UNIVERSITI MALAYSIA TERENGGANU

LAB MODULE 2

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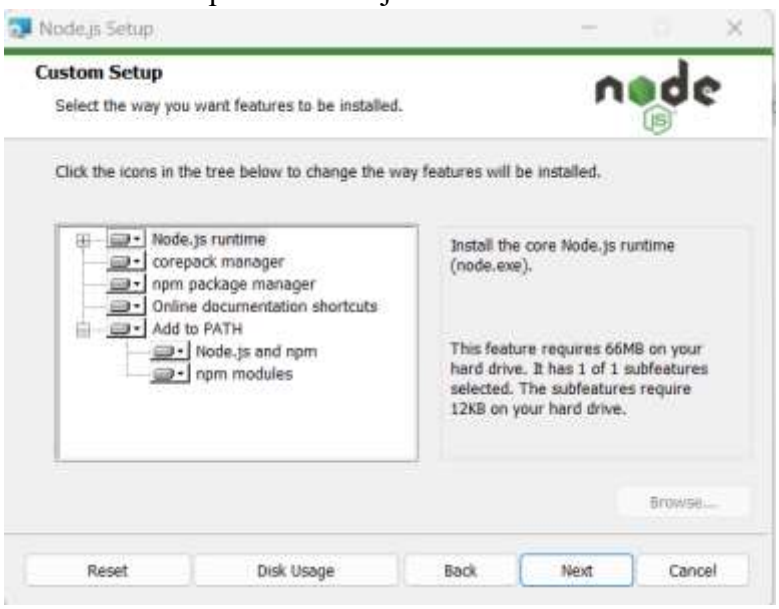
PROGRAMME: BACHELOR OF COMPUTER SCIENCE (MOBILE COMPUTING)

LECTURER : DR RABIEI B MAMAT

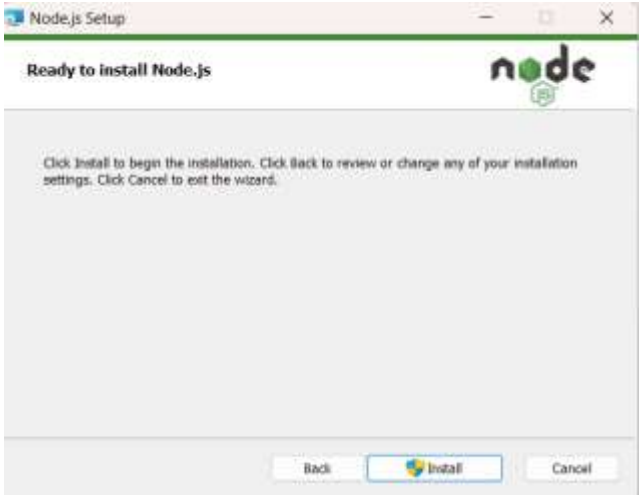
Task 1

1. Install the node.js

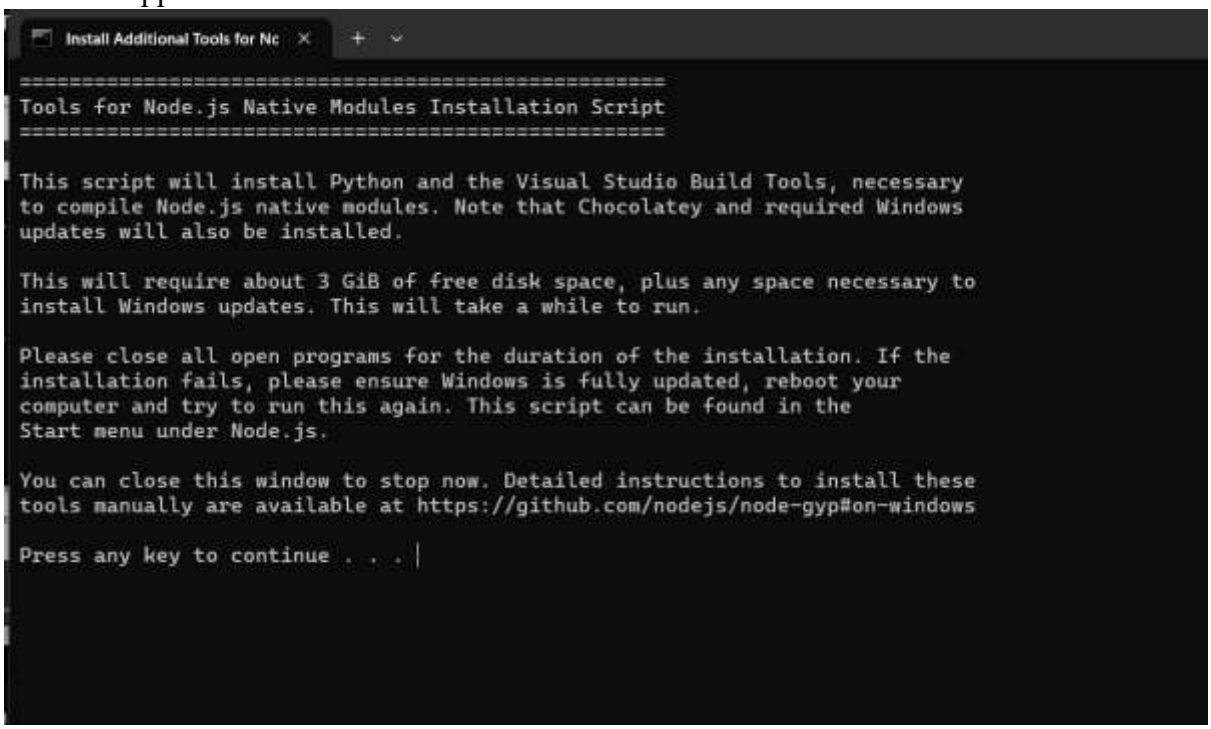
2. Make sure the npm and node.js is under the Add to PATH icon.:



