

## CS2303 Quiz 6

Test-driven development (TDD) process

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Name:  
WPI email:

Total out of 2.5 points:

1. (0.357 points) What is the TDD process? Explain in sufficient detail that a person could follow the steps in the description.
2. (0.357 points) Describe one benefit of the TDD process.
3. (0.357 points) Recall that the sequence diagram is used to design the software at a higher level of abstraction than code. Suppose designers have chosen to separate a human-computer-interface program into a class for recognizing and enacting specific commands (called the controller), a class for supporting what the user sees, and converting user input (menu choices, keyboard accelerators) into commands (called the view) and a class that manages the state data of the application (positions of objects, locations of treasure, etc.) (called the model). Draw a sequence diagram using these classes, and show some messages for setting up for a game of battleship.
4. (0.357 points) Suppose a function is needed, to establish the position in the sea, of a given kind of battleship. What test function and test cases would you suggest? Explain why these are useful.
5. (0.357 points) Suppose you have written adequately thorough test cases for a function that places an instance of given ship into the sea for a battleship game, and that you have refactored that code to your satisfaction. Would you subsequently find it necessary to examine the code for that function? If so, why; if not, why not?
6. (0.357 points) Explain how the levels of abstraction are traversed, in the stages of (1) design of sequence diagram, (2) test-driven development of functions (3) checking for completeness of application development: Is it top down? Is it bottom up? Is it top down followed by bottom up? Explain your perspective.

7. (0.357 points) Is there any relationship between a collection of tests (including test cases) and documentation of code? Explain your perspective.