



UNIVERSITI MALAYSIA TERENGGANU

LAB MODULE 2

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MATRIC NO : S63762

PROGRAMME: BACHELOR OF COMPUTER SCIENCE (MOBILE COMPUTING)

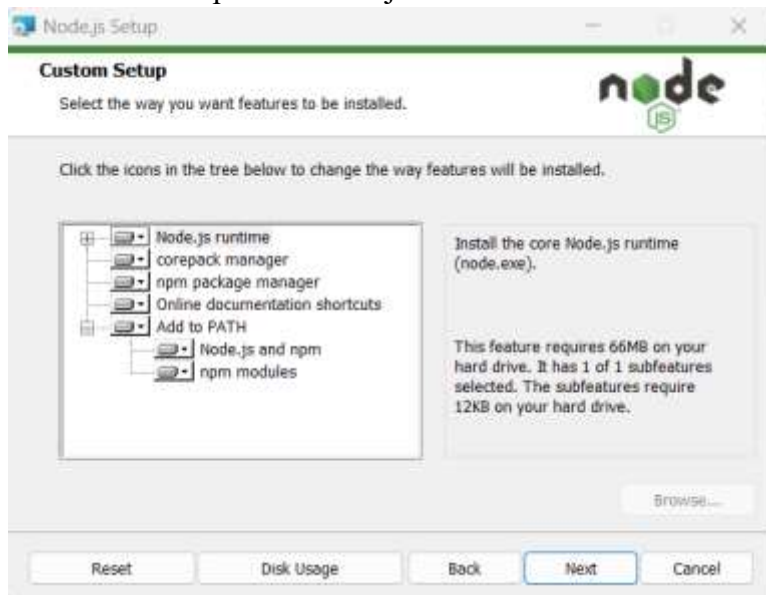
LECTURER : DR RABIEI B MAMAT

Task 1

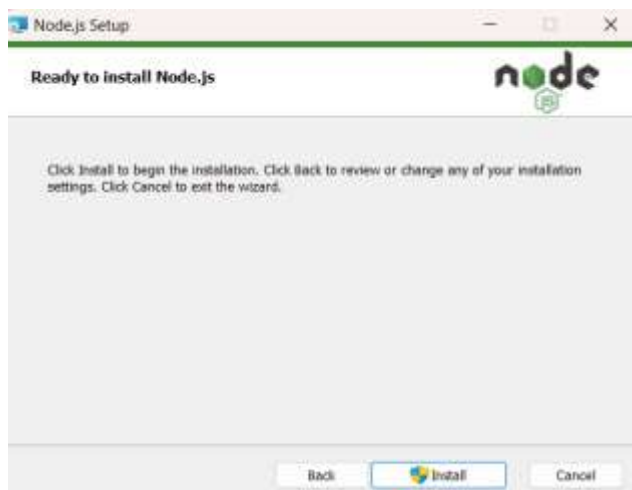
1. Install the node.js



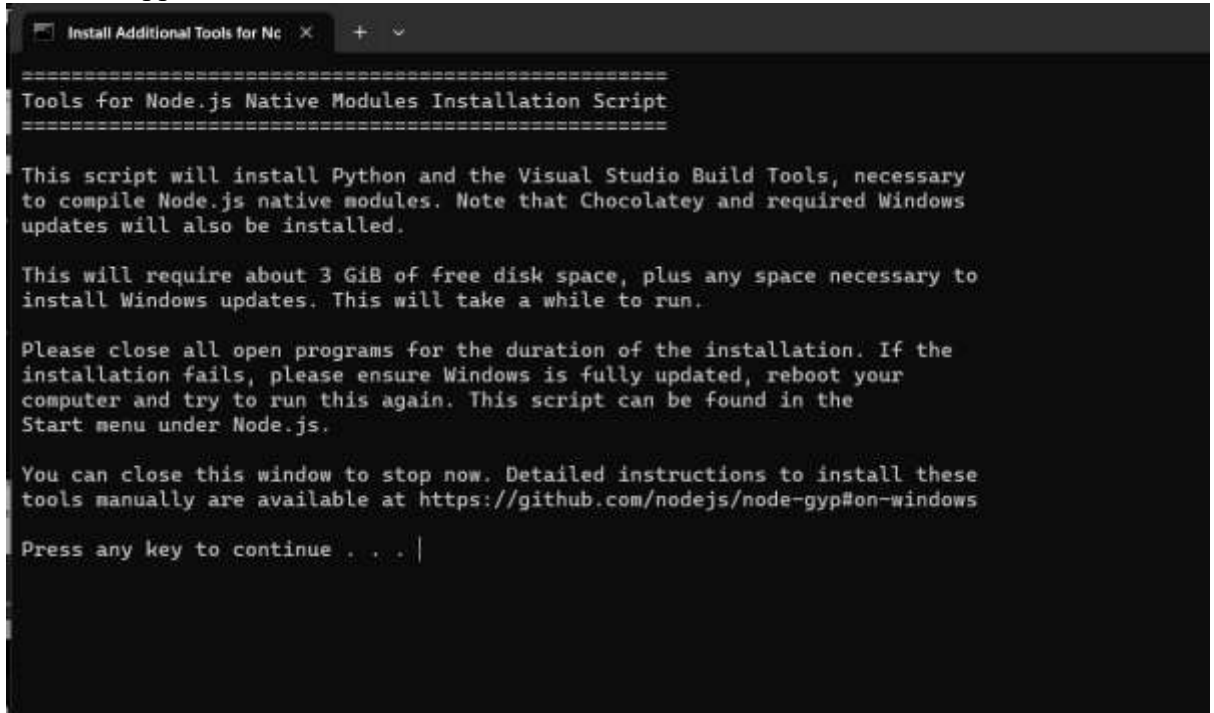
2. Make sure the npm and node.js is under the Add to PATH icon.:



3. Click install



4. This will appear.



```
=====  
Tools for Node.js Native Modules Installation Script  
=====
```

This script will install Python and the Visual Studio Build Tools, necessary to compile Node.js native modules. Note that Chocolatey and required Windows updates will also be installed.

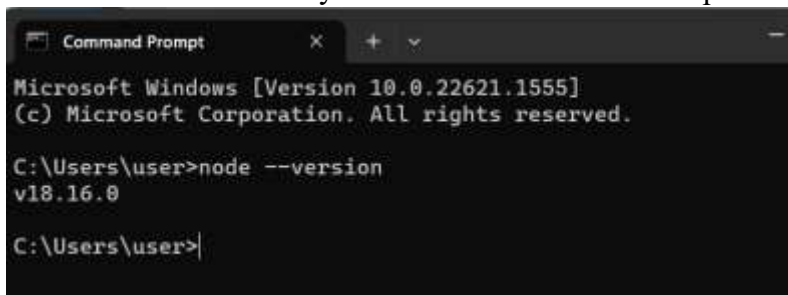
This will require about 3 GiB of free disk space, plus any space necessary to install Windows updates. This will take a while to run.

