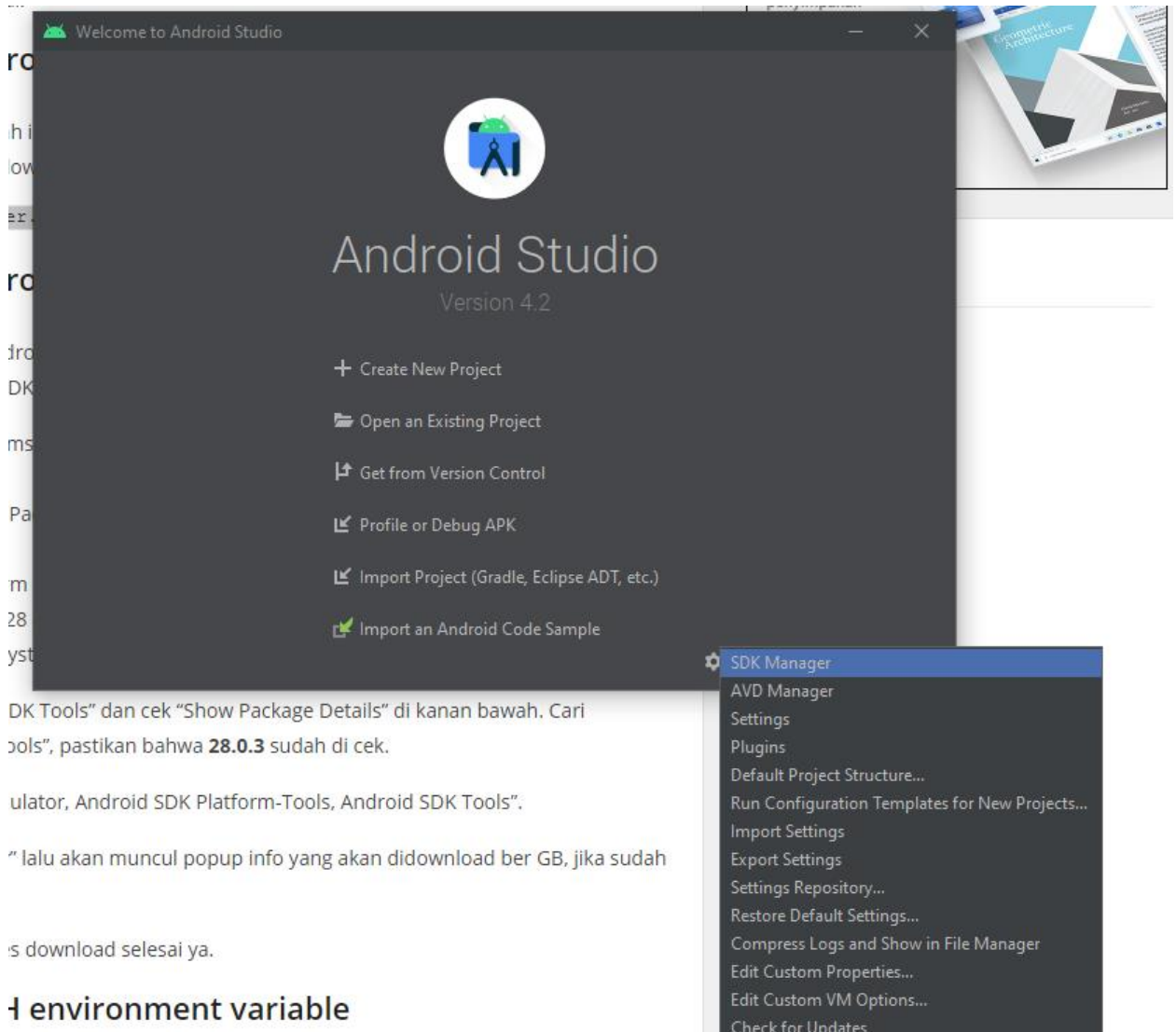
Gambar 2.2 Install JDK,Node.JS dan Phyton

Setelah melakukan installasi JDK,Node.Js dan juga phyton, selanjutnya adalah melakukan installasi Android studio. Pertama download terlebih dahulu file android studio. Setelah itu install seperti biasa,



Gambar 2.3 Install Android Studio

Selanjutnya adalah kita diminta untuk menjalankan android studio dan kemudian install android SDK



DK Tools” dan cek “Show Package Details” di kanan bawah. Cari
ols”, pastikan bahwa **28.0.3** sudah di cek.

ulator, Android SDK Platform-Tools, Android SDK Tools”;

” lalu akan muncul popup info yang akan didownload ber GB, jika sudah

is download selesai ya.

4 environment variable

Gambar 2.4 Android Studio SDK Manager

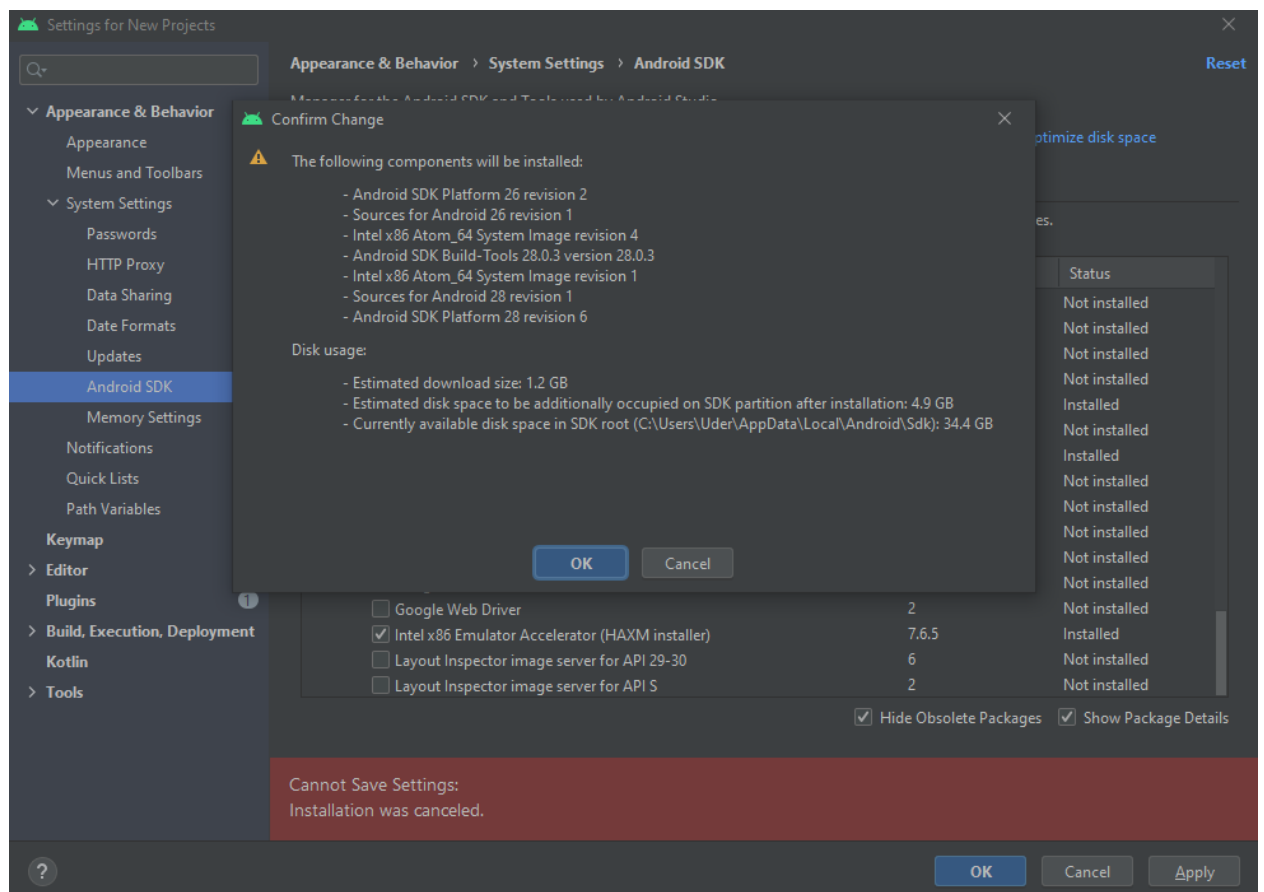
Kemudian install sesuai yang diminta dengan cara Pilih Tab “SDK Platforms” pada SDK Manager, kemudian cek pada list Android 9.0 (Pie) dan Android 8.0 (Oreo). Kemudian cek “Show Package Details” yang ada di kanan bawah. Pastikan cek