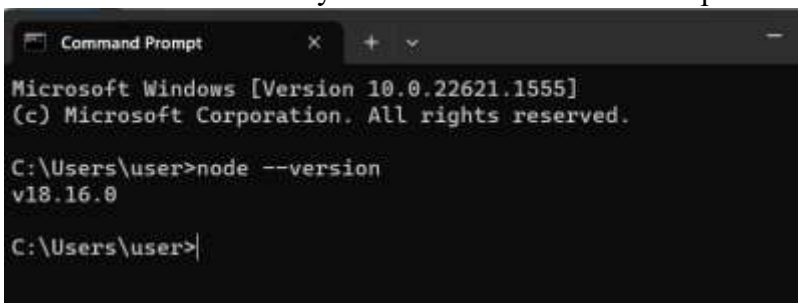
3. Click install



4. This will appear.

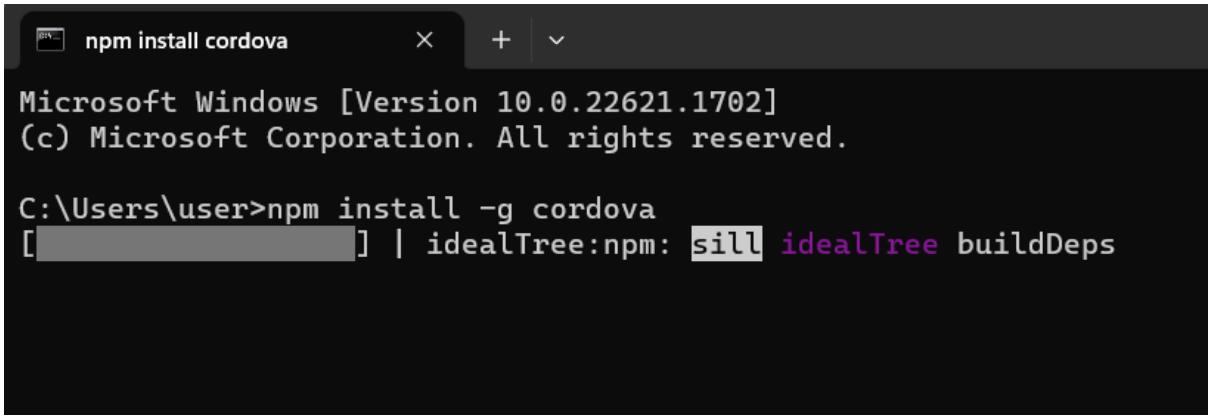


5. Check if it is successfully installed in Command Prompt.



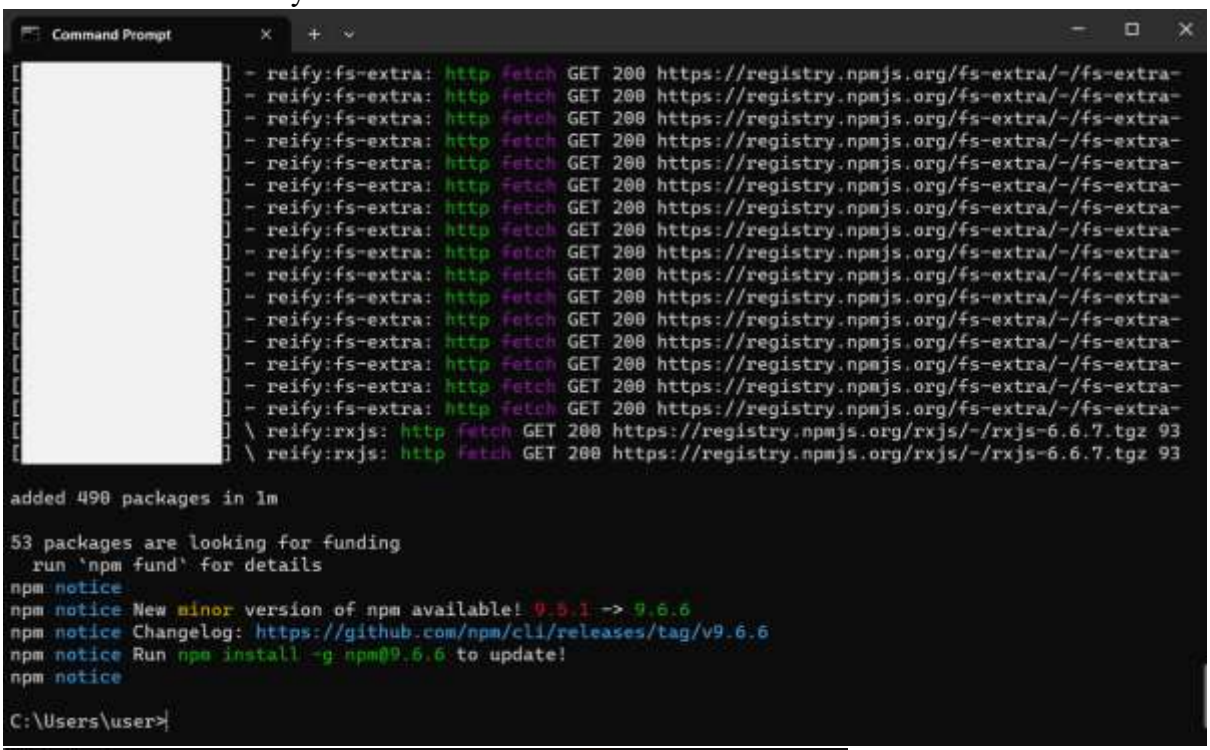
6. Install GIT at git-scm.com

7. Install Cordova

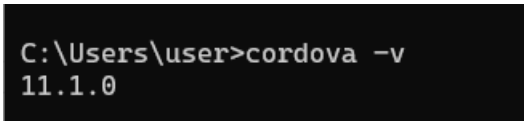


-g mean to install it globally.

8. Cordova is successfully installed.



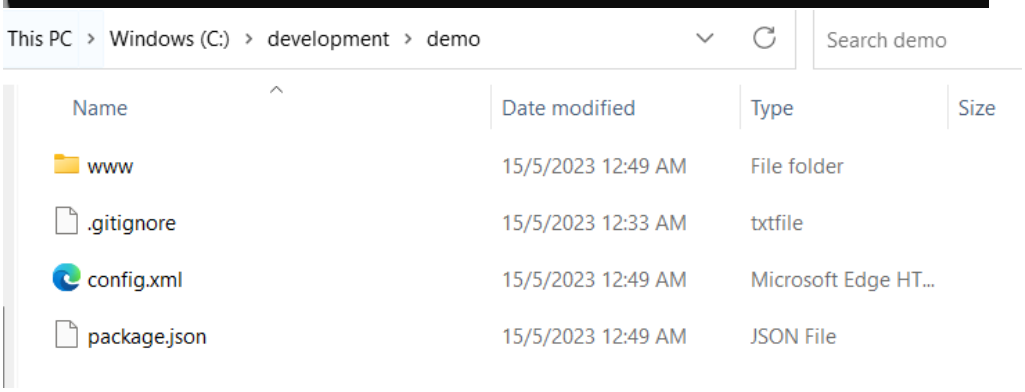
This is the cordova version that I've installed:



9. Create/ setting the environment in the Local Disk C named “development”

10. Try creating a new project inside the development file named “demo” .

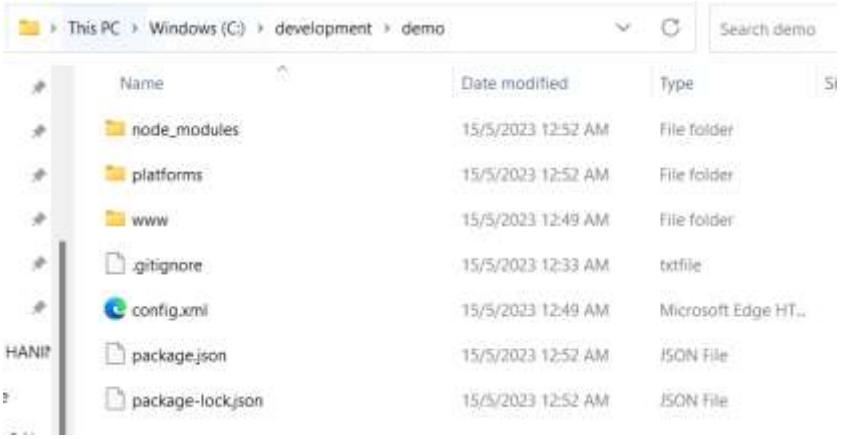
```
C:\Users\user>cd C:\development

C:\development>cordova create demo com.test.demo "Demo App"
Creating a new cordova project.

C:\development>
```