Please close all open programs for the duration of the installation. If the installation fails, please ensure Windows is fully updated, reboot your computer and try to run this again. This script can be found in the Start menu under Node.js.

You can close this window to stop now. Detailed instructions to install these tools manually are available at <https://github.com/nodejs/node-gyp#on-windows>

Press any key to continue . . . |

5. Check if it is successfully installed in Command Prompt.



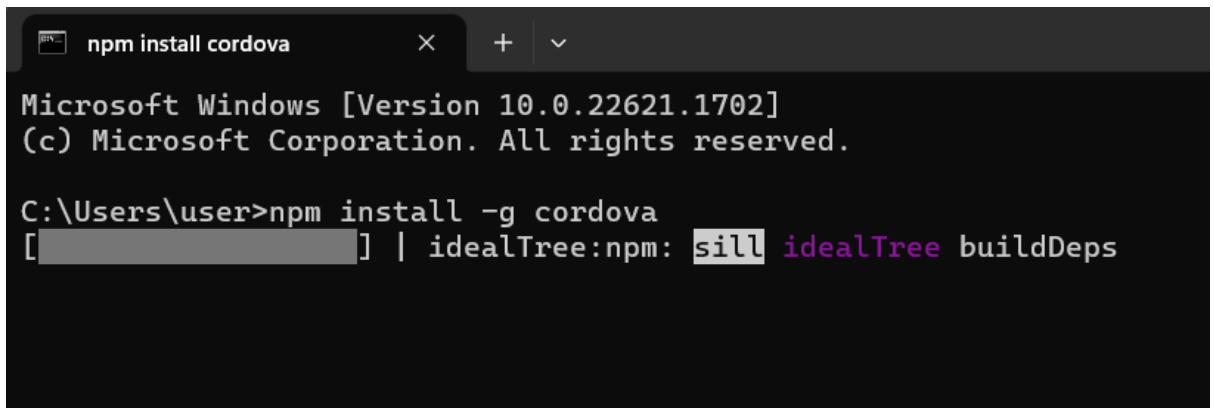
```
Microsoft Windows [Version 10.0.22621.1555]  
(c) Microsoft Corporation. All rights reserved.
```

C:\Users\user>node --version
v18.16.0

C:\Users\user>|

6. Install GIT at git-scm.com

7. Install Cordova



```
Microsoft Windows [Version 10.0.22621.1702]  
(c) Microsoft Corporation. All rights reserved.
```

C:\Users\user>npm install -g cordova
[redacted] | idealTree:npm: sill idealTree buildDeps

-g mean to install it globally.

8. Cordova is successfully installed.

```

C:\Users\user> npm install --save-extras fs-extra rxjs
- reify:fs-extra: http fetch GET 200 https://registry.npmjs.org/fs-extra/-/fs-extra-
- reify:fs-extra: http fetch GET 200 https://registry.npmjs.org/fs-extra/-/fs-extra-
- reify:fs-extra: http fetch GET 200 https://registry.npmjs.org/fs-extra/-/fs-extra-
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- reify:fs-extra: http fetch GET 200 https://registry.npmjs.org/fs-extra/-/fs-extra-
- reify:rxjs: http fetch GET 200 https://registry.npmjs.org/rxjs/-/rxjs-6.6.7.tgz 93
- reify:rxjs: http fetch GET 200 https://registry.npmjs.org/rxjs/-/rxjs-6.6.7.tgz 93

added 498 packages in 1m

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

npm notice New minor version of npm available! 9.5.1 -> 9.6.6
npm notice Changelog: https://github.com/npm/cli/releases/tag/v9.6.6
npm notice Run `npm install -g npm@9.6.6` to update!
npm notice

C:\Users\user>

```

```

C:\Users\user> cordova
May Cordova anonymously report usage statistics to improve the tool over time? yes

Thanks for opting into telemetry to help us improve cordova.

Synopsis

  cordova command [options]

Global Commands
create ..... Create a project
help ..... Get help for a command
telemetry ..... Turn telemetry collection on or off
config ..... Set, get, delete, edit, and list global cordova options

Project Commands
info ..... Generate project information
requirements ..... Check and print out all the requirements
                  for platforms specified

platform ..... Manage project platforms
plugin ..... Manage project plugins

prepare ..... Copy files into platform(s) for building
compile ..... build platform(s)
clean ..... Cleanup project from build artifacts

run ..... Run project
              (including prepare && compile)
serve ..... Run project with a local webserver
              (including prepare)

Learn more about command options using 'cordova help <command>'

Aliases
build => cordova prepare && cordova compile
simulate => cordova run --simulator

Options
-v, --version ..... prints out this utility's version
-d, --verbose ..... debug mode produces verbose log output for all activity,
                    disables check for CLI updates
--no-update-notifier ..... suppresses executing hooks
--hooks ..... (taking RegEx hook patterns as parameters)

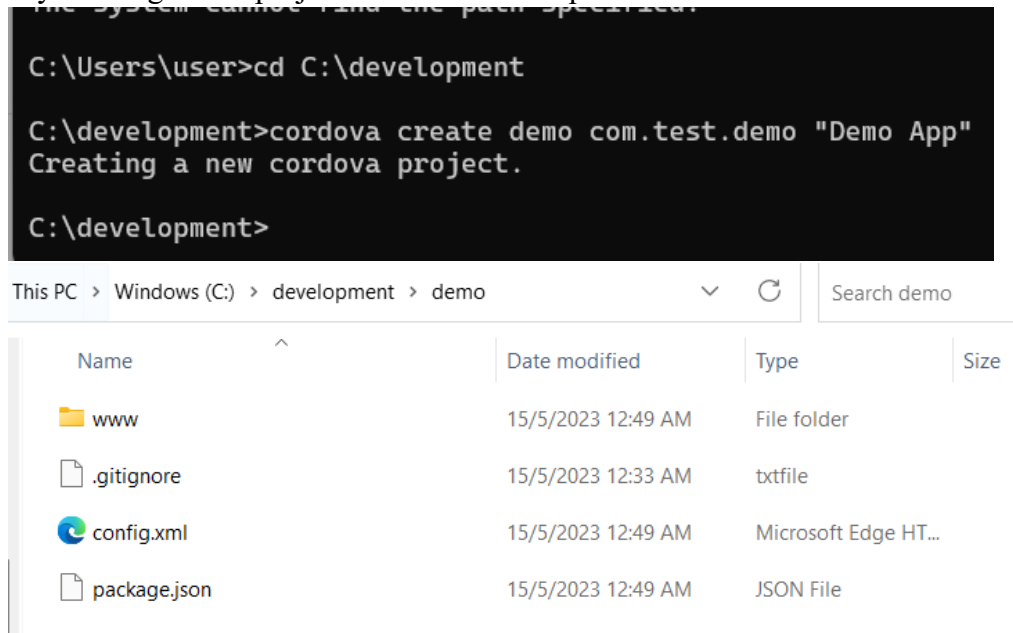
Examples
cordova create myApp org.apache.cordova.myApp myApp
cordova plugin add cordova-plugin-camera
cordova platform add android
cordova plugin add cordova-plugin-camera --save
cordova platform add android --save
cordova requirements android
cordova build android --verbose
cordova run android
cordova build android --release -- --keystore=.android.keystore --storePassword=android --alias=myKey
cordova config ls

