



UMT

UNIVERSITI MALAYSIA TERENGGANU

CSM3103 – FRONT-END PROGRAMMING (K1)
BACHELOR OF COMPUTER SCIENCE (MOBILE COMPUTING)
WITH HONOURS
LAB 2
SEMESTER 2 2023/2024

Prepared for:

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LINK GITHUB: <https://github.com/akmalyeng/CSM3103Lab2>

Task 1 – Setup and configure Apache cordova on your desktop/laptop

```
Windows PowerShell
Microsoft Windows [Version 10.0.22631.3447]
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C:\Users\Zahier>npm install -g cordova
npm WARN deprecated @npmcli/move-file@2.0.1: This functionality has been moved to @npmcli/fs
npm WARN deprecated stringify-package@1.0.1: This module is not used anymore, and has been replaced by @npmcli/package-j
son
npm WARN deprecated har-validator@5.1.5: this library is no longer supported
npm WARN deprecated uuid@3.4.0: Please upgrade to version 7 or higher. Older versions may use Math.random() in certain
circumstances, which is known to be problematic. See https://v8.dev/blog/math-random for details.
npm WARN deprecated request@2.88.2: request has been deprecated, see https://github.com/request/request/issues/3142

changed 547 packages in 1m

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

C:\Users\Zahier>
C:\Users\Zahier>cordova --version
12.0.0 (cordova-lib@12.0.1)

C:\Users\Zahier>cordova create helloworld com.helloworld.io HelloWorld
Path already exists and is not empty: C:\Users\Zahier\helloworld

C:\Users\Zahier>cd helloworld

C:\Users\Zahier\helloworld>dir
Volume in drive C has no label.
Volume Serial Number is 126A-5CDB
```

```
Windows PowerShell
Directory of C:\Users\Zahier\helloworld

15/04/2024 04:45 PM <DIR>      .
21/04/2024 12:44 PM <DIR>      ..
15/04/2024 02:47 PM      889 .gitignore
15/04/2024 04:45 PM <DIR>      .idea
15/04/2024 02:58 PM      496 config.xml
15/04/2024 03:02 PM <DIR>      node_modules
15/04/2024 03:02 PM    63,946 package-lock.json
15/04/2024 03:02 PM      510 package.json
15/04/2024 03:02 PM <DIR>      platforms
15/04/2024 02:58 PM <DIR>      www
      4 File(s)      65,841 bytes
      6 Dir(s)      7,203,487,744 bytes free

C:\Users\Zahier\helloworld>cordova platform add browser
Using cordova-fetch for cordova-browser@7.0.0
Platform browser already added.

C:\Users\Zahier\helloworld>cordova run browser
startPage = index.html
Static file server running @ http://localhost:8000/index.html
CTRL + C to shut down
200 /index.html (gzip)
200 /css/index.css (gzip)
200 /img/logo.png
200 /cordova.js (gzip)
404 /cordova_plugins.js
200 /js/index.js (gzip)
```

Task 2 – Your First Apache Cordova Application

```
Windows PowerShell

C:\Users\Zahier\Desktop\cordovaProject>cordova create task2Hello io.csm3103.lab2 Task2
Path already exists and is not empty: C:\Users\Zahier\Desktop\cordovaProject\task2Hello

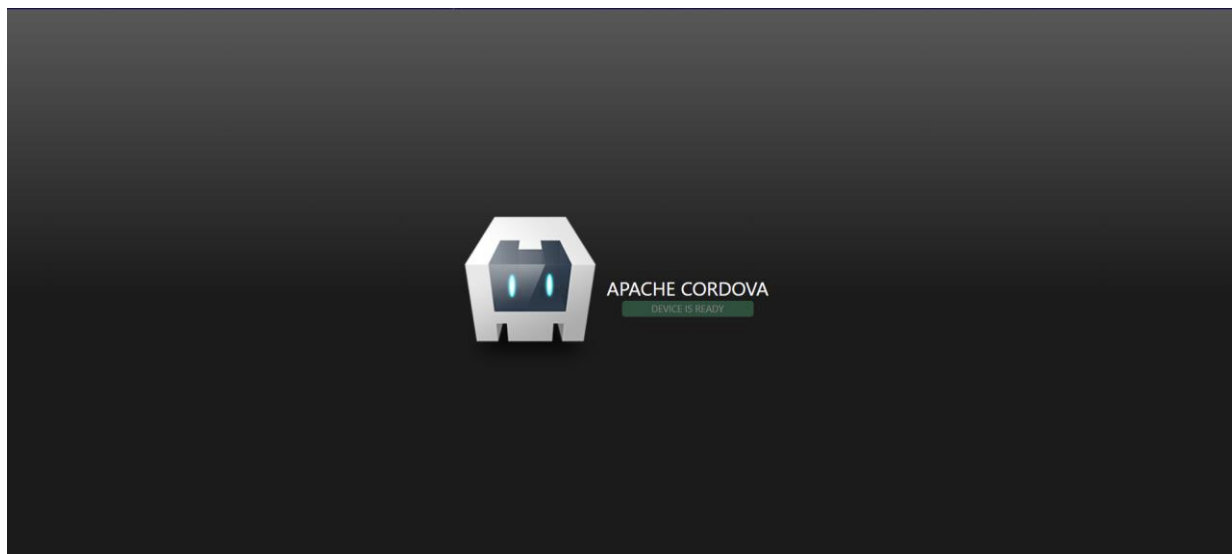
C:\Users\Zahier\Desktop\cordovaProject>cd task2Hello

C:\Users\Zahier\Desktop\cordovaProject\Task2Hello>cordova add android
Cordova does not know add; try `cordova help` for a list of all the available commands.

C:\Users\Zahier\Desktop\cordovaProject\Task2Hello>cordova platform add android
Using cordova-fetch for cordova-android@12.0.1
Platform android already added.

C:\Users\Zahier\Desktop\cordovaProject\Task2Hello>cordova platform add browser
Using cordova-fetch for cordova-browser@7.0.0
Platform browser already added.

C:\Users\Zahier\Desktop\cordovaProject\Task2Hello>cordova run browser
startPage = index.html
Static file server running @ http://localhost:8000/index.html
CTRL + C to shut down
200 /index.html (gzip)
304 /css/index.css
304 /img/logo.png
200 /cordova.js (gzip)
404 /cordova_plugins.js
200 /js/index.js (gzip)
200 /favicon.ico (gzip)
```