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

```
C:\development\demo>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: com.test.demo
        Name: Demo App
        Activity: MainActivity
        Android target: android-30
Subproject Path: CordovaLib
Subproject Path: app
Android project created with cordova-android@10.1.2
```

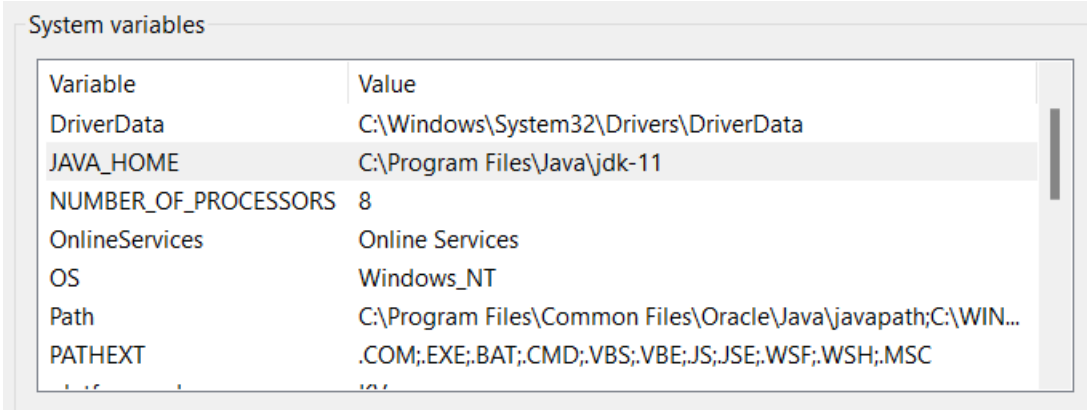
After that, it will create another files such as:-



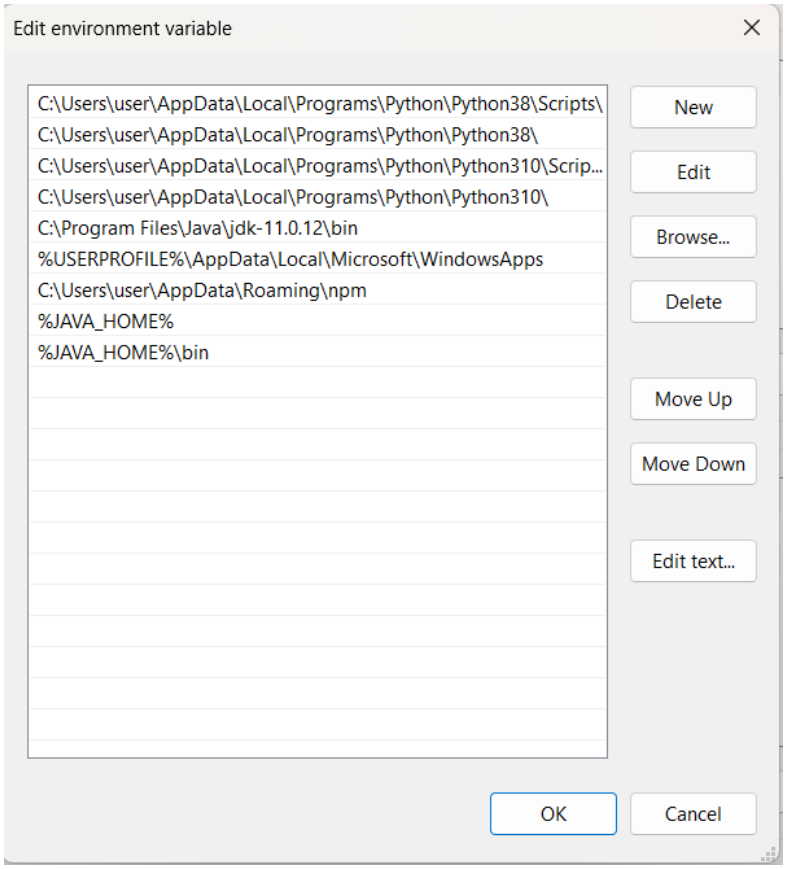
And in the platform folder there will be android folder.

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

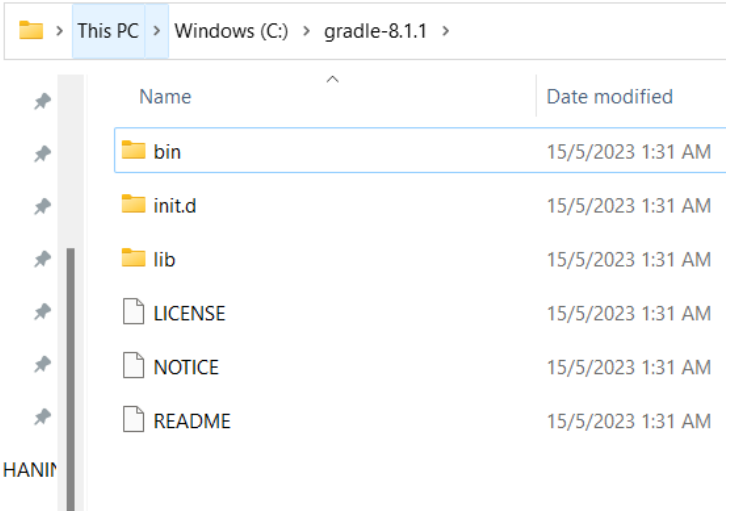
13. Do some setting for the JDK.
    Add JAVA_HOME and the java file for the value at System variables.



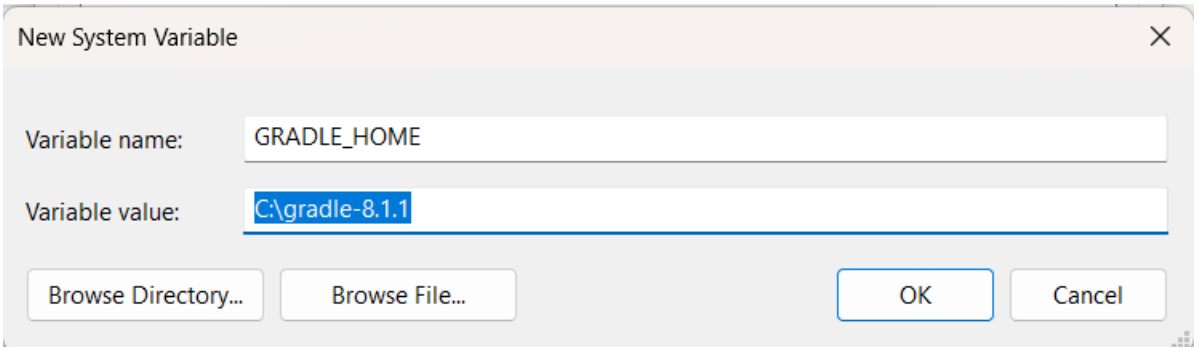
Then, add %JAVA_HOME% and %JAVA_HOME% \bin in the Path for the User variables for User.