```

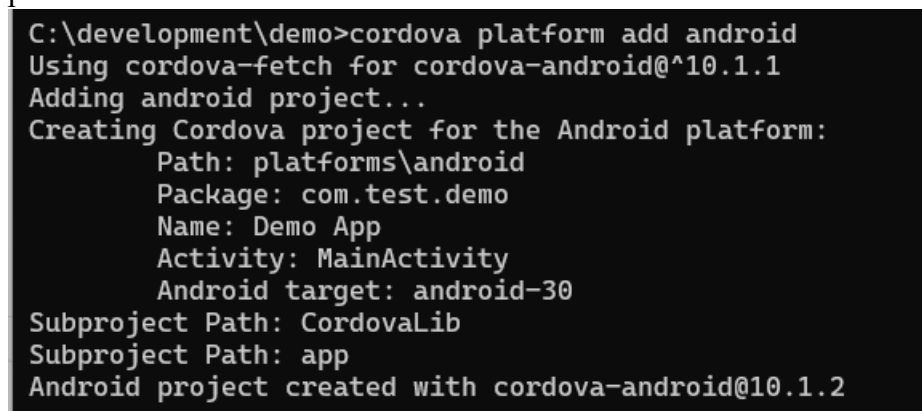
This is the cordova version that I've installed:

```
C:\Users\user>cordova -v
11.1.0
```

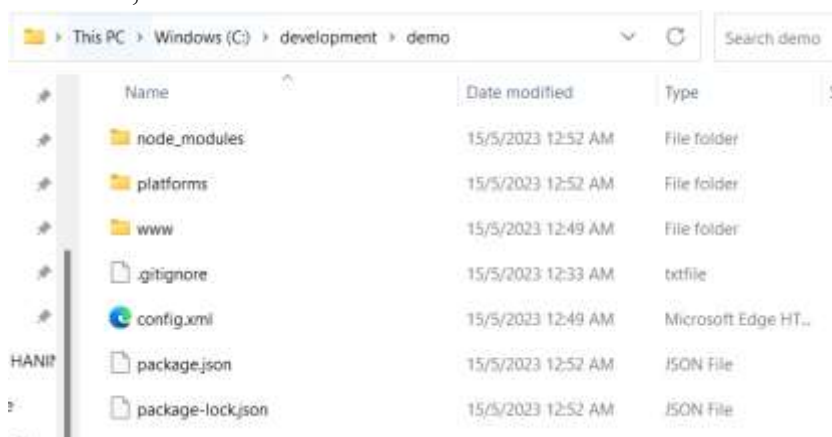
9. Create/ setting the environment in the Local Disk C named “development”
10. Try creating a new project inside the development file named “demo” .



11. Tell the cordova to create an app which the platform is Android by typing ‘cordova platform add android’.

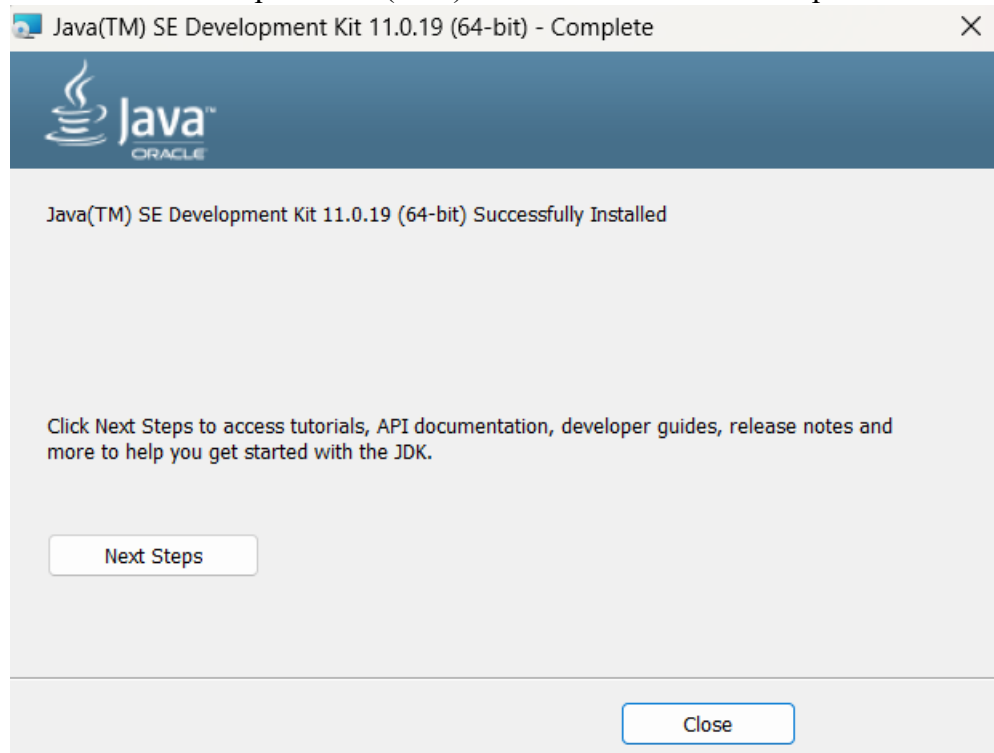


After that, it will create another files such as:-



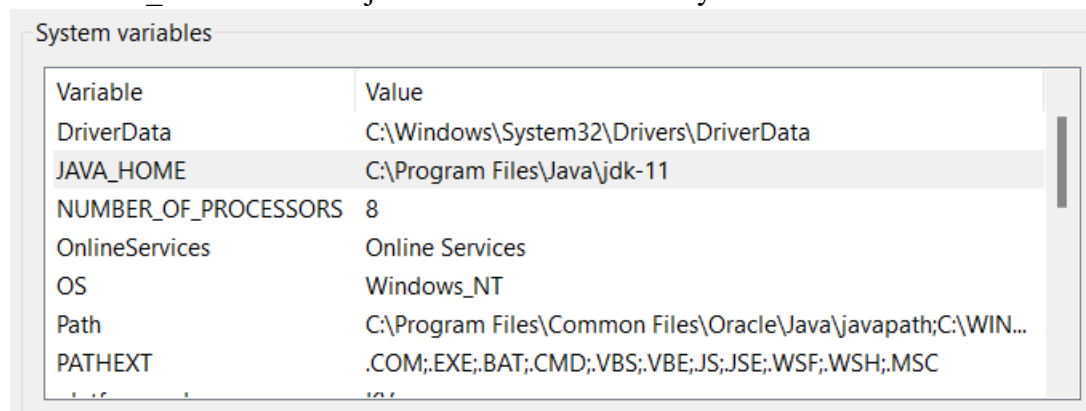
And in the platform folder there will be android folder.

