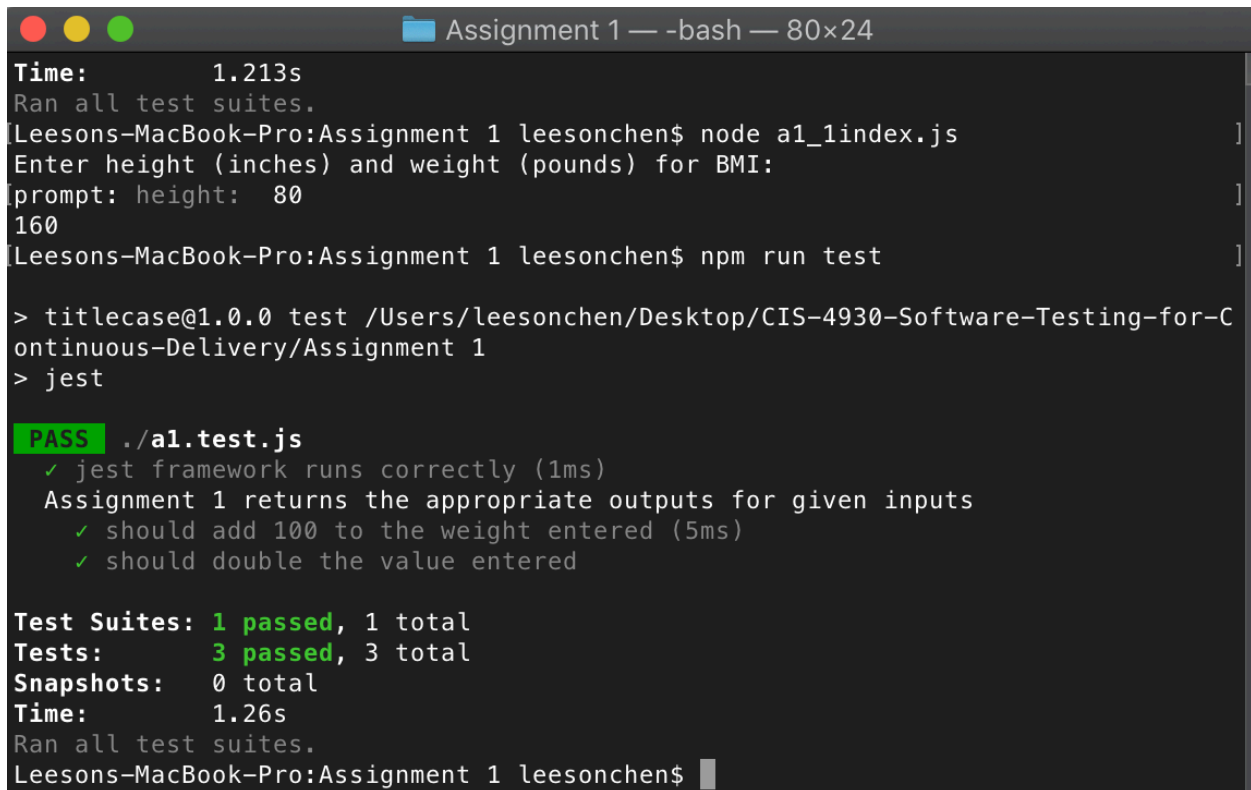


SWT PPA 1 Project Report

Leeson Chen

1. Naming and organizational conventions: The language I am using is Javascript. Because of this, my tests will be using the Jest testing framework. The names of my tests will follow the naming format it('should... [condition]'). For example, a test that expects to add 100 to any number input will be named it('should add 100 to the input number', ...
2. The tests use Jest, which I downloaded from the Mac OS command line with "npm install --save-dev jest". The test script was compiled and run from the command line as well ("node a1index.js" to run the code filed as a1index.js, and "npm run test" to run the test suite named a1.test.js).
3. [screenshot of all tests passing]

A terminal window titled "Assignment 1 — -bash — 80x24" showing the execution of a test suite. The output indicates that all tests passed. The test suite is named "a1.test.js" and contains three tests: "jest framework runs correctly (1ms)", "Assignment 1 returns the appropriate outputs for given inputs", and "should add 100 to the weight entered (5ms)". The test suite is named "a1.test.js" and contains three tests: "jest framework runs correctly (1ms)", "Assignment 1 returns the appropriate outputs for given inputs", and "should add 100 to the weight entered (5ms)". The test suite is named "a1.test.js" and contains three tests: "jest framework runs correctly (1ms)", "Assignment 1 returns the appropriate outputs for given inputs", and "should add 100 to the weight entered (5ms)".

```
Time: 1.213s
Ran all test suites.
Leesons-MacBook-Pro:Assignment 1 leesonchen$ node a1_index.js
Enter height (inches) and weight (pounds) for BMI:
prompt: height: 80
160
Leesons-MacBook-Pro:Assignment 1 leesonchen$ npm run test

> titlecase@1.0.0 test /Users/leesonchen/Desktop/CIS-4930-Software-Testing-for-C
ontinuous-Delivery/Assignment 1
> jest

PASS ./a1.test.js
  ✓ jest framework runs correctly (1ms)
  Assignment 1 returns the appropriate outputs for given inputs
    ✓ should add 100 to the weight entered (5ms)
    ✓ should double the value entered

Test Suites: 1 passed, 1 total
Tests: 3 passed, 3 total
Snapshots: 0 total
Time: 1.26s
Ran all test suites.
Leesons-MacBook-Pro:Assignment 1 leesonchen$
```

4. [code coverage report]
5. I think that unit testing and TDD are useful additional steps to the programming process. Although they are a time investment, the investment pays off. TDD is of course very useful for a real programming project, as it reduces time spent on maintenance and ensuring code changes don't break old features. The benefits to TDD are as listed above: that it reduces time spent on maintenance and makes

sure code changes don't break old features; additionally, the tests serve as documentation and specifications of their own. The drawbacks to TDD are that writing tests at the beginning takes longer than just starting to write the program, which can be less useful for code that is simple and may not need a full suite of tests for long-term maintenance.