–Android SDK Platform 28 & 26

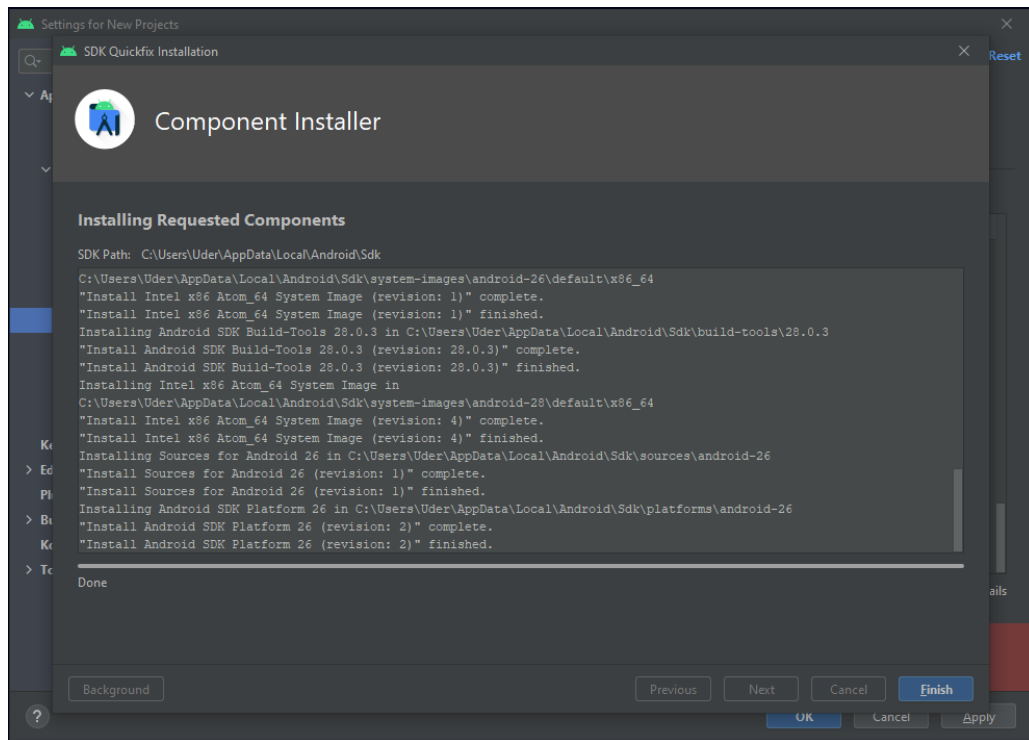
-Source for android 28 & 26

– Intel x86 Atom_64 System Image atau Google APIs Intel x86 Atom System Image

Kemudian pilih tab “SDK Tools” dan cek “Show Package Details” di kanan bawah. Cari “Android SDK Build-Tools”, pastikan bahwa **28.0.3** sudah di cek. Cek juga “Android Emulator, Android SDK Platform-Tools, Android SDK Tools”. Jika sudah, klik “Apply” lalu akan muncul popup info yang akan didownload ber GB, jika sudah yakin klik “OK”.

