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**LAB TITLE: Intro to MSVS**

Ans:

1. **Question 1:** Place a breakpoint at the line "int x = 1, y = 1;" and run the program using Debug, Start Debugging. The program stops at the first breakpoint. What are the values of x and y at this point in the program?

x -858993460 int

y -858993460 int

1. **Question 2:** Use the Step Over command once. What now are the values of x and y at this point in the program?

x 1 int

y 1 int

1. **Question 3:** In your own words, explain why the change in the values of x and y that occurred in Step 2 was not visible at the breakpoint in Step 1.

The breakpoint causes the program to stop executing right before the line executes. At the breakpoint in question 1, the line that assigns the variables doesn’t occur yet.

1. **Question 4:** The yellow arrow should be pointing to the line "pr\_message("Hello world!");". Use the Step Into command to enter this function. Explain what you see.

basic\_string(const \_Elem \*\_Ptr)

: \_Mybase()

{ // construct from [\_Ptr, <null>)

\_Tidy();

assign(\_Ptr);

}

Quite honestly, I have absolutely no idea what I’m seeing. All I’m guessing is that this is how a string is made, using a function called basic\_string hidden in some deep part of the C++ language.

1. **Question 5:** Now use the Step Out command to return to "pr\_message("Hello world!");". What is the command you used for this action?

I mean, I used Shift+F11

1. **Question 6:** Now in the main function, place a breakpoint on the line "x = y / x;". Keep an eye on the window as you continously use the Step Over command until you reach this breakpoint. What line in the program sets the denominator to cause the divide-by-zero error?

Line 14.

x 0 int

y 1 int

1. **Question 7:** Based on your answer in Question 6, correct the code to allow the program to run to completion.

I mean, I can literally do anything except that division part. Like incrementing instead of decrementing on line 14, not setting y = to x decremented on line 15, or not dividing by the x decremented on line 20.

**LAB TITLE: Title 1**

Ans:

***Question 1:***For what values does the function **init\_values\_x1()** get invoked?

***Question 2:***For what values does **init\_values\_part1A()**get called?

***Question 3:***For what values does **init\_values\_part1B()** get called?

***Question 4:***For what values does **init\_values\_part2()** get called?

***Question 5:***For what values does **init\_default()**get called?

***Question 6:***  What set of 3 values (**i,x,y**) caused the phone network to crash?

***Question 7:***After entering the 3 values, what is displayed when the execution of the program stops at the breakpoint you set at the line that contain the name of the function?

***Question 8:***  Does the program stop at the breakpoint again?

***Question 9:***  How do you remove the breakpoint you set?

***Question 10****:*What differences in the execution of the **MSVS** commands, **"F11"** and **"F10",** did you observe?

***Question 11:*** Where does execution stop when you enter "**Shift-F11**"?

***Question 12:***  What does **MSVS** do with "**Watch**" variables?

***Question 13:***  Did you observe anything that surprises you about the behavior of the program? Was the execution of any lines skipped that you thought should have been executed?

***Question 14:***  Can you explain the behavior you observed?

**LAB TITLE: Title 1**

Ans:

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2. Asdfasdfasdfasf
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