12. Install Java Development Kit(JDK) version 11.0.19 to the computer.

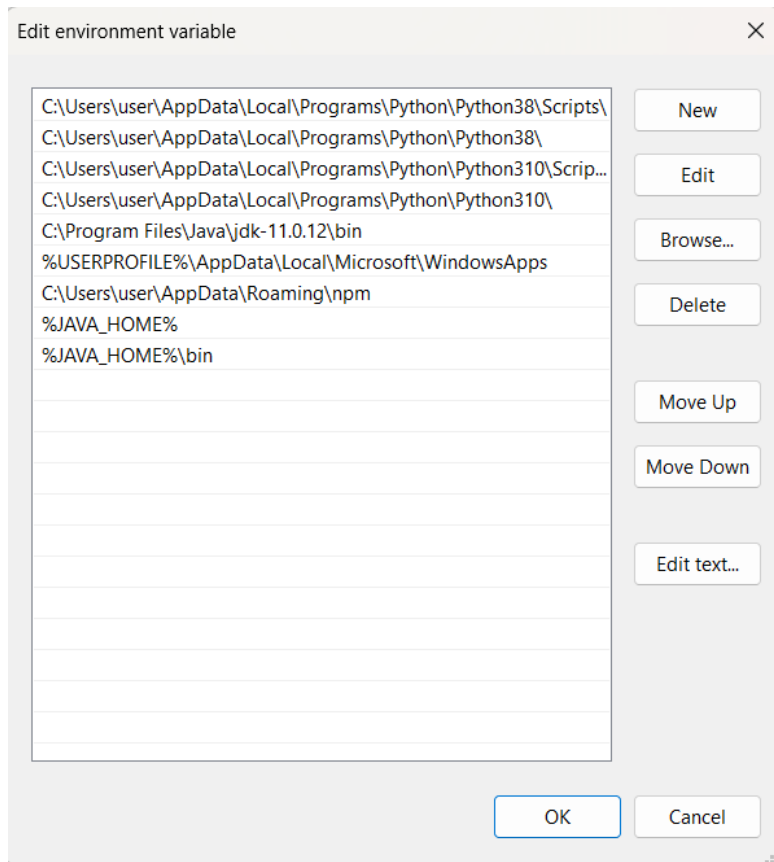


13. Do some setting for the JDK.

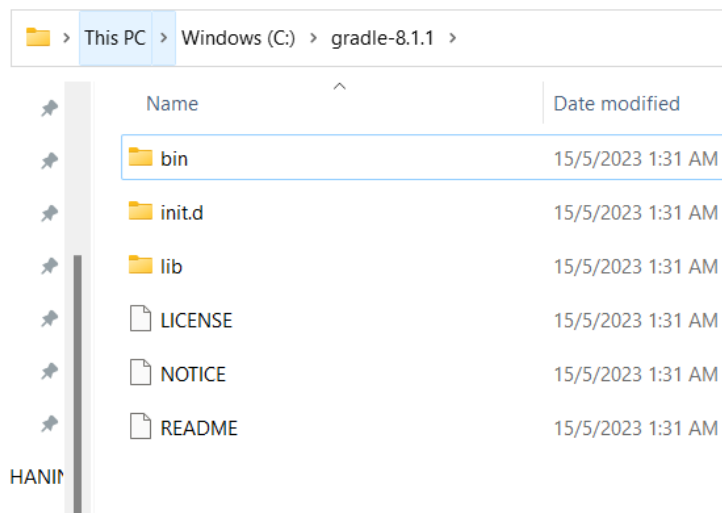
Add JAVA_HOME and the java file for the value at System variables.



Then, add %JAVA_HOME% and %JAVA_HOME% \bin in the Path for the User variables for User.