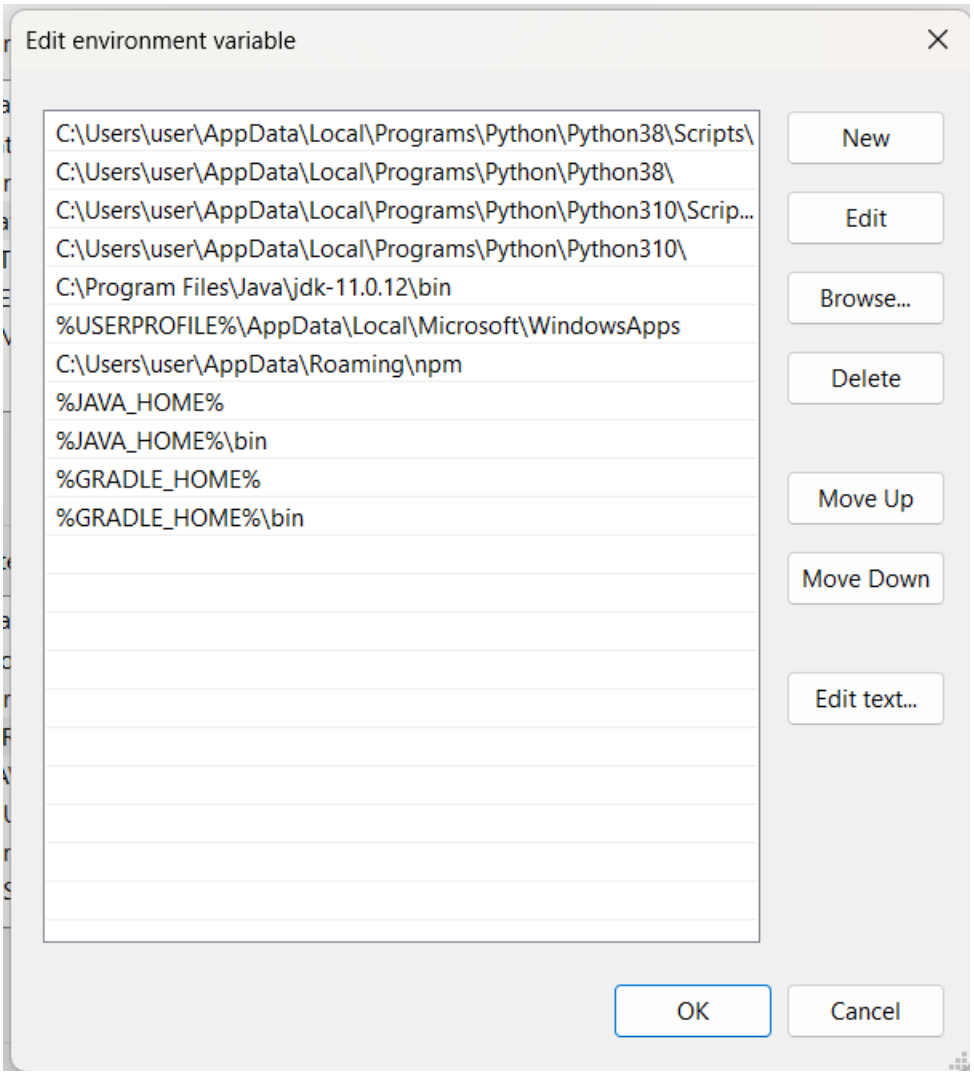


14. Install Gradle

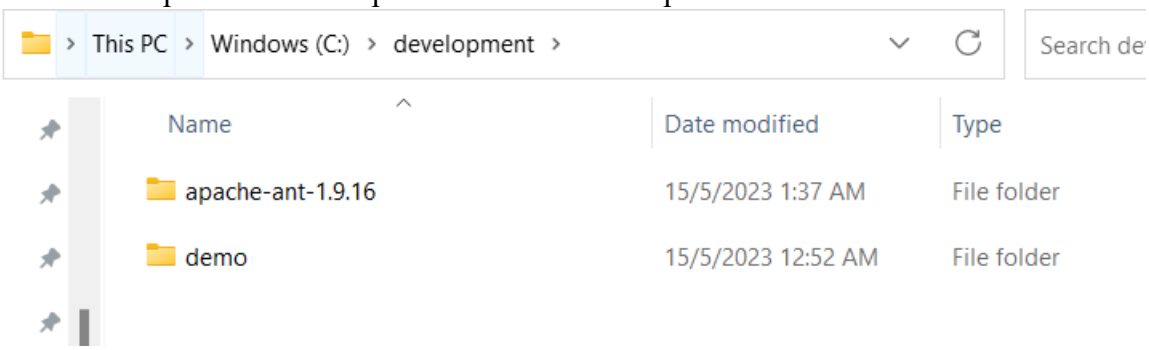


Next, setup the setting for the Gradle.


New System Variable
Variable name:
GRADLE_HOME
Variable value:
C:\gradle-8.1.1
Browse Directory...
Browse File...
OK
Cancel

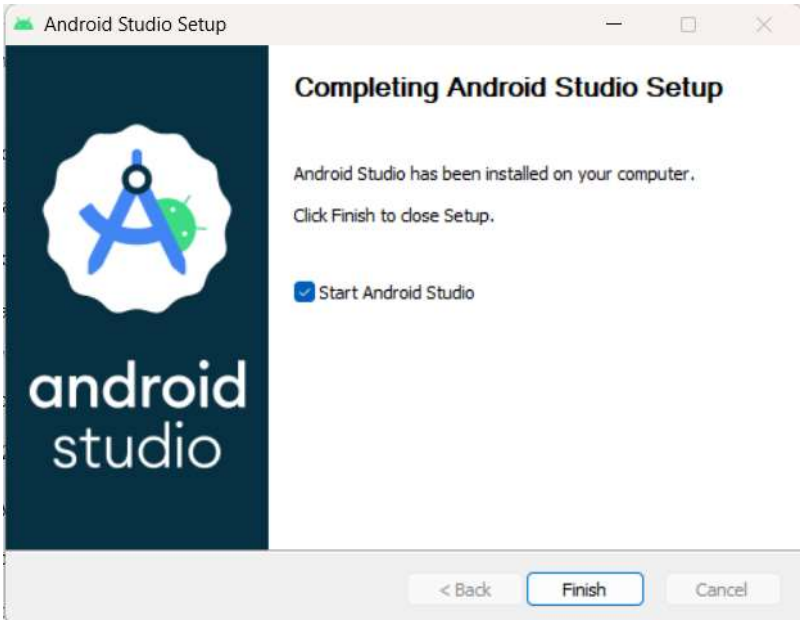

Edit environment variable
C:\Users\user\AppData\Local\Programs\Python\Python38\Scripts\
C:\Users\user\AppData\Local\Programs\Python\Python38\
C:\Users\user\AppData\Local\Programs\Python\Python310\Scrip...
C:\Users\user\AppData\Local\Programs\Python\Python310\
C:\Program Files\Java\jdk-11.0.12\bin
%USERPROFILE%\AppData\Local\Microsoft\WindowsApps
C:\Users\user\AppData\Roaming\npm
%JAVA_HOME%
%JAVA_HOME%\bin
%GRADLE_HOME%
%GRADLE_HOME%\bin
New
Edit
Browse...
Delete
Move Up
Move Down
Edit text...
OK
Cancel

