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Classwork 5

**Problem 2:** output explanation

X1 is an integer with value 1000, in memory hex 1000 is stored as 0x000003E8.

Y1 is a short with value 200, in memory hex 200 is stored as 0x00C8

* After swap (big endian), the most significant byte is stored first, so when we swap, we are swapping 00 and C8. The new values are:
  + X1 = 0xC803E8
  + Y1 = 0x0000 since the original was overwritten with short.
* After swap (little endian), the least significant byte is stored first, so the swap will change E8 with C8. The new values are
  + X1 = 0x00C80300 (new integer value after swapping bytes)
  + Y1 = 0x03E8 (which