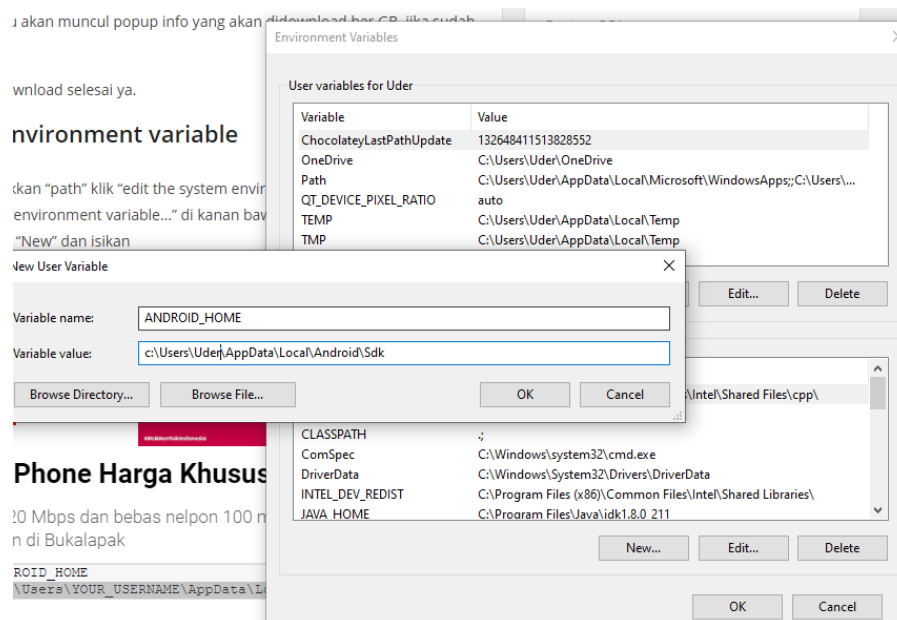


Gambar 2.5 Android Studio Instal file pada SDK manager



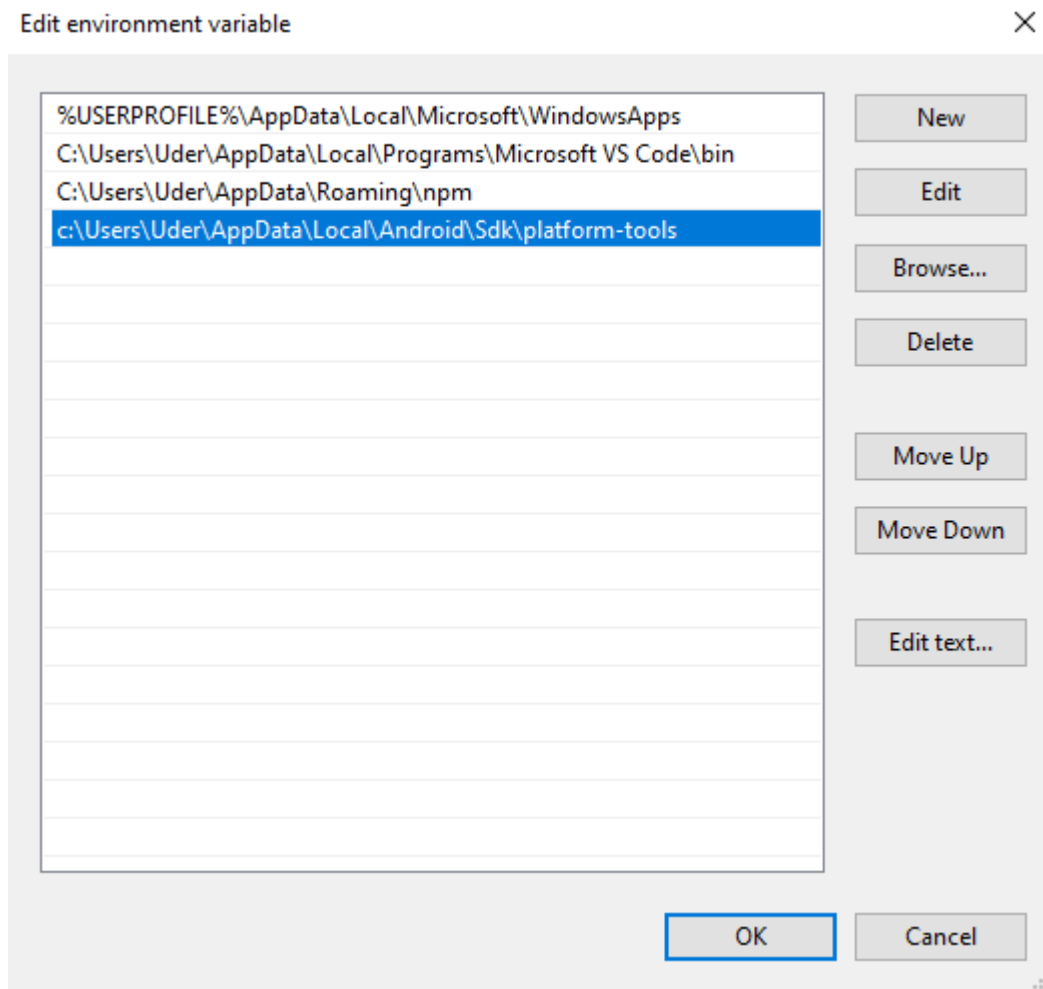
Gambar 2.6 Proses instalasi selesai

Selanjutnya kita diminta untuk membuat dan menset-up path



Gambar 2.7 Menambahkan Path pada environment variables

Kemudian klik path , lalu tambahkan variable baru didalam path dengan alamat `c:\Users\YOUR_USERNAME\AppData\Local\Android\Sdk\platform-tools` tersebut seperti berikut :



Gambar 2.8 Path Environment variables

Selanjutnya kita diminta untuk menginstal react native menggunakan cmd dengan memasukan kalimat `npm install -g react-native-cli` pada cmd. Jika sudah terinstall maka pada cmd akan seperti berikut :

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.19042.572]
(c) 2020 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 -> 7.12.0
npm notice Changelog: https://github.com/npm/cli/releases/tag/v7.12.0
npm notice Run npm install -g npm@7.12.0 to update!
npm notice

added 81 packages, and audited 82 packages in 9s

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 -> 7.12.0
npm notice Changelog: https://github.com/npm/cli/releases/tag/v7.12.0
npm notice Run npm install -g npm@7.12.0 to update!
npm notice

C:\Windows\system32>
```

Gambar 2.9 Install React Native

Kemudian pada nomor 7 setelah selesai kita diminta untuk membuat aplikasi pertama yang dimana kita dapat memasukan kode berikut `react-native init ProjectSaya` pada cmd

```
Administrator: C:\Windows\system32\cmd.exe
18 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
info Setting up new React Native app in C:\Windows\system32\ProjectSaya
(node:9400) 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 har-validator@5.1.5: this library is no longer supported
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 request@2.88.2: request has been deprecated, see https://github.com/request/request/issues/3142
npm WARN deprecated babel-eslint@10.1.0: babel-eslint is now @babel/eslint-parser. This package will no longer receive updates.

added 458 packages, and audited 1177 packages in 49s

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

16 moderate severity vulnerabilities

To address issues that do not require attention, run:
  npm audit fix

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.
info Adding required dev dependencies
up to date, audited 1177 packages in 7s

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

16 moderate severity vulnerabilities

To address issues that do not require attention, run:
  npm audit fix

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.

Run instructions for Android:
  • Have an Android emulator running (quickest way to get started), or a device connected.
  • cd "C:\Windows\system32\ProjectSaya" && npx react-native run-android

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

Gambar 2.10 Membuat File ProjectSaya

Setelah selesai pada poin 7 maka kita lanjut ke poin 8 yang dimana kita diminta untuk melakukan setting device / emulator dan melakukan cek apakah emulator / device android telah terhubung atau belum dengan cara mengetik adb devices pada CMD.

```
C:\Users\Uder>adb devices
List of devices attached
emulator-5554    device
```