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

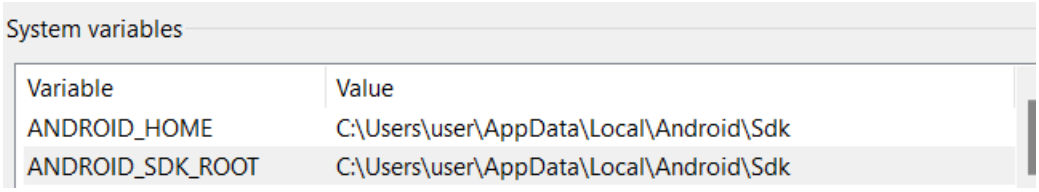


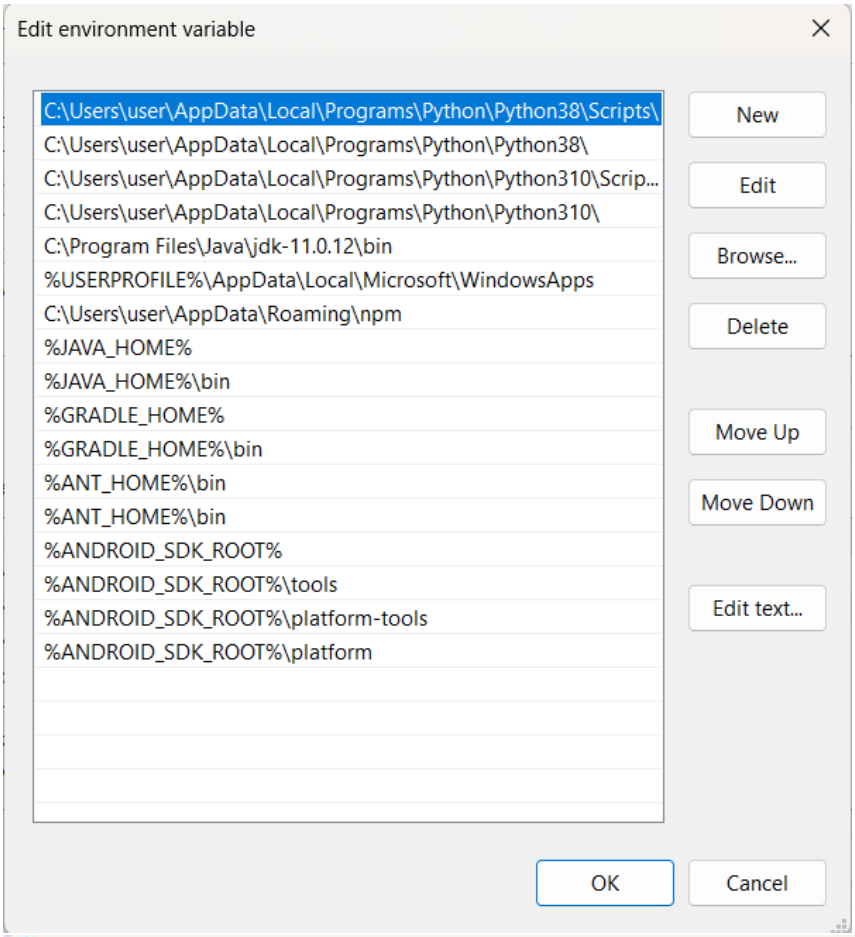
Next, setup the environment variable as usual.

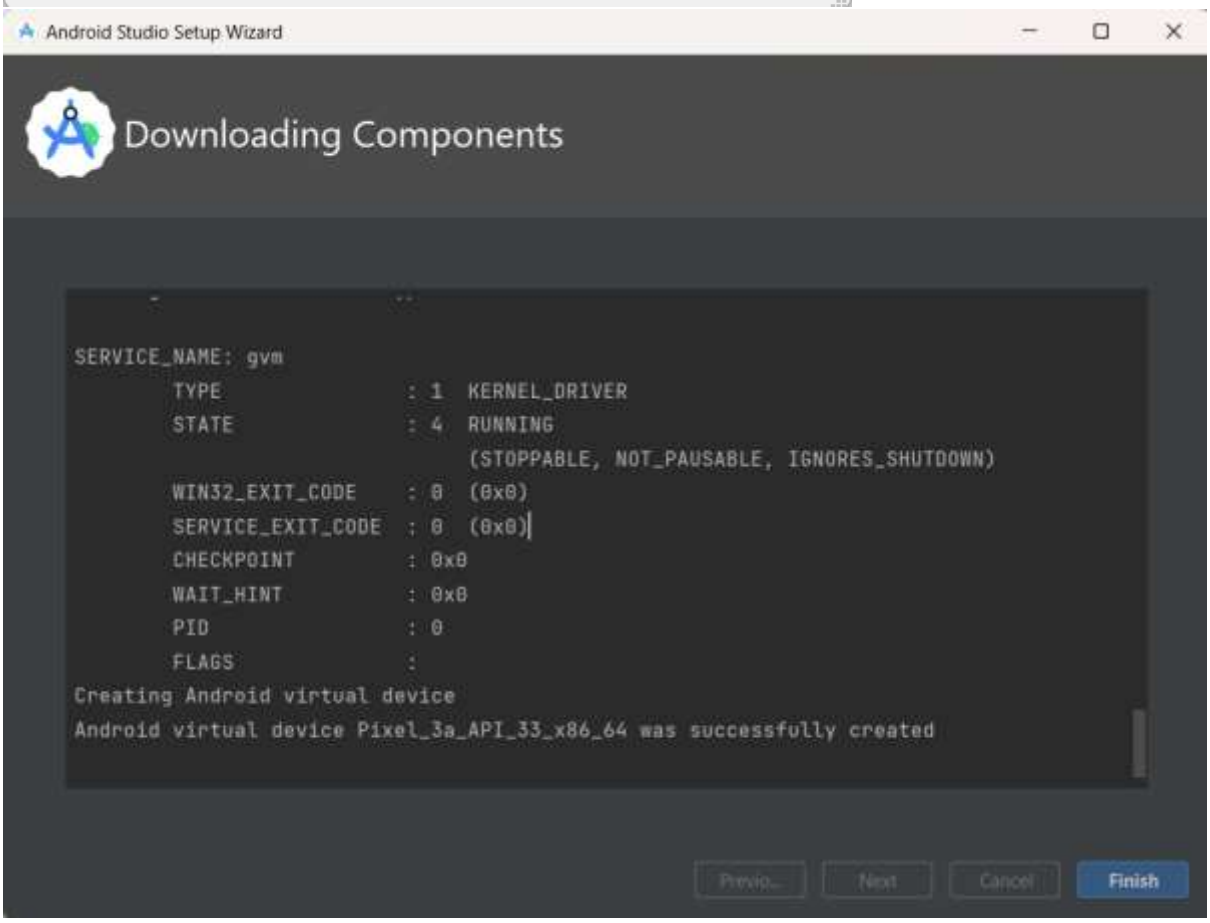
16. Install the Android SDK or Android Studio