Task3 – Simple eventListener in Cordova Project

```
C:\> Select Windows PowerShell
C:\Users\Zahier>cd Desktop

C:\Users\Zahier\Desktop>mkdir cordovaProject
A subdirectory or file cordovaProject already exists.

C:\Users\Zahier\Desktop>cd cordovaProject

C:\Users\Zahier\Desktop\cordovaProject>cordova create Task3EventListener io.csm3103.lab2 Task3
Creating a new cordova project.

C:\Users\Zahier\Desktop\cordovaProject>cd Task3EventListener

C:\Users\Zahier\Desktop\cordovaProject\Task3EventListener>cordova platform add browser
Using cordova-fetch for cordova-browser
Adding browser project...
Creating Cordova project for cordova-browser:
  Path: C:\Users\Zahier\Desktop\cordovaProject\Task3EventListener\platforms\browser
  Name: Task3

C:\Users\Zahier\Desktop\cordovaProject\Task3EventListener>cordova run browser
startPage = index.html
Static file server running @ http://localhost:8000/index.html
CTRL + C to shut down
304 /index.html
304 /css/index.css
304 /img/logo.png
200 /cordova.js (gzip)
404 /cordova_plugins.js
200 /js/index.js (gzip)
```

Do some research on how to add two controls to you index.js to do the following:

- Handle volume up button

```
document.addEventListener('volumeupbutton', onVolumeKeyUp, false);

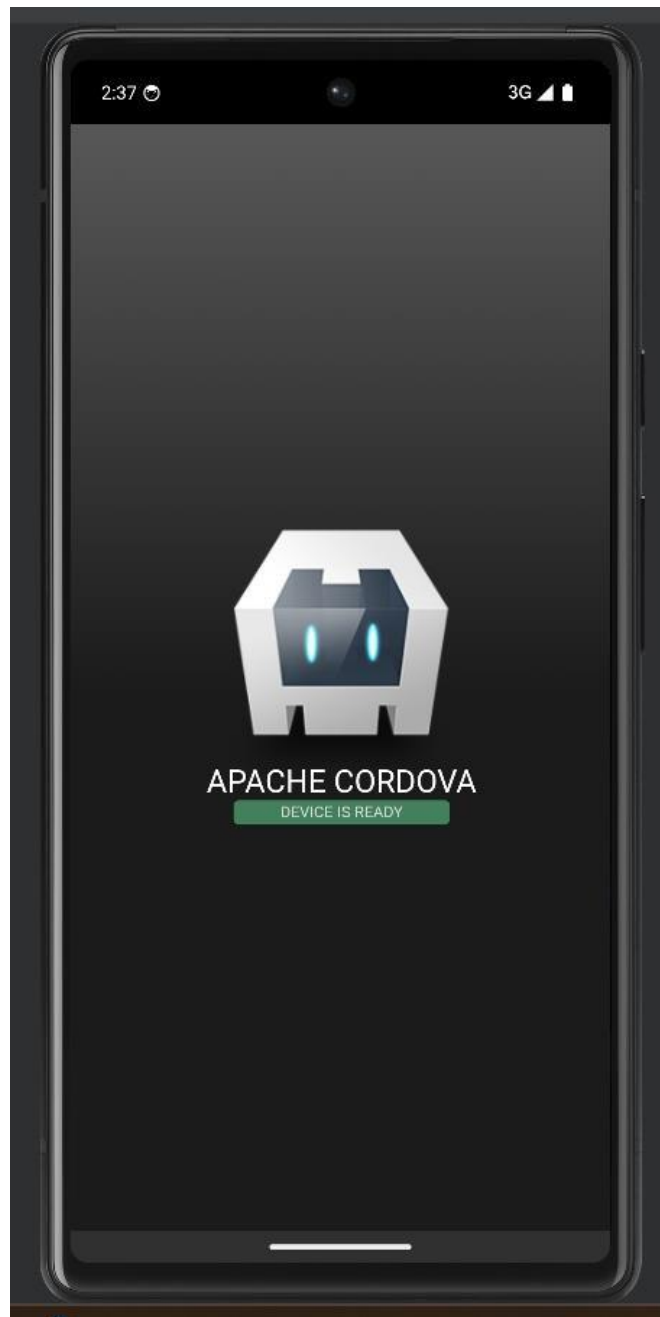
function onVolumeKeyUp(){
    alert("You press volume up!");
}

document.addEventListener('upbutton', onUpButton, false);

function onUpButton(e){
    e.preventDefault();
    alert("Up button pressed!");
}
}
```