Gambar 2.11 Cek Devices

Kemudian pada point 9 kita diminta untuk menjalankan react native pada emulator / device android dengan cara mengetik dua baris kalimat di bawah ini :

cd ProjectSaya

react-native run-android

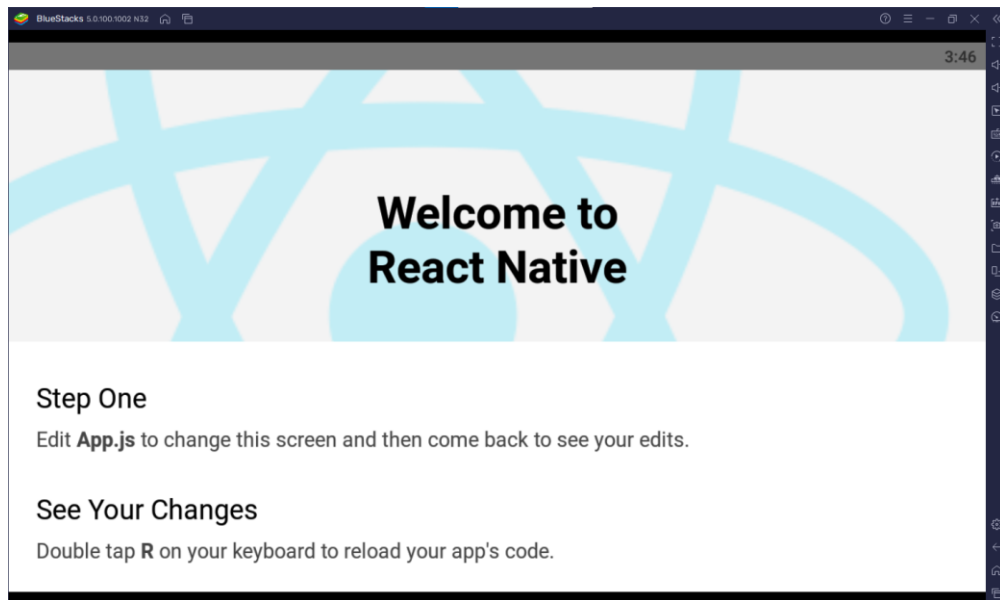


```
C:\Windows\system32\cmd.exe
C:\Users\Uder>cd ProjectSaya
C:\Users\Uder\ProjectSaya>react-native run-android
Info Running Jetifier to migrate libraries to AndroidX. You can disable it using "--no-jetifier" flag.
(node:8344) Warning: Accessing non-existent property 'padLevels' of module exports inside circular dependency
(Use "node --trace-warnings ..." to show where the warning was created)
Jetifier found 903 file(s) to forward-jetify. Using 8 workers...
Info JS server already running.
File c:\Users\Uder\android\repositories.cfg could not be loaded.
Checking the license for package Android SDK Build-Tools 29.0.2 in c:\Users\Uder\AppData\Local\Android\Sdk\licenses
License for package Android SDK Build-Tools 29.0.2 accepted.
Preparing "Install Android SDK Build-Tools 29.0.2 (revision: 29.0.2)".
"Install Android SDK Platform 29 (revision: 5)" ready.
Installing Android SDK Platform 29 in c:\Users\Uder\AppData\Local\Android\Sdk\platforms\android-29.0.2
"Install Android SDK Platform 29 (revision: 5)" complete." complete.
"Install Android SDK Platform 29 (revision: 5)" finished." finished.
> 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, libf1
ipper.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, libjsijniProfiler.so, libjsinspector.so, libnative-filters.so, libn
ative-image-transcoder.so, libreact_codegen_reactandroidspec.so, libreact_nativemodule_core.so, libreactnativeblob.so, libreactnativejni.so, libreactnativeuilsjni.so, libreactp
e
rLoggerjni.so, libturbonomodulejsijni.so, libyoga.so.
> Task :app:installDebug
[EmulatorConsole]: Failed to start Emulator console for 5554
Installing APK 'app-debug.apk' on 'emulator-5554 - 7.1.1' for app:debug
Installed on 1 device.

BUILD SUCCESSFUL in 3m 23s
29 actionable tasks: 29 executed
Info Connecting to the development server...
Info Starting the app on "emulator-5554"...
Starting: Intent { cmp=com.projectsaya/.MainActivity }
C:\Users\Uder\ProjectSaya>
```

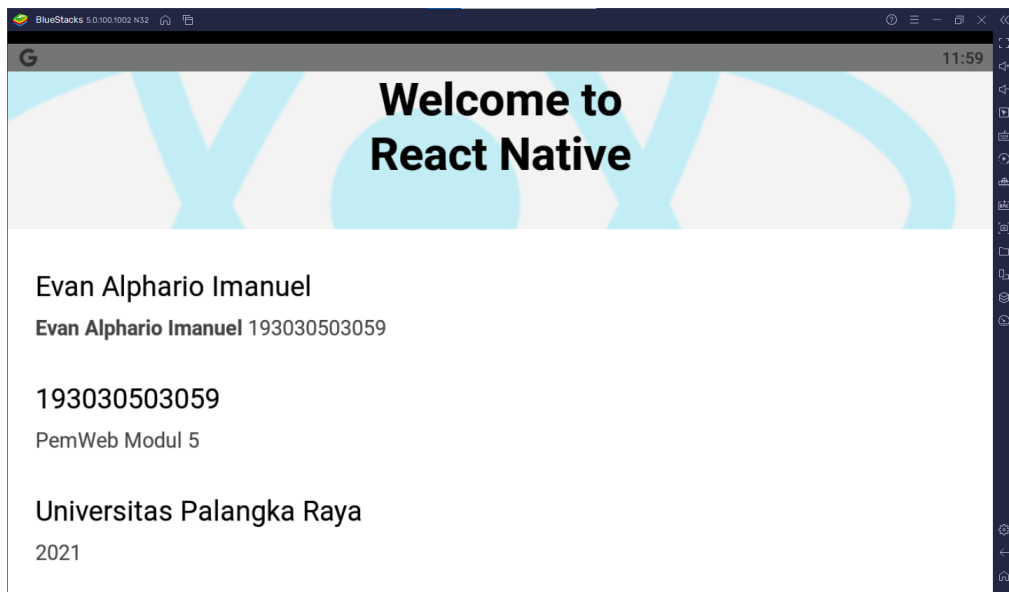
Gambar 2.12 Menjalankan React native pada emulator

Selanjutnya setelah selesai nomor 9 , pada point 10 kita diminta untuk mengubah dan mengedit tampilan menu react native. Berikut adalah tampilan awal dari react native tersebut :



Gambar 2.13 Tampilan Aplikasi Project Saya

Kemudian setelah di rubah isi pada file app.js maka hasilnya menjadi seperti berikut :



Gambar 2.14 Tampilan Aplikasi Project Saya Setelah dirubah

BAB III

KESIMPULAN

Dari praktikum ini dapat disimpulkan bahwa React Native merupakan sebuah framework yang memungkinkan untuk melakukan pengembangan aplikasi untuk berbagai platform menggunakan basis kode yang sama, sehingga membantu dan mempermudah dalam pembuatan aplikasi untuk berbagai platform.