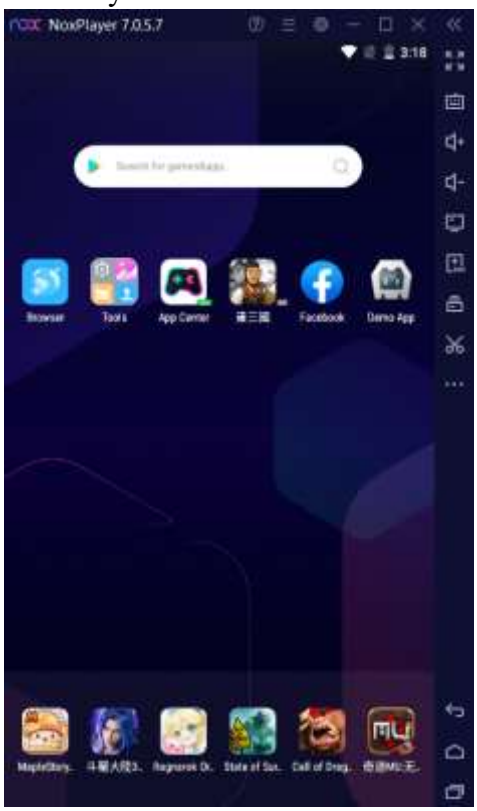
SDK Folder : C:\Users\user\AppData\Local\Android\Sdk



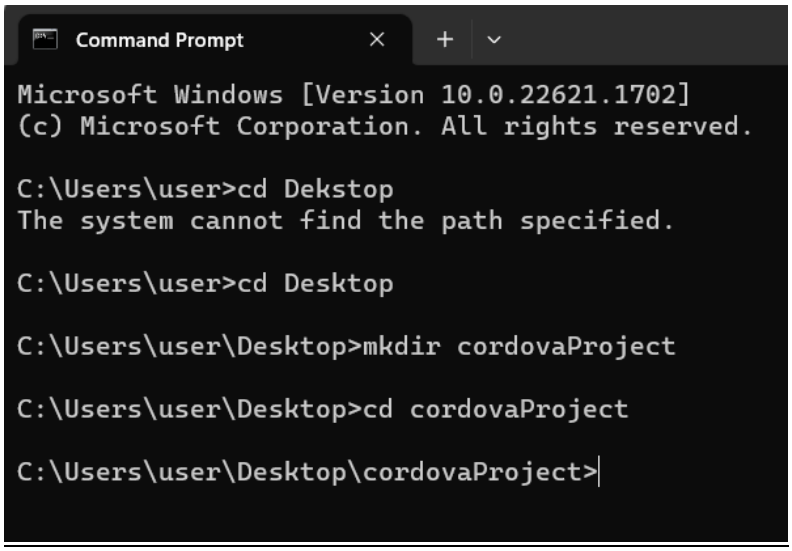

Edit environment variable
C:\Users\user\AppData\Local\Programs\Python\Python38\Scripts\
C:\Users\user\AppData\Local\Programs\Python\Python38\
C:\Users\user\AppData\Local\Programs\Python\Python310\Scrip...
C:\Users\user\AppData\Local\Programs\Python\Python310\
C:\Program Files\Java\jdk-11.0.12\bin
%USERPROFILE%\AppData\Local\Microsoft\WindowsApps
C:\Users\user\AppData\Roaming\npm
%JAVA_HOME%
%JAVA_HOME%\bin
%GRADLE_HOME%
%GRADLE_HOME%\bin
%ANT_HOME%\bin
%ANT_HOME%\bin
%ANDROID_SDK_ROOT%
%ANDROID_SDK_ROOT%\tools
%ANDROID_SDK_ROOT%\platform-tools
%ANDROID_SDK_ROOT%\platform
New
Edit
Browse...
Delete
Move Up
Move Down
Edit text...
OK
Cancel

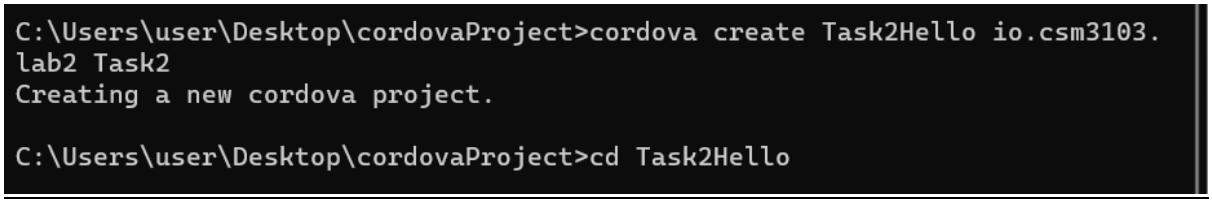

Android Studio Setup Wizard
Downloading Components
SERVICE_NAME: gvm
TYPE : 1 KERNEL_DRIVER
STATE : 4 RUNNING
(STOPPABLE, NOT_PAUSABLE, IGNORES_SHUTDOWN)
WIN32_EXIT_CODE : 0 (0x0)
SERVICE_EXIT_CODE : 0 (0x0)
CHECKPOINT : 0x0
WAIT_HINT : 0x0
PID : 0
FLAGS :
Creating Android virtual device
Android virtual device Pixel_3a_API_33_x86_64 was successfully created
Previo...
Next
Cancel
Finish

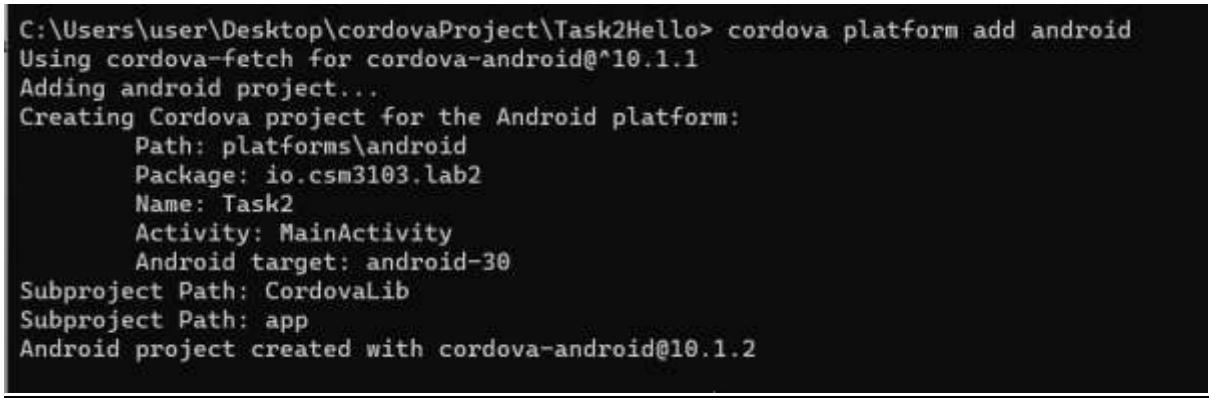
17. Install Emulator
    Nox Player is installed.

