

Knowledge Assessment

This is a Practical knowledge Assessment. It consists of several open book instructions.

Take home questions

Description:

*Know how to design, create and add tests to the test suite
Know how to increase the code coverage of the added tests
Analyse and debug the tests upon adding them*

Question.	Details of Question
1.	Download and unzip the folder https://github.com/huajiejason/js-bmi-coverage
2.	<p>In the folder, there is a js file named bmi-calculate.js with the following code excerpt</p> <pre>const bmiCalc = function (weight, height) { var bmi; bmi = (weight / Math.pow((height/100), 2)).toFixed(1); console.log(bmi); if(bmi < 18.5){ category = "Underweight"; } //If BMI is >=18.5 and <=24.9 else if(bmi >= 18.5 && bmi <= 24.9){ category = "Normal Weight"; } //If BMI is >= 25 and <= 29.9 else if(bmi >= 25 && bmi <= 29.9){ category = "Overweight"; } //If BMI is <= 30 else{</pre>

	<pre> category = "Obese"; } return category; } module.exports = { bmiCalc }; </pre> <p>Note: This file has been provided as well as part of the js-bmi-coverage folder/ in https://github.com/huajiejason/js-bmi-coverage</p>
3.	<p>There is a js test file named as bmi-calculate.test.js which has the following excerpt</p> <pre> const { bmiCalc } = require('./bmi-calculate'); </pre> <p>Note: This file has been provided as well as part of the js-bmi-coverage folder/ in https://github.com/huajiejason/js-bmi-coverage</p>
4.	<p>There is a package.json file which has the following excerpt</p> <pre> { "name": "@codecoverage/example-javascript", "version": "0.0.1", "description": "Codecoverage Example Javascript", "scripts": { "test": "jest" }, "devDependencies": { "jest": "^28.1.1" } } </pre> <p>Note: This file has been provided as well as part of the js-bmi-coverage folder/ in https://github.com/huajiejason/js-bmi-coverage</p>
5.	<p>In order to observe the coverage results, there is a new file named jest.config.js with the following excerpt</p>

```
module.exports = {
  collectCoverage: true,
  coverageReporters: ['text', 'cobertura'],
}
```

Note: This file has been provided as well as part of the js-bmi-coverage folder/ in <https://github.com/huajiejason/js-bmi-coverage>

6. Execute the following command

“npm install && npm run test”

In the terminal window

Observe the code coverage table as follows

```
-----|-----|-----|-----|-----|-----
File    | % Stmts | % Branch | % Funcs | % Lines | Uncovered Line #s
-----|-----|-----|-----|-----|-----
All files |      0 |      0 |      0 |      0 |
-----|-----|-----|-----|-----|
Test Suites: 1 failed, 1 total
Tests:       0 total
Snapshots:   0 total
Time:        0.542 s
```

7. Based on the similar example in W5, create a test to exercise BMI Underweight

8. Execute the following command “npm run test” on the terminal and observe the code coverage table.
Take note of the coverage and provide the results with explanation

9. Create another test to exercise BMI Normal Weight. Execute the following command “npm run test” on the terminal and observe the code coverage table.
Take note of the coverage and provide the results with explanation

10. Expand the regression test to cover the other BMI categories namely Overweight and Obese. Execute the following command “npm run test” on the terminal and observe the code coverage table.
Take note of the coverage and provide the results with explanation

11. Ensure you are able to provide the added tests and explanation of the coverage for

- Step #7 & #8
- Step #9
- Step #10