

In Session Assignment 2 --- Test Doubles

Objective

Practice writing test doubles to isolate unit tests from external systems / resources.

Assignment

Write 2 simple programs in your chosen programming language. Write unit tests for those program with test doubles (mocks, fakes, dummies, stubs, spies) to isolate functionality and mock external resources.

Program 1

- Write a program to sum integers from a text file (you choose how to structure the text file - e.g., single integer per line). The program should read the list of integers, add them up, then append the resulting sum to the text file. Write unit tests to test program elements in isolation.

Program 2

- Setup a local database (e.g., MySQL, PostgreSQL, MongoDB, SQLite). Write a program that connects to the database to manage simple customer accounting. The program should include the following functions:
 - Create a customer (id, name, total amount of goods purchased)
 - Create an order (customer id, amount of goods purchased)
 - Retrieve all customers

You do not need to create a user interface for either program. Functionality will be verified by writing tests. You are required to review documentation, search Google, Stack Overflow and other online resources to determine a suitable approach to writing test doubles (i.e., mocking frameworks and libraries) in your language of choice. Database configuration can be hardcoded into the program source. Add a comment in your database code to indicate the name, version, port number, and download link for your chosen database. It must be installed local to your machine.

For each of your tests, tag the tests (write comment above the test with on of the #tags below) that contain test doubles and use the tag to indicate the type of test double that is included in the test (you may not use them all).

Testing double TAGS:#mock, #fake, #stub, #dummy, #spy,

SUBMIT - GitHub Repo Link to Tagged Commit

Create zip file of all contents including -

- 1) source code, tests, and project files (content that you would share to execute on another machine)
- 2) screen shot of passing tests

Monday, October 18 - 11:59pm (late submissions penalized - tags past this date/time)