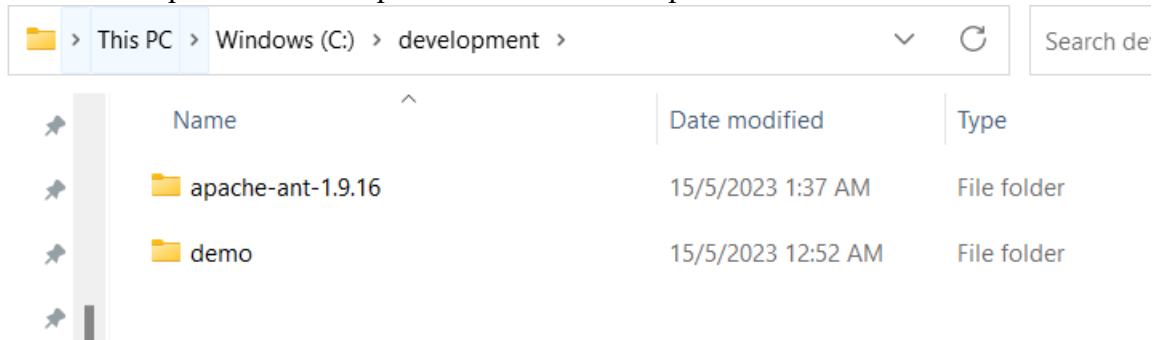


14. Install Gradle



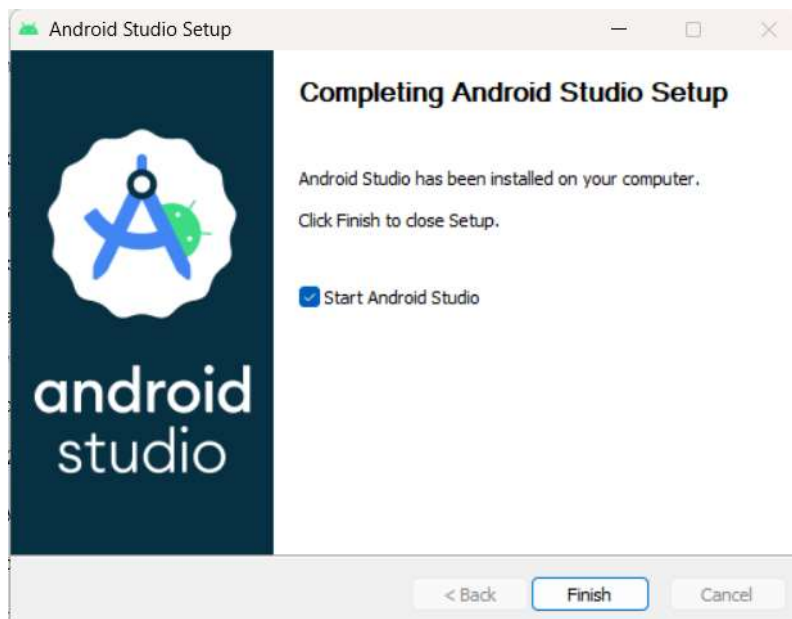
Next, setup the setting for the Gradle.

15. Download Apache ANT and put it inside the development file.



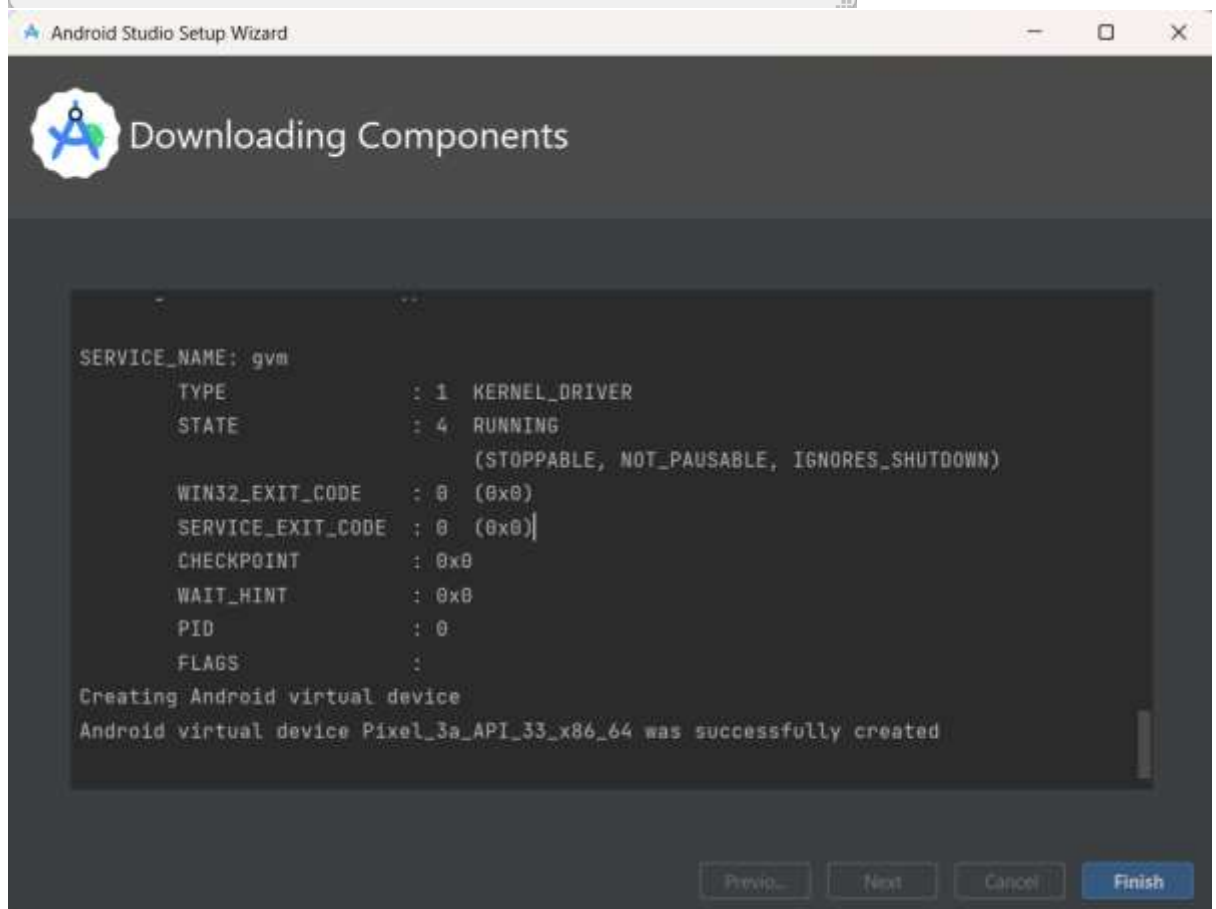
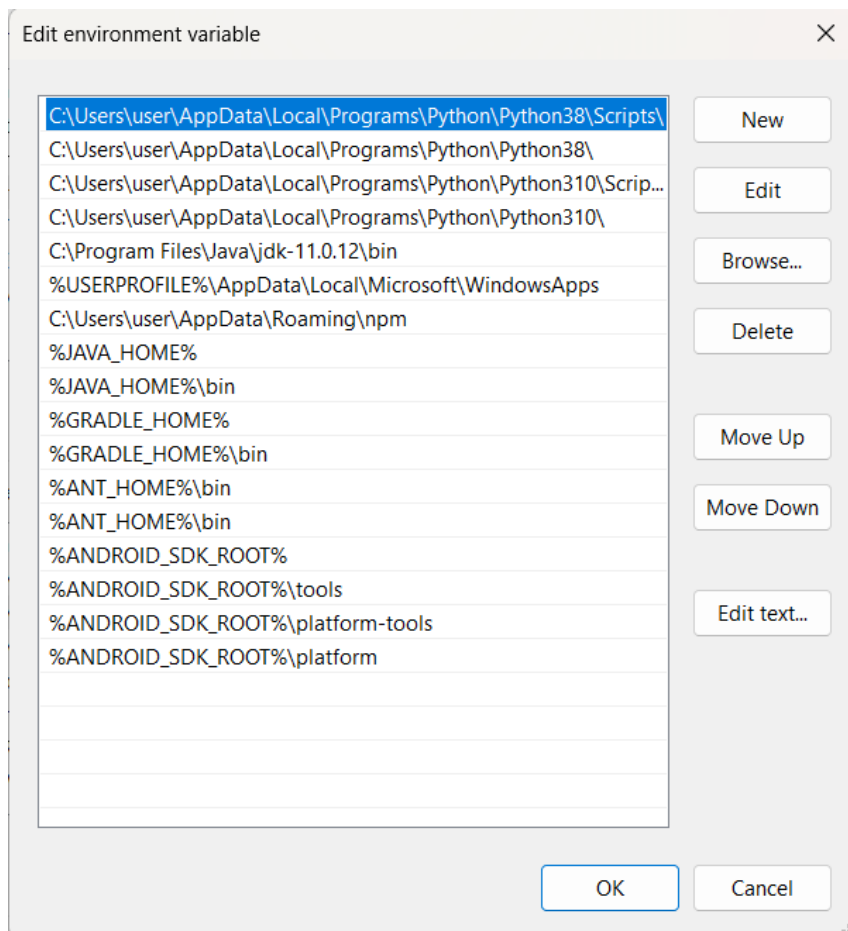
Next, setup the environment variable as usual.

