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CIS121

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Assignment 6

Q1.

Line 5 is the prototype of function testing.

Q2.

The names are c and d. C is an integer and d is a decimal number.

Q3.

The computations and results are the same if we change c and d to number1 and number2 respectively.

Q4.

Even if we assigned a value to d the value of y would not be changed. This is because there is no call by reference that would make y and d share a memory location. They are separate variables and changing one does not mean they are both equal at all times.

Q5.

Calling change2(99) does not alter the value of x because it it is a call by value. The value assigned to x at that point is 99 because it was declared in main. However, the call by reference of change(x) means that the computer now thinks of val and x as different sames for the same location. When this occurs assigning 27 to val in the change function also means x now has a value of 27. Calling by reference ties together the two variables so changes to one mean the other has changed as well. Call by values do not cascade changes in this way.

Q6.

The computer prints both the value 10 and 9 in that order. The global value of 12 does not print because main declares a new value of 9 for x, and since x was not declared a constant the value changes. 10 is printed first because the first print statement encountered is the one that prints the value of 10 that is defined in the new block inside of main. This new blocks local variable is only accessible within that block so the following print statement outside the block still refers to the statement that assigned 9 to x because of the limited scope that a block creates. In this code we encountered a non-constant global variable, a local variable, and a local variable within a block.