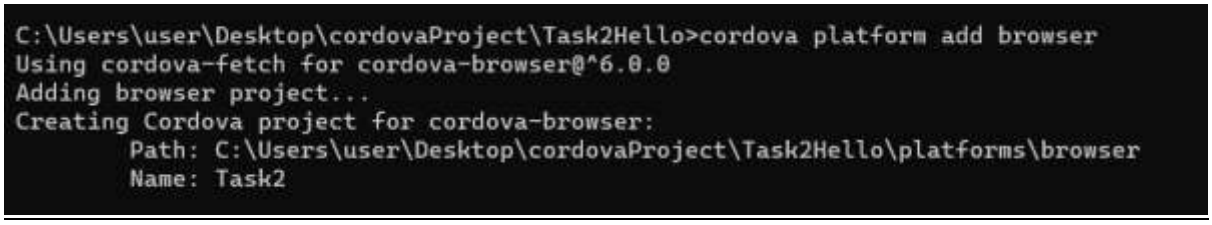


Task 2

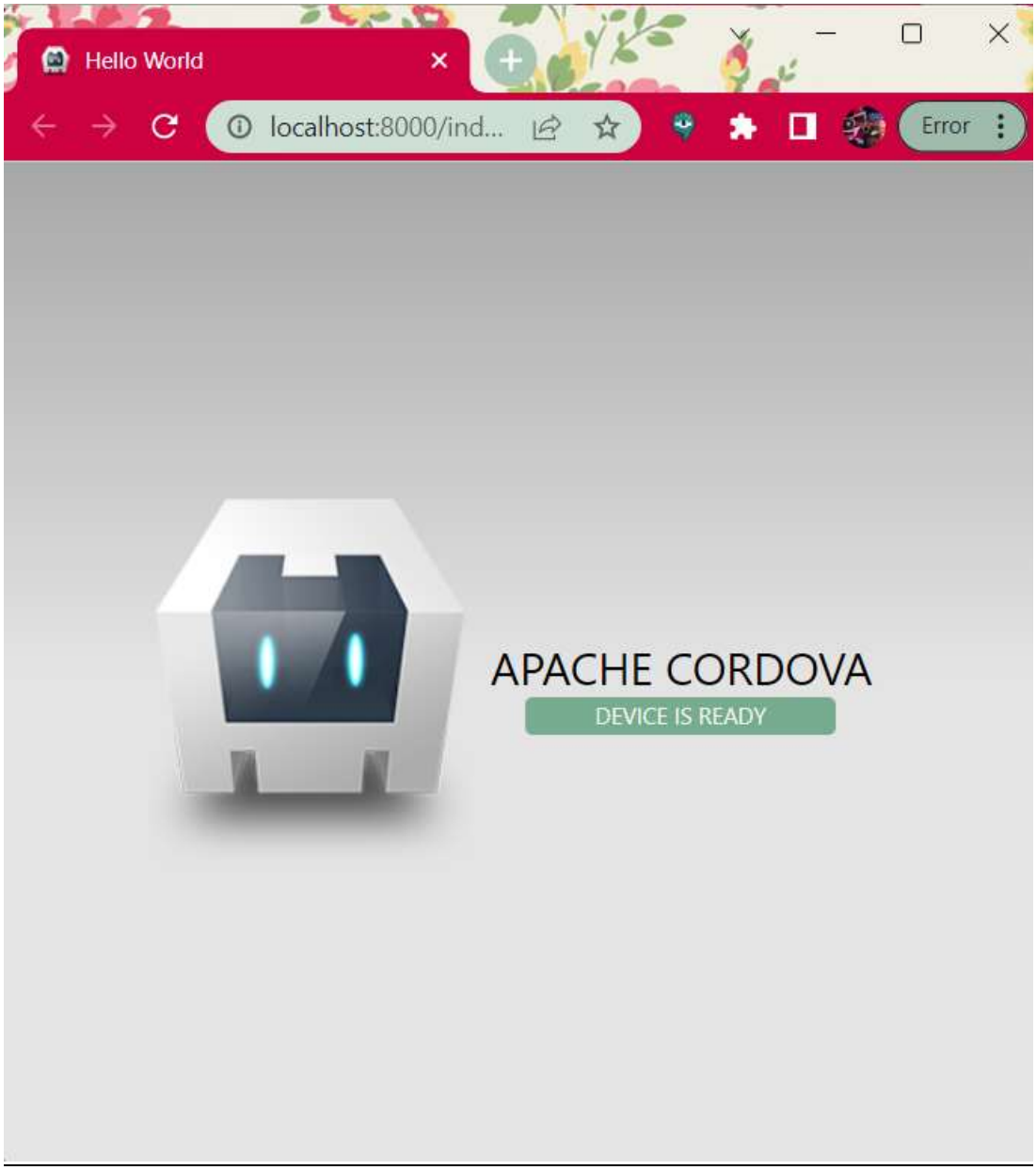

Command Prompt
Microsoft Windows [Version 10.0.22621.1702]
(c) Microsoft Corporation. All rights reserved.
C:\Users\user>cd Dekstop
The system cannot find the path specified.
C:\Users\user>cd Desktop
C:\Users\user\Desktop>mkdir cordovaProject
C:\Users\user\Desktop>cd cordovaProject
C:\Users\user\Desktop\cordovaProject>