16. Install the Android SDK or Android Studio



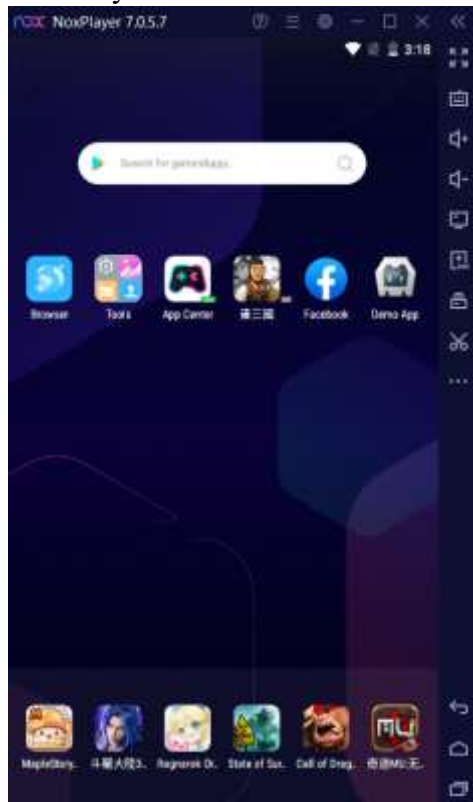
SDK Folder : C:\Users\user\AppData\Local\Android\Sdk

System variables	
Variable	Value
ANDROID_HOME	C:\Users\user\AppData\Local\Android\Sdk
ANDROID_SDK_ROOT	C:\Users\user\AppData\Local\Android\Sdk



17. Install Emulator

Nox Player is installed.



Task 2

```
Command Prompt
Microsoft Windows [Version 10.0.22621.1702]
(c) Microsoft Corporation. All rights reserved.

C:\Users\user>cd Dekstop
The system cannot find the path specified.

C:\Users\user>cd Desktop

C:\Users\user\Desktop>mkdir cordovaProject

C:\Users\user\Desktop>cd cordovaProject

C:\Users\user\Desktop\cordovaProject>|
```

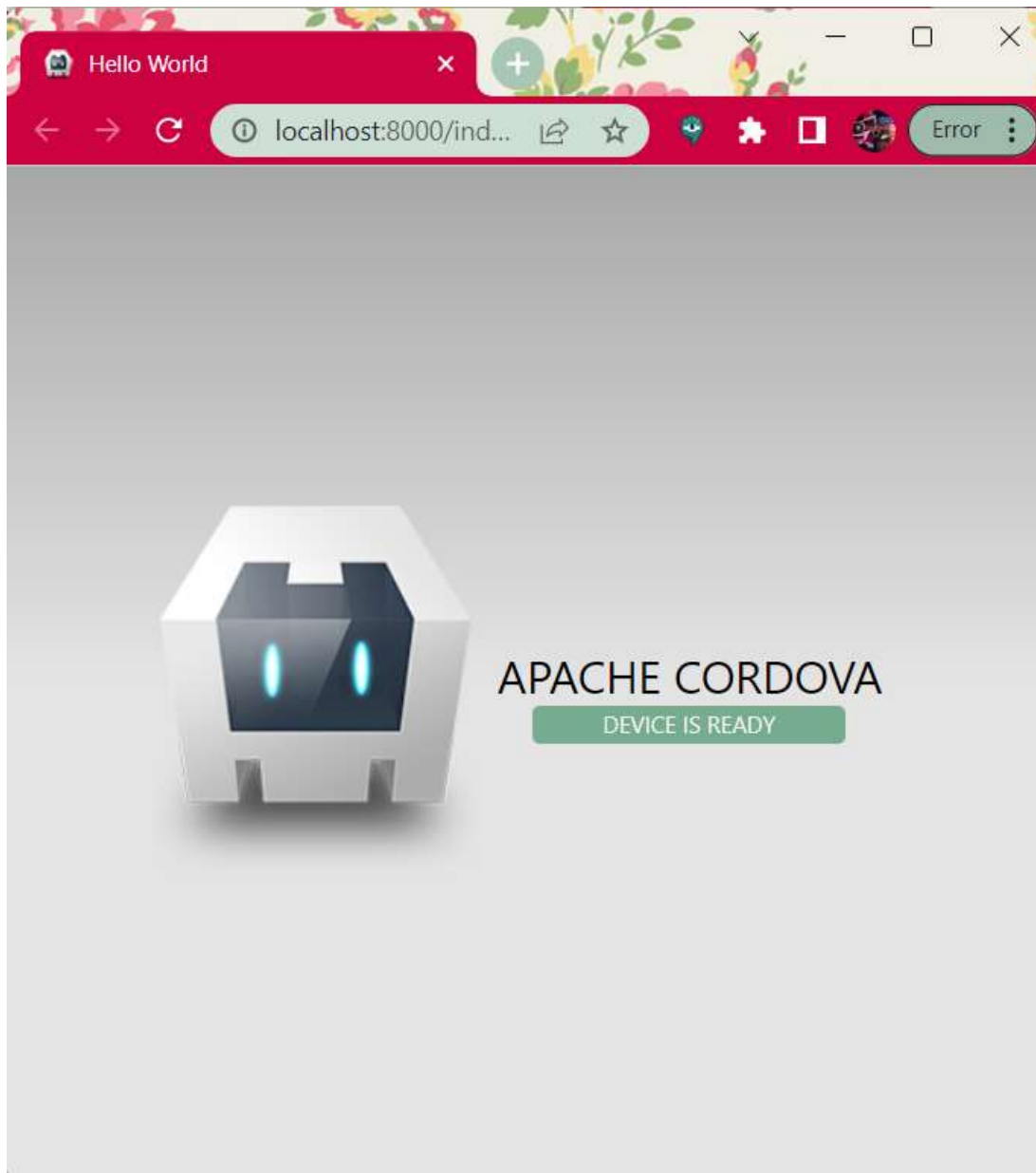
```
C:\Users\user\Desktop\cordovaProject>cordova create Task2Hello io.csm3103.
lab2 Task2
Creating a new cordova project.

C:\Users\user\Desktop\cordovaProject>cd Task2Hello
```