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Ismi, T. (2021). *React Native: Ketahui Pengertian serta Kelebihan dan Kekurangannya.* <https://glints.com/id/lowongan/react-native-adalah/#.YHOqeT8RXDc>

Developer.android.com. (2020). Mengenal Android Studio | Developer Android | Android Developers. In *Developer.Android.Com.* <https://developer.android.com/studio/intro?hl=id>

LAMPIRAN

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.19042.572]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Windows\system32>@"%SystemRoot%\System32\WindowsPowerS
hell\1.0\powershell.exe" -NoProfile -InputFormat None -ExecutionPolicy Bypass -Command "iex ((New-Object System.Net.WebClient).DownloadString('https://chocolatey.org/install.ps
1'))" && SET "PATH=%PATH%;%ALLUSERSPROFILE%\chocolatey\bin"
r 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\Uder\AppData\Local\Temp\chocolatey\chocoInstall\chocolatey.zip
Not using proxy.
Extracting C:\Users\Uder\AppData\Local\Temp\chocolatey\chocoInstall\chocolatey.zip to C:\Users\Uder\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\Uder\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

C:\Windows\system32>
```

Gambar 2.1 Instal Chocolatey

```
Administrator: Command Prompt
Ensuring Chocolatey commands are on the path
Ensuring chocolatey.nupkg is in the lib folder

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%

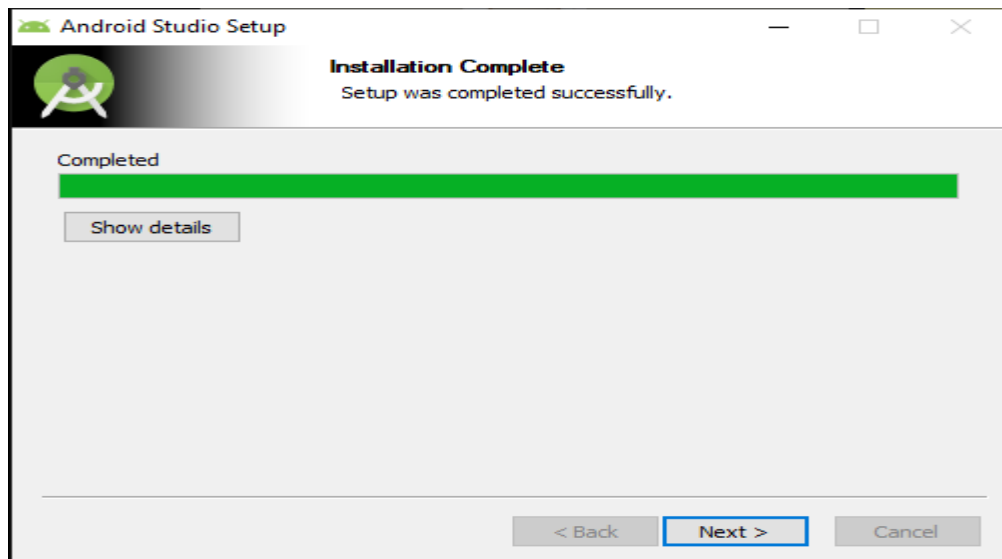
python2 v2.7.18 [Approved]
python2 package files install completed. Performing other installation steps.
Installing 64-bit python2...
python2 has been installed.
Installed to 'C:\Python27'
Adding C:\Python27 to PATH if needed
python2 may be able to be automatically uninstalled.
Environment Vars (like 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://java1.oracle.com/webapps/download/GetFile/1.8.0_211-b12/478a62b7d4e34b78b671c754eaaaf38ab/windows-i586/jdk-8u211-windows-x64.exe
Installing jdk8...
jdk8 has been installed.
PATH environment variable does not have C:\Program Files\Java\jdk1.8.0_211\bin in it. Adding...
jdk8 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 jdk8 was successful.
Software installed to 'C:\Program Files\Java\jdk1.8.0_211\'

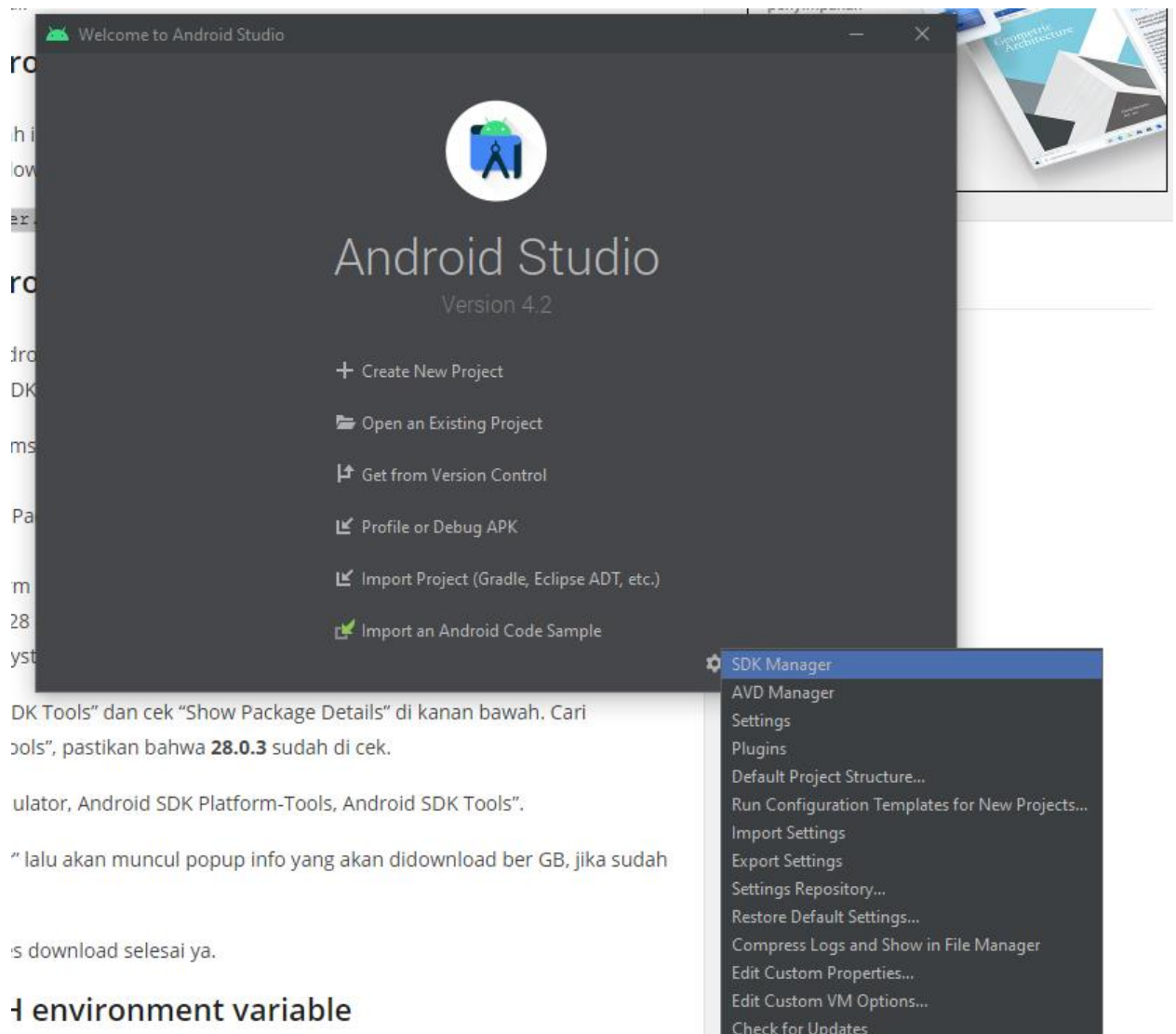
Chocolatey installed 3/3 packages.
See the log for details (C:\ProgramData\chocolatey\logs\chocolatey.log).