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

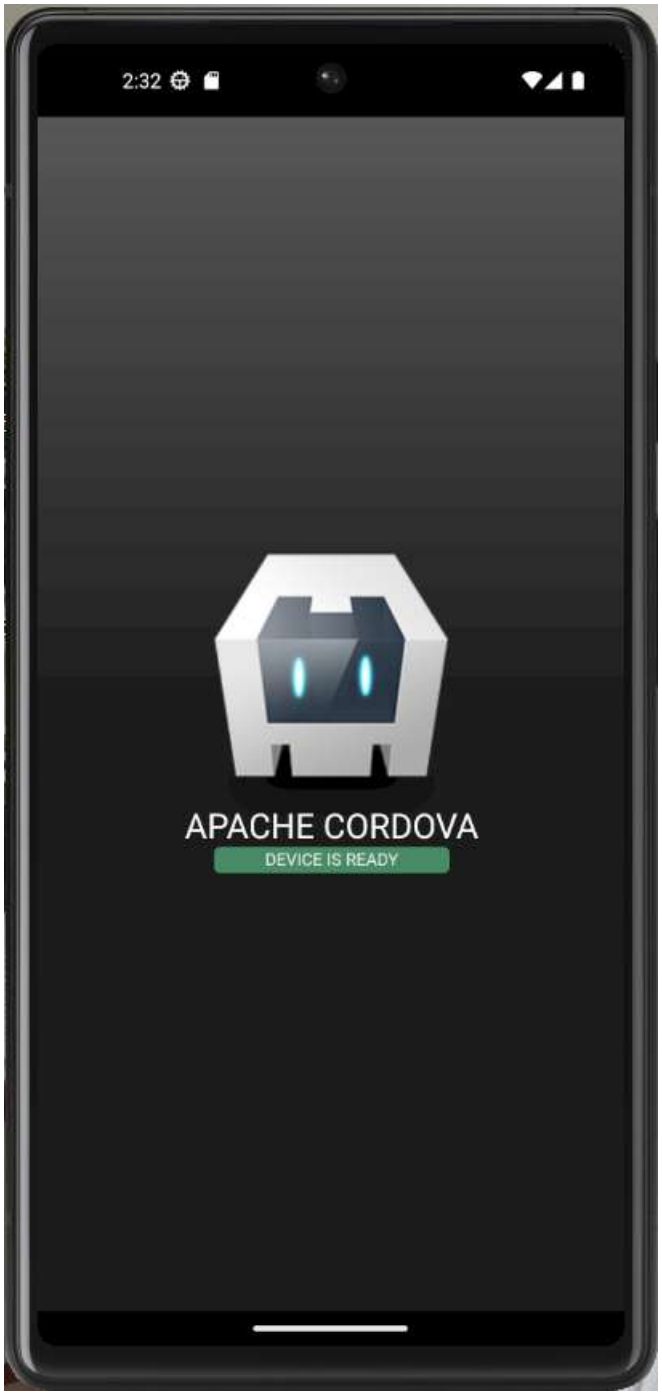

C:\Users\user\Desktop\cordovaProject\Task2Hello> cordova platform add android
Using cordova-fetch for cordova-android@^10.1.1
Adding android project...
Creating Cordova project for the Android platform:
Path: platforms\android
Package: io.csm3103.lab2
Name: Task2
Activity: MainActivity
Android target: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



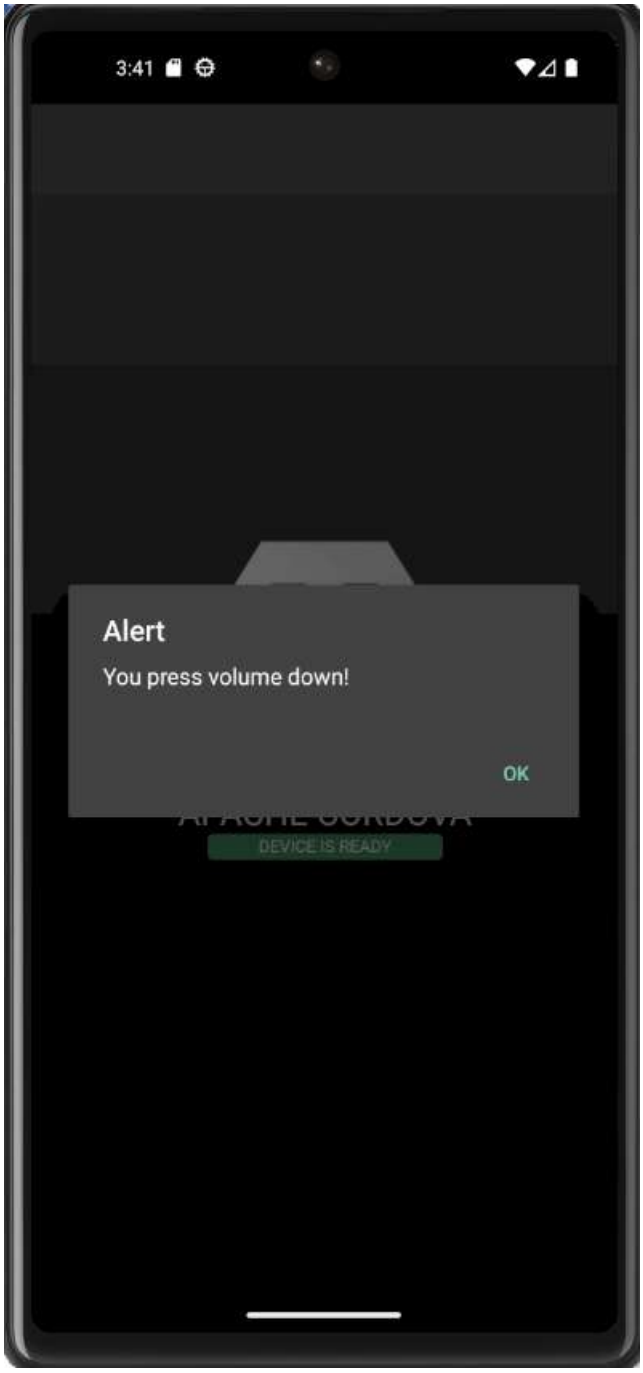
First cordova project on android


2:32
APACHE CORDOVA
DEVICE IS READY

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.


3:41
Alert
You press volume down!
OK
DEVICE IS READY

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                'Logitude: '          + 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
```

```
function watchPosition(){
    var options = {
        maximumAge:3600000,
        timeout: 3000,
        enableHighAccuracy:true,
    }
    var watchID = navigator.geolocation.watchPosition(onSuccess, onError, options);

    function onSuccess(position){
        alert('Latitude: '          + position.coords.latitude          + '\n' +
              'Logitude: '          + position.coords.longitude         + '\n' +
              'Altitude: '          + position.coords.altitude          + '\n' +
              'Accuracy: '          + position.coords.accuracy          + '\n' +
              'Altitude Accuracy: '         + position.coords.altitudeAccuracy        + '\n' +
              'Heading: '           + position.coords.heading           + '\n' +
              'Speed: '           + position.coords.speed           + '\n' +
              'Timestamp: '         + position.coords.timestamp         + '\n' );
    }

    function onError(error){
        alert('code: '  +error.code +'\n'+'message: '+ error.message + '\n');
    }
}
```

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 andro
id
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 t
o old ns http://schemas.android.com/repository/android/generic/01
Warning: Mapping new ns http://schemas.android.com/sdk/android/repo/addon2/02 to o
ld ns http://schemas.android.com/sdk/android/repo/addon2/01
Warning: Mapping new ns http://schemas.android.com/sdk/android/repo/addon2/03 to o
ld ns http://schemas.android.com/sdk/android/repo/addon2/01
Warning: Mapping new ns http://schemas.android.com/sdk/android/repo/repository2/02
```