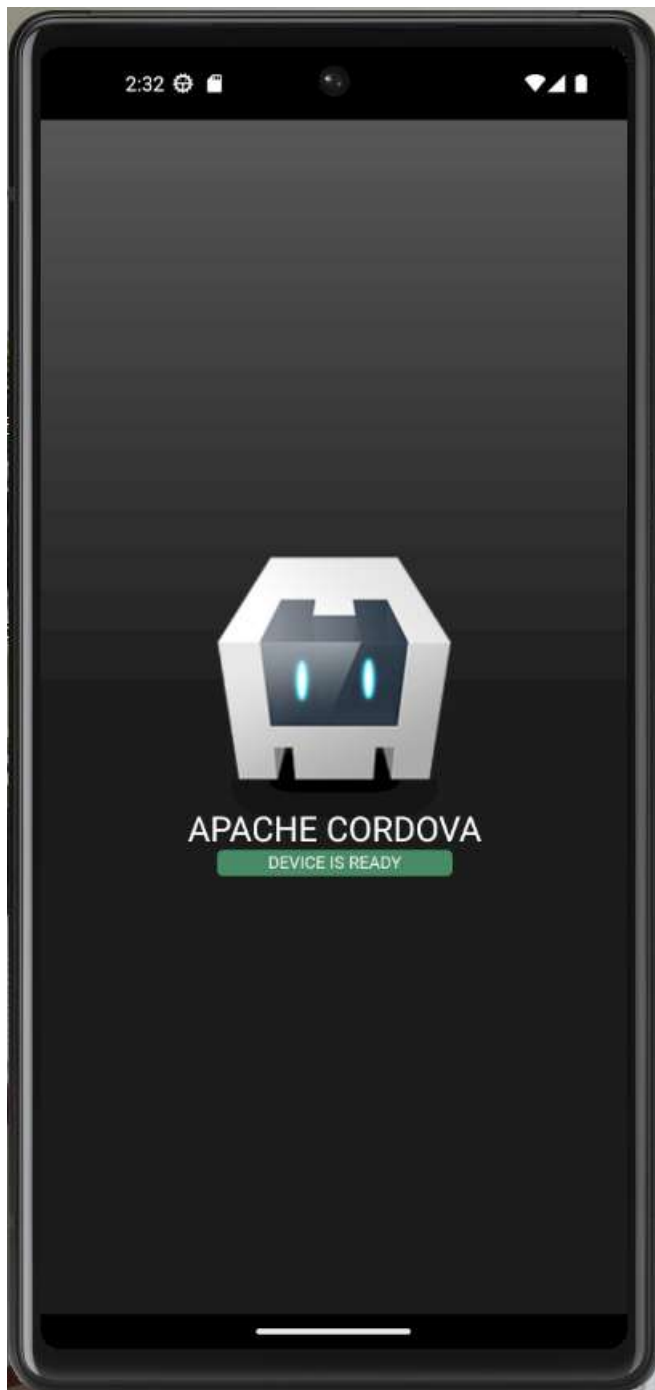
```
C:\Users\user\Desktop\cordovaProject\Task2Hello>cordova platform add android
Using cordova-fetch for cordova-android@10.1.1
Adding android project...
Creating Cordova project for the Android platform:
  Path: platforms\android
  Package: io.csm3103.lab2
  Name: Task2
  Activity: MainActivity
  Android target: android-30
Subproject Path: CordovaLib
Subproject Path: app
Android project created with cordova-android@10.1.2
```

```
C:\Users\user\Desktop\cordovaProject\Task2Hello>cordova platform add browser
Using cordova-fetch for cordova-browser@6.0.0
Adding browser project...
Creating Cordova project for cordova-browser:
  Path: C:\Users\user\Desktop\cordovaProject\Task2Hello\platforms\browser
  Name: Task2
```

