

TDD LAB

Overview: You will receive a file with the code. Use TDD practices to write tests and complete the code.

Task:

1. The ChangeHandler class allows users to insert coins into a vending machine and calculates the correct coins to give in change. Complete this class.
2. Note that all amounts are counted in cents, not dollars.
3. Write tests to ensure ChangeHandler is working correctly.

Required Test Cases

5. **Constructor:**
 - a. amountDue is set based in argument.
 - b. cashTendered is set to zero.
6. **insertCoin:**
 - a. Inserting a quarter adds 25.
 - b. Inserting a dime adds 1.
 - c. Inserting a nickel adds 5.
 - d. Inserting a penny adds 1.
 - e. Calling function multiple times continues to add on to amount.
7. **isPaymentSufficient:**
 - a. Returns true if cashTendered more than amountDue.
 - b. Returns false if cashTendered less than amountDue.
 - c. Returns true if cashTendered equal to amountDue.
8. **giveChange:**
 - a. 0 change produces: quarters: 1, dimes: 0, nickels: 0, pennies: 2.
 - b. 10 change produces: quarters: 0, dimes: 1, nickels: 0, pennies: 0.
 - c. 27 change produces: quarters: 1, dimes: 0, nickels: 0, pennies: 2.
 - d. 68 change produces: quarters: 1, dimes: 1, nickels: 1, pennies: 3.
 - e. Come up with two more.

Bonus

- Add healing to the Character and test it.
- Write some tests for the Game class.

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Setup:

1. Create a new directory for your lab. Within it, create **src** and **test** directories.
2. Copy the provided **change-handler.js** starter into the **src** directory.
3. Create a **change-handler.spec.js** file in the **test** folder. You will write your tests in here.
4. Back in the main directory for your lab, run **npm init** (Accept all defaults.)
5. **npm install --save-dev karma jasmine karma-jasmine karma-chrome-launcher**
6. **karma init** (Select jasmine for framework, Chrome for browser, and **src/*.js** and **test/*.js** for location of your files. For everything else, use the defaults.)
7. Finally run **karma start** to kick off the tests. It will automatically re-run them every time you save a file.

