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. This test case passes if the correct average is returned from the function. 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 the test passes when 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 test passes if the function returns a string detailing that the list contained mixed types.

Question 3:

The tests for this program look for proper strings to be inserted for first and last name. The first test case takes two proper strings for first and last name and combines them together. The function returns the concatenation of the two strings if it passes. The second test case sends in an integer for last name. The test passes if the function error handles this input and returns a string detailing that the input for last name must be a string. The last test case is doing the same thing as the second test case, except for it checks the first name for integer input. This test case passes if the function returns an error detailing that last name needs to be a string.

Question 4:

The component I have chosen to write tests for is the function that handles uploading a video to YouTube. This software checks if a video imported into YouTube is in a supported format. If the video is not a supported format, it will be rejected. Another piece of functionality is encoding the video and uploading the video itself to YouTube servers. If an error occurs such as

corrupted files or loss of connection, the upload will halt. Once a video is uploaded the user can name the video, add thumbnails, tags, description, and other attributes.

Test 1:

The first test determines if the video uploaded is in the proper format. If the video is not in the proper format the software will reject the file from being uploaded. The test passes if the file uploaded is part of the correct file types allowed. The test will also pass if an incorrect file type uploaded is rejected.

Test 2:

File size is another consideration. If a file is too large the software will reject it. The test passes if the file size is within the constraint and will allow the video to be uploaded. The test will also pass if a file that is too large is rejected from being uploaded.

Test 3:

Once a video is uploaded it must have a title before it is uploaded. This test passes if there is a title. The test also passes if it rejects a video from being published that does not have a title.