Cordova run browser :-



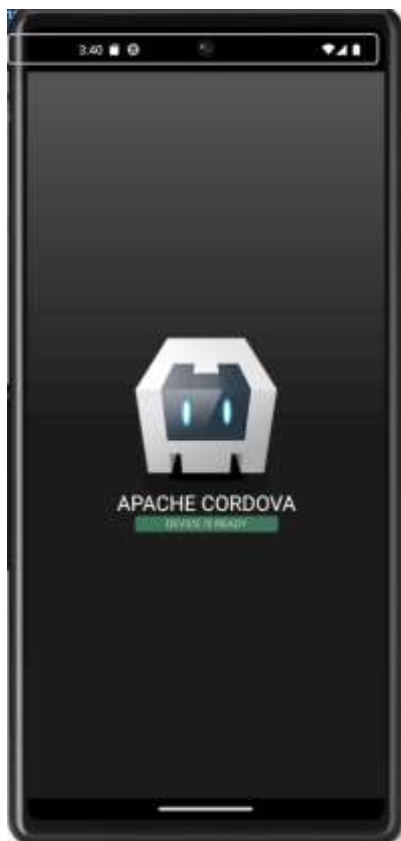
First cordova project on android

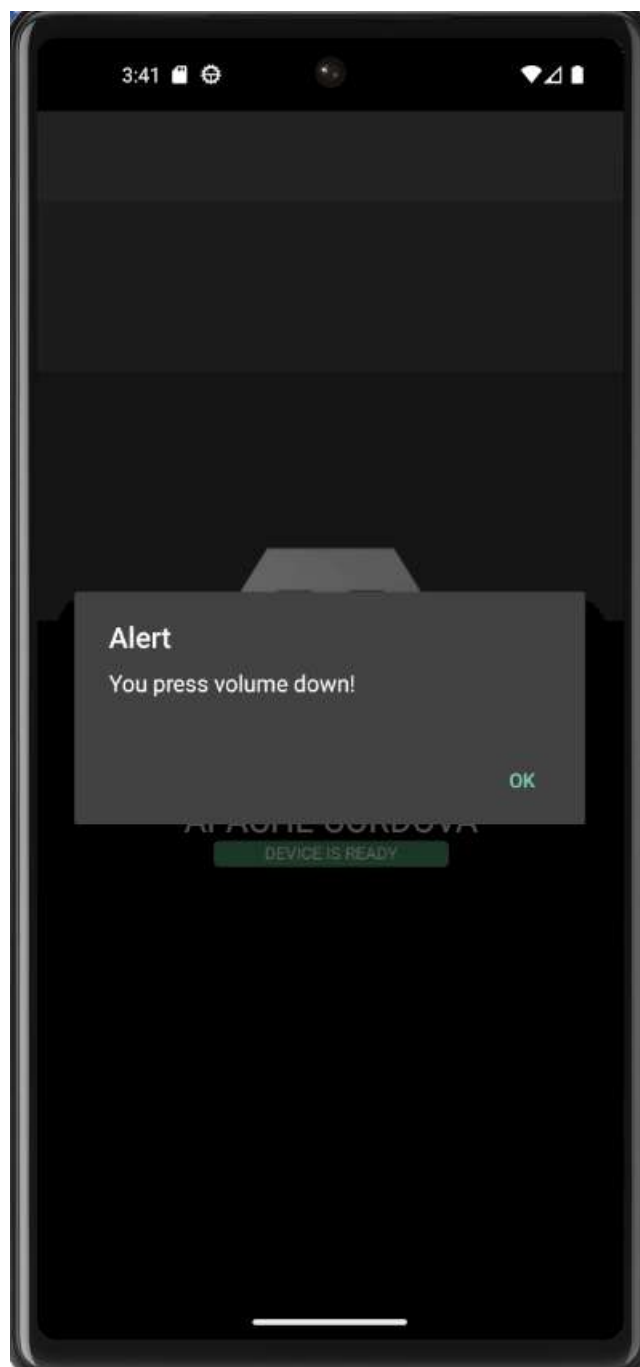


Task 3

```
31 document.addEventListener('volumedownbutton', onVolumeKeyDown, false);
32
33 function onVolumeKeyDown(){
34     alert("You press volume down!");
35 }
36
37 function onBackButton(e){
38     e.preventDefault();
39     alert("back button pressed!");
40 }
41
```

4.







7. What is the purpose of `e.preventDefault()` ?

The `preventDefault()` method cancels the event if it is cancelable, meaning that the default action that belongs to the event will not occur. For example, this can be useful when: Clicking on a "Submit" button, prevent it from submitting a form. Clicking on a link, prevent the link from following the URL.

```
50     document.addEventListener('volumeupbutton', onVolumeKeyUp, false);
51
52     function onVolumeKeyUp () {
53         alert("You press volume up!");
54     }
55
56     document.addEventListener("menubutton", onMenuKeyDown, false);
57
58     function onMenuKeyDown () {
59         alert("You press menu button!");
60     }
61
```

Task 4

```
39 <body>
40 <div class="app">
41 <h1>Apache Cordova</h1>
42 <div id="deviceready" class="blink">
43 <p class="event listening">Connecting to Device</p>
44 <p class="event received">Device is Ready</p>
45 </div>
46 <button id="getPosition">Current Position</button>
47 <button id="watchPosition">Watch Position</button>
48 </div>
49 <script src="cordova.js"></script>
50 <script src="js/index.js"></script>
51 </body>
52 </html>
```

3. Add the given code on line 46 and 46 to index.html

```
<button id="getPosition">Current Position</button>
<button id="watchPosition">Watch Position</button>
```

4. Open index.js and add the following code inside the ready function

```
31 document.getElementById("getPosition").addEventListener("click", getPosition);
32
33 function getPosition() {
34     var options = {
35         enableHighAccuracy : true,
36         maximumAge : 3600000
37     };
38
39     var watchID = navigator.geolocation.getCurrentPosition(onSuccess, onError, options);
40
41     function onSuccess(position) {
42         alert('Latitude: ' + position.coords.latitude + '\n' +
43             'Longitude: ' + position.coords.longitude + '\n' +
44             'Altitude: ' + position.coords.altitude + '\n' +
45             'Accuracy: ' + position.coords.accuracy + '\n' +
46             'Altitude Accuracy: ' + position.coords.altitudeAccuracy + '\n' +
47             'Heading: ' + position.coords.heading + '\n' +
48             'Speed: ' + position.coords.speed + '\n' +
49             'Timestamp: ' + position.coords.timestamp + '\n');
50     };
51
52     function onError(error) {
53         alert('code: ' + error.code + '\n' + 'message: ' + error.message + '\n');
54     }
55 }
56
57 document.getElementById("watchPosition").addEventListener("click", watchPosition);
58
```

```

59 function watchPosition() {
60     var options = {
61         maximumAge: 3600000,
62         timeout: 3000,
63         enableHighAccuracy: true,
64     };
65     var watchID = navigator.geolocation.watchPosition(onSuccess, onError, options);
66
67     function onSuccess(position) {
68         alert('Latitude: ' + position.coords.latitude + '\n' +
69             'Longitude: ' + position.coords.longitude + '\n' +
70             'Altitude: ' + position.coords.altitude + '\n' +
71             'Accuracy: ' + position.coords.accuracy + '\n' +
72             'Altitude Accuracy: ' + position.coords.altitudeAccuracy + '\n' +
73             'Heading: ' + position.coords.heading + '\n' +
74             'Speed: ' + position.coords.speed + '\n' +
75             'Timestamp: ' + position.coords.timestamp + '\n');
76     }
77
78     function onError(error) {
79         alert('code: ' + error.code + '\n' + 'message: ' + error.message + '\n');
80     }
81 }
82

```

6. Enable developer mode.



10. Run cordova

```
C:\Users\user\Desktop\Sem 4\Pengaturcaraan Front-End\Task4>cd Task4

C:\Users\user\Desktop\Sem 4\Pengaturcaraan Front-End\Task4\Task4>cordova run android
Checking Java JDK and Android SDK versions
ANDROID_SDK_ROOT=C:\Users\user\AppData\Local\Android\Sdk (recommended setting)
ANDROID_HOME=C:\Users\user\AppData\Local\Android\Sdk (DEPRECATED)
Using Android SDK: C:\Users\user\AppData\Local\Android\Sdk
Subproject Path: CordovaLib
Subproject Path: app
Starting a Gradle Daemon, 1 incompatible and 1 stopped Daemons could not be reused
, use --status for details
Warning: Mapping new ns http://schemas.android.com/repository/android/common/02 to
old ns http://schemas.android.com/repository/android/common/01
Warning: Mapping new ns http://schemas.android.com/repository/android/generic/02 to
old ns http://schemas.android.com/repository/android/generic/01
Warning: Mapping new ns http://schemas.android.com/sdk/android/repo/addon2/02 to
old ns http://schemas.android.com/sdk/android/repo/addon2/01
Warning: Mapping new ns http://schemas.android.com/sdk/android/repo/addon2/03 to
old ns http://schemas.android.com/sdk/android/repo/addon2/01
Warning: Mapping new ns http://schemas.android.com/sdk/android/repo/repository2/02
```



Link GitHub for the lab : <https://github.com/ilhamhanina/Code-Lab-CSM3103-S63762.git>