C:\Windows\system32>
```

Gambar 2.2 Install JDK,Node.JS dan Phyton



Gambar 2.3 Install Android Studio



DK Tools” dan cek “Show Package Details” di kanan bawah. Cari
ools”, pastikan bahwa **28.0.3** sudah di cek.

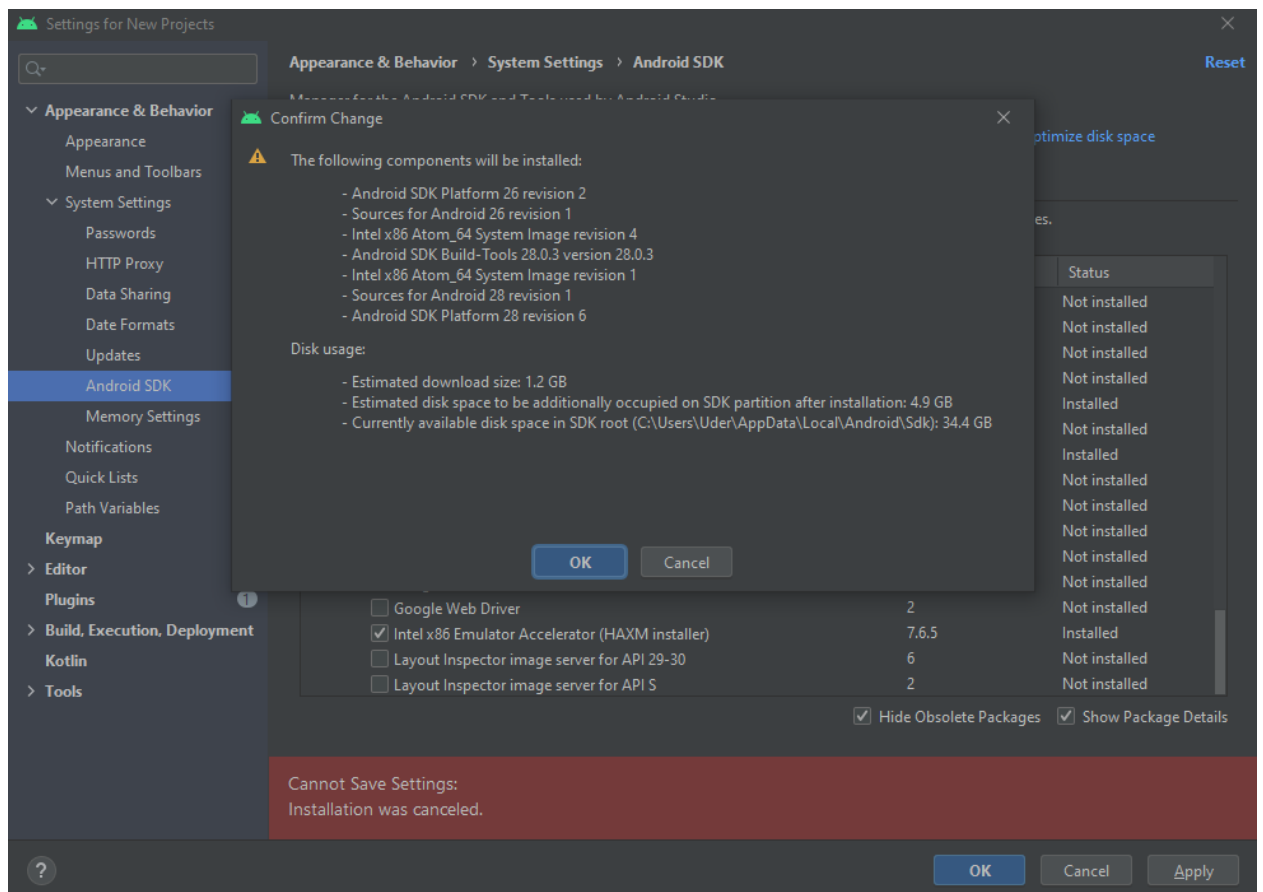
ulator, Android SDK Platform-Tools, Android SDK Tools”.

” lalu akan muncul popup info yang akan didownload ber GB, jika sudah

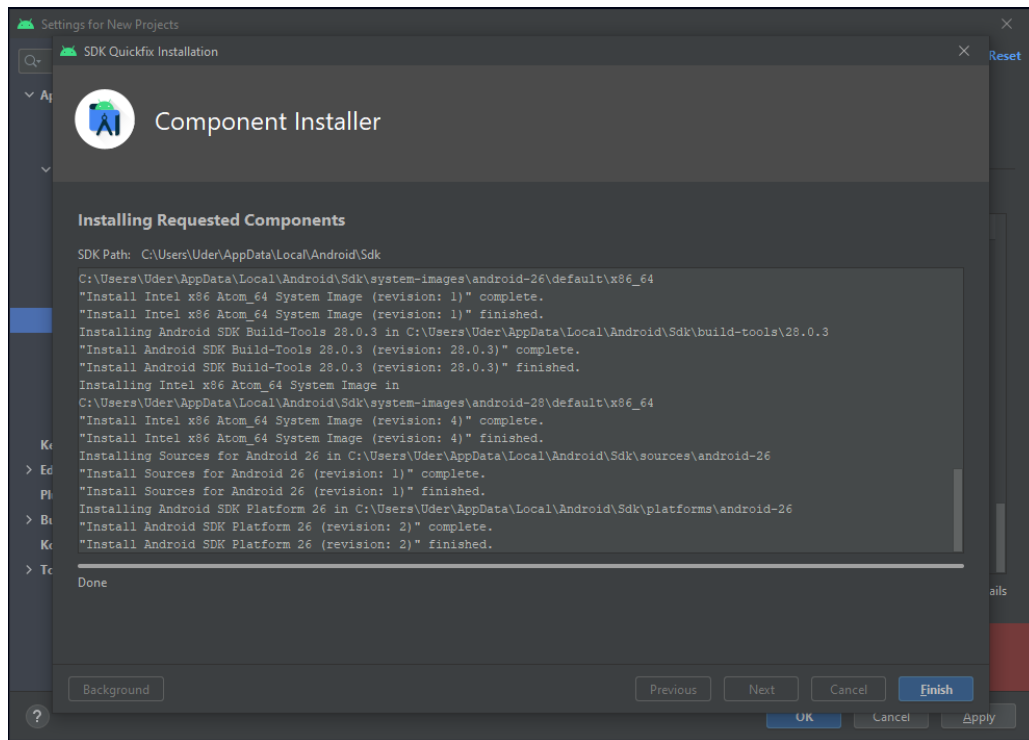
is download selesai ya.

1 environment variable

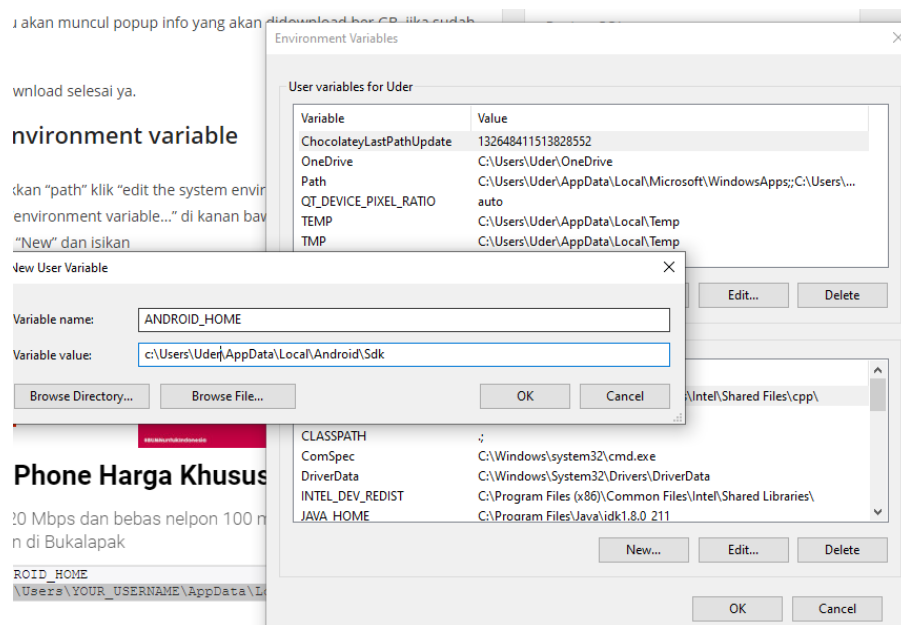
Gambar 2.4 Android Studio SDK Manager



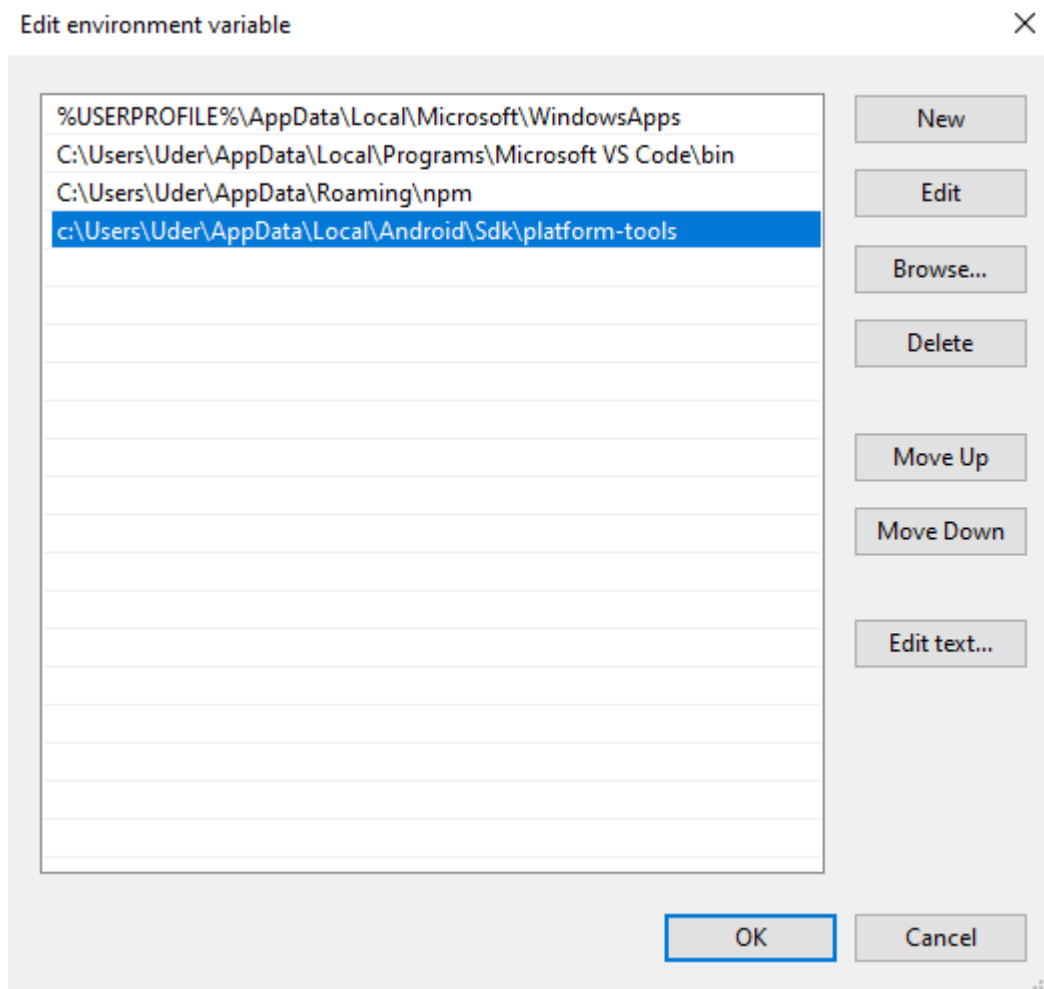
Gambar 2.5 Android Studio Instal file pada SDK manager



Gambar 2.6 Proses instalasi selesai



Gambar 2.7 Menambahkan Path pada environment variables



Gambar 2.8 Path Environment variables


