

CS 362 - Software Engineering II

Homework 4

Question 1

10 Points

1.1 Write code to calculate the volume of a cube.

1.2 Use the unittest module and write any 3 tests that can test out your code.

Hint: Take into consideration tests for checking negative values, type errors, complex numbers, etc.

Deliverable

- i) Submit files that contain your code and the associated tests to Github.
 - ii) In the pdf that you submit, explain your thinking behind those tests that you chose to write.
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Question 2

10 Points

2.1 Write code to calculate the average of elements in a list.

2.2 Use the unittest module and write any 3 tests that can test out your code.

Hint: Take into consideration tests for checking empty lists, divide by zero, etc.

Deliverable

- i) Submit files that contain your code and the associated tests to Github.
- ii) In the pdf that you submit, explain your thinking behind those tests that you chose to write.

Question 3

10 Points

3.1 Write code that generates a **full name** when you provide the **first** and **last name** as inputs.

3.2 Use the unittest module and write any 3 tests that can test out your code.

Deliverable

- i) Submit files that contain your code and the associated tests to Github.
- ii) In the pdf that you submit, explain your thinking behind those tests that you chose to write.

Note - Demonstrate pass and fail conditions for each of the above. Applies to Questions 1, 2, and 3.

Question 4

10 Points

From **In-class activity 1**:

Think of your social media system. Give 1 example of a component that your system contains. Based on this component, provide 3 examples of unit tests that you could write.

Deliverable:

- i) Choose a component from your system from In-class activity 1. Describe specifically what your component does in your system.
- ii) Write down three examples of unit tests you could write for that component.

Note - These are examples of what you would specifically test in that component. You do not have to write code.