- b. Handle menu button

```
28 document.addEventListener('backbutton',onBackButton,false);  
29  
30 function onBackButton(e){
```



Task 4 – Cordova Plugin use case (Simple Geolocation)

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.22631.3447]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Zahier>cd Desktop

C:\Users\Zahier\Desktop>cd cordovaProject

C:\Users\Zahier\Desktop\cordovaProject>cordova create task4Plugin io.csm3103.lab2 Task4
Path already exists and is not empty: C:\Users\Zahier\Desktop\cordovaProject\task4Plugin

C:\Users\Zahier\Desktop\cordovaProject>cd task4Plugin

C:\Users\Zahier\Desktop\cordovaProject\Task4Plugin>cordova platform add android
Using cordova-fetch for cordova-android
Adding android project...
Creating Cordova project for the Android platform:
  Path: platforms\android
  Package: io.csm3103.lab2
  Name: Task4
  Activity: MainActivity
  Android Target SDK: android-33
  Android Compile SDK: 33
Subproject Path: CordovaLib
Subproject Path: app
Android project created with cordova-android@12.0.1

C:\Users\Zahier\Desktop\cordovaProject\Task4Plugin>cordova platform add browser
Using cordova-fetch for cordova-browser@^7.0.0
Platform browser already added.
```

```

<html>
  <head>
    <meta charset="utf-8">
    <!--
      Customize this policy to fit your own app's needs. For more guidance, please refer to the docs:
      | https://cordova.apache.org/docs/en/latest/
      Some notes:
      | * https://ssl.gstatic.com is required only on Android and is needed for TalkBack to function properly
      | * Disables use of inline scripts in order to mitigate risk of XSS vulnerabilities. To change this:
      |   * Enable inline JS: add 'unsafe-inline' to default-src
    -->
    <meta http-equiv="Content-Security-Policy" content="default-src 'self' data: https://ssl.gstatic.com 'unsafe-inline' 'unsafe-eval'>
    <meta name="format-detection" content="telephone=no">
    <meta name="msapplication-tap-highlight" content="no">
    <meta name="viewport" content="initial-scale=1, width=device-width, viewport-fit=cover">
    <meta name="color-scheme" content="light dark">
    <link rel="stylesheet" href="css/index.css">
    <title>Hello World</title>
  </head>
  <body>
    <div class="app">
      <h1>Apache Cordova</h1>
      <button id="getPosition">Current Position</button>
      <button id="watchPosition">Watch Position</button>
      <div id="deviceready" class="blink">
        <p class="event listening">Connecting to Device</p>
        <p class="event received">Device is Ready</p>
      </div>
    </div>
    <script src="cordova.js"></script>
    <script src="js/index.js"></script>
  </body>
</html>

```

```

document.addEventListener('deviceready', onDeviceReady, false);

function onDeviceReady() {
  // Cordova is now initialized. Have fun!

  console.log('Running cordova-' + cordova.platformId + '@' + cordova.version);
  document.getElementById('deviceready').classList.add('ready');
}

document.getElementById("getPosition").addEventListener("click", getPosition);

function getPosition(){
  var options = {
    enableHighAccuracy: true,
    maximumAge: 3600000
  }

  var watchID = navigator.geolocation.getCurrentPosition(onSuccess, onError, options);

  function onSuccess(position){
    alert('Latitude: ' + position.coords.latitude + '\n' +
      'Longitude: ' + 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.timestamp + '\n');
  };

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

```



```

document.getElementById("watchPosition").addEventListener("click", watchPosition);

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' +
            'Longitude: ' + 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');
    }
}

```



APACHE CORDOVA

Current Position Watch Position

DEVICE IS READY