```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.19042.572]
(c) 2020 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 -> 7.12.0
npm notice Changelog: https://github.com/npm/cli/releases/tag/v7.12.0
npm notice Run npm install -g npm@7.12.0 to update!
npm notice

added 81 packages, and audited 82 packages in 9s

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 -> 7.12.0
npm notice Changelog: https://github.com/npm/cli/releases/tag/v7.12.0
npm notice Run npm install -g npm@7.12.0 to update!
npm notice

C:\Windows\system32>
```

Gambar 2.9 Install React Native

```
Administrator: C:\Windows\system32\cmd.exe
18 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
info Setting up new React Native app in C:\Windows\system32\ProjectSaya
(node:9400) 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 har-validator@5.1.5: this library is no longer supported
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 request@2.88.2: request has been deprecated, see https://github.com/request/request/issues/3142
npm WARN deprecated babel-eslint@10.1.0: babel-eslint is now @babel/eslint-parser. This package will no longer receive updates.

added 458 packages, and audited 1177 packages in 49s

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

16 moderate severity vulnerabilities

To address issues that do not require attention, run:
  npm audit fix

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.
info Adding required dev dependencies
up to date, audited 1177 packages in 7s

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

16 moderate severity vulnerabilities

To address issues that do not require attention, run:
  npm audit fix

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.

Run instructions for Android:
  • Have an Android emulator running (quickest way to get started), or a device connected.
  • cd "C:\Windows\system32\ProjectSaya" && npx react-native run-android

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

Gambar 2.10 Membuat File ProjectSaya

```
C:\Users\Uder>adb devices
List of devices attached
emulator-5554    device
```

Gambar 2.11 Cek Devices

```
C:\Windows\system32\cmd.exe
C:\Users\Uder>cd ProjectSaya

C:\Users\Uder>react-native run-android
info Running Jetifier to migrate libraries to AndroidX. You can disable it using "--no-jetifier" flag.
(node:8344) 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 8 workers...
info JS server already running.
File C:\Users\Uder\android\repositories.cfg could not be loaded.
Checking the license for package Android SDK Build-Tools 29.0.2 in c:\Users\Uder\AppData\Local\Android\Sdk\licenses
License for package Android SDK Build-Tools 29.0.2 accepted.
Preparing "Install Android SDK Build-Tools 29.0.2 (revision: 29.0.2)".
"Install Android SDK Platform 29 (revision: 5)" ready.
Installing Android SDK Platform 29 in c:\Users\Uder\AppData\Local\Android\Sdk\platforms\android-29.0.2
"Install Android SDK Platform 29 (revision: 5)" complete." complete.
"Install Android SDK Platform 29 (revision: 5)" finished." finished.

> Task :app:compileDebugJavaWithJavac

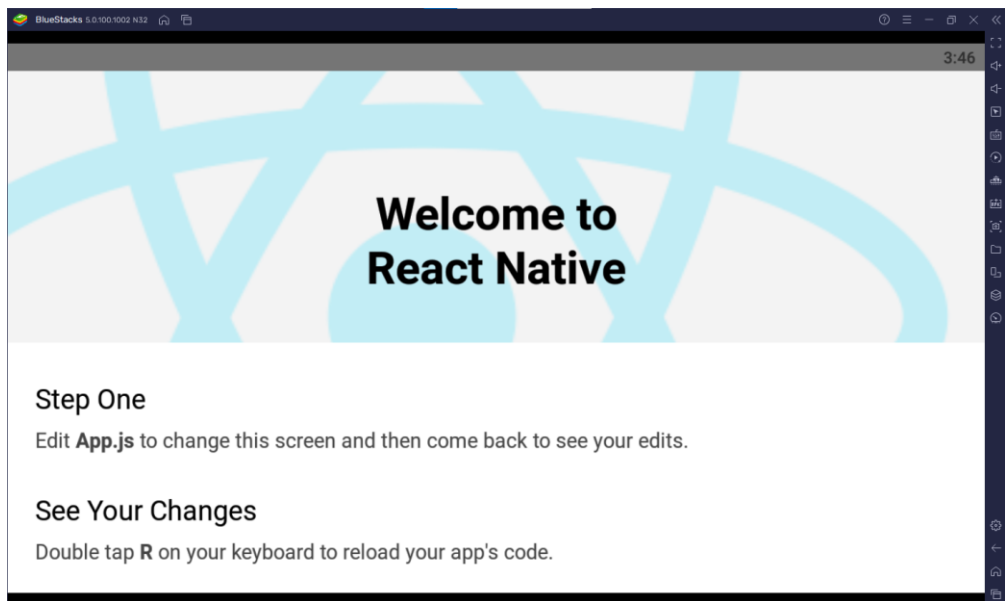
> Task :app:stripDebugDebugSymbols
Unable to strip the following libraries, packaging them as they are: libc++_shared.so, libevent-2.1.so, libevent_core-2.1.so, libevent_extra-2.1.so, libfb.so, libfbjni.so, libf1
ipper.so, libfolly_futures.so, libfolly_json.so, libglog.so, libglog_init.so, libhermes-executor-common-debug.so, libhermes-executor-common-release.so, libhermes-executor-debug.
so, libhermes-executor-release.so, libhermes-inspector.so, libimagepipeline.so, libjsc.so, libjscexecutor.so, libjsijniProfiler.so, libjsinspector.so, libnative-filters.so, libn
ative-imageencoder.so, libreact_codegen_reactandroidspec.so, libreact_nativemodule_core.so, libreactnativeblob.so, libreactnativejni.so, libreactnativeutilsjni.so, libreactpe
rfloggerjni.so, libturbonomodulejsijni.so, libyoga.so.

> Task :app:installDebug
[EmulatorConsole]: Failed to start Emulator console for 5554
Installing APK 'app-debug.apk' on 'emulator-5554 - 7.1.1' for app:debug
Installed on 1 device.

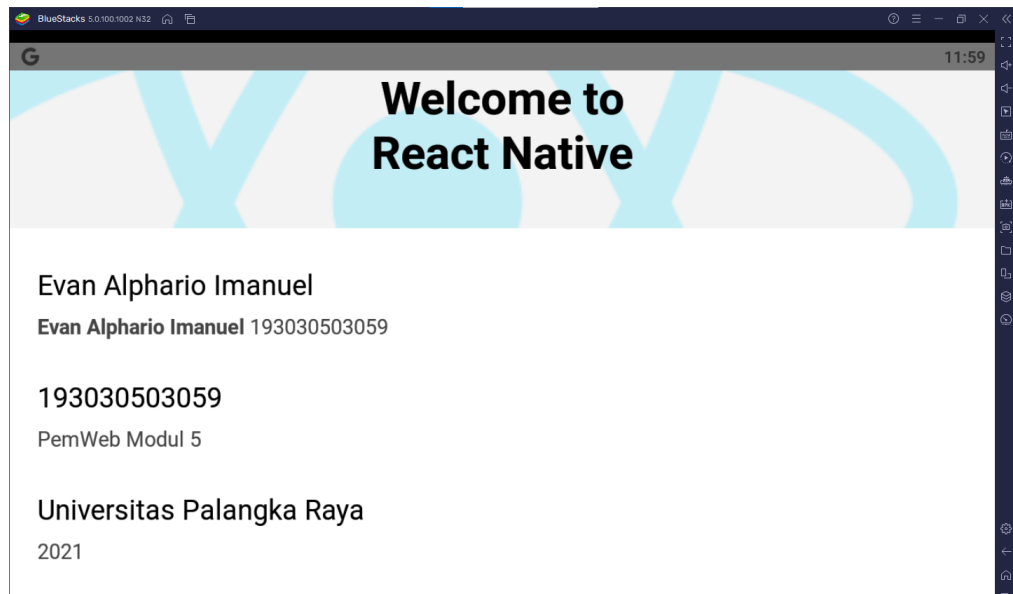
BUILD SUCCESSFUL in 3m 23s
29 actionable tasks: 29 executed
info Connecting to the development server...
info Starting the app on "emulator-5554"...
Starting Intent { cmp=com.projectSaya/.MainActivity }

C:\Users\Uder>ProjectSaya
```

Gambar 2.12 Menjalankan React native pada emulator



Gambar 2.13 Tampilan Aplikasi Project Saya



Gambar 2.14 Tampilan Aplikasi Project Saya Setelah dirubah