CS 362 HW 4

Question 1:

The tests I chose to write for the volume of the cube detail three different possible inputs integers, negative integers, and non-integers. The tests send each of the values respectively into the function that calculates the volume. For correct whole number integers, the program returns an integer that is the volume of the cube with edge length x (x is the variable sent into the function). The test case written sends in the value 5 and compares it to 125 (the volume of a cube with edge length 5), if it is true then the test case passes. The second test case tests the program for negative integer input. If the function gets a negative value it returns “Value must be greater than zero”. The third test case looks for non-integer input. If the value sent into the function contains non-integer inputs, it returns “Not a proper input. Please input a integer”. These tests each cover possible inputs to determine that the function properly meets specifications.

Question 2:

The tests for this program include checking if a list contains all integers, if a list is empty, or if a list contains string values. To test for correctness, I built a test case that checks to see if the function properly returns an average for a list of integers. The second test case determines if a list is empty and handles divide by zero error. The function handles this by finding the length of the list and compares it to 0. If the length is 0 it returns a string describing that the list cannot be empty since this would cause a divide by zero error. The third test case determines if there are mixed types in the array. If there are, then the function returns a string detailing that the list contained mixed types.