

ASSESSMENT BRIEF

Course:	Software Development
Teacher:	Fachtna Roe
Component Title & Code:	Mobile Technologies 5N0580 (MOBT)
Assessment Technique:	Skills Demonstration (SKILLS2) (MOBT)
Assessment Title:	Android Native Application (MOBT)
Weighting:	40% (MOBT)
LO's Assessed:	LO 5, 7, 8, 9, 10, 12 (MOBT)

Overview of Brief:

You previously “*Created a prototype GUI design for a Health Information App,*”, using a web-based calculator displayed in a local Android WebViewer program.

You must now create a native version of the App for your Android device.

You may re-use previous code from open sources, but credit must be given, and licences must be adhered to. The completed work **must** be your own.

Issue Date: 2024-03-13
Review Date: 2024-03-19
Submission date: 2024-04-19

Assessment activity guidelines/instructions to learners:

(splash, main, settings)

Create a minimum 3-screen Application, facilitating a user to:

Calculate their BMI

Count their steps (pedometer), including:

Enable/disable the pedometer

Configure the pedometer

Save data within their device

Calculate distance walked

(And, *possibly*, show target heart-rate, bpm etc?)

Support materials

The AppInventor-JavaLibrary and the kawa library are available at <https://fachtnaroe.net/apks>

Look at **appinventor.mit.edu** for a visual understanding of how Appinventor functions work, and what you can do with the different sensors and objects.

There are sample and demonstrator programs zipped and available at <https://fachtnaroe.net/apks>

In particular at the /apks location look for the bmi2, bmi3, bmi4 etc zipped project demonstrators. These show how to use the pedometer object, the TinyDB object, and a variant of the appinventor Slider object which may be useful as an input for adjusting stride length when configuring the pedometer.

Deliverables:

Submit your program and report using html, where each file other than the report file links (via hypertext anchor, or in-line for images etc) to all of the other files in the submission. The report file name must be **index.html** – this is the only file that will be opened directly from the file-system for this

assignment by the examiner. You must therefore weave each file into the 'story' of your report.

The Android app must be cleaned before compression, then zipped and made available through a link in your **index.html**

Include among the linked supporting files:

- The cleaned, compressed, App folder
- 1 set, screen design sketches
- A UX work-flow diagram demonstrating user operation
- UML use-case diagram
- A screen shot of each final screen
- Java code for your MainActivity.java;
 - put this in your HTML page between
`<code><pre></pre></code>`
- Evidence of testing.
- Project report

Participate in the development of the App with the same person whose Software Architecture #6 you tested (webviewer version).

Submission: Single HTML file (**index.html**) with all resources (images etc) linked in, in a folder called eg **red/1/MOBT2-RED1/** submitted via **t.fachtnaroe.net**.

The submitted page may be used for your Client Website assignment.

Marking scheme:

Tipperary ETB

Mobile Technologies 5N0580	Learner Marking Sheet 1 Skills Demonstrations/Projects 70%
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Learner's Name: _____ Learner's PPSN: _____

Assessment Criteria	Maximum Mark	Learner Mark
Skills Demonstration 1		
1. Demonstrate an understanding of the design, development, deployment, operation, maintenance and evaluation of mobile devices	10	
	10	
Skills Demonstration 2		
<ul style="list-style-type: none"> Participate in the execution of a project plan addressing the on-going planning, maintenance and upgrading of mobile platforms and technologies 	5	
<ul style="list-style-type: none"> Demonstrate a basic mobile application development lifecycle, including API description for various operating systems, user interface considerations and deployment requirements 	10	
<ul style="list-style-type: none"> Explore the use of programming concepts in mobile application development 	10	
<ul style="list-style-type: none"> Demonstrate an understanding of mobile app development concepts and working with APIs 	5	
<ul style="list-style-type: none"> Use local and networked data and data stores 	5	
<ul style="list-style-type: none"> Use a mobile application development environment to install, configure, test, and deploy a prescribed basic mobile application 	5	
Subtotal	40	
Skills Demonstration 3		
3. Demonstrate the fundamental software development lifecycle	10	
	10	
4. Effectively manage mobile IT devices and systems (e.g. configuration, settings, management and maintenance)	10	
	10	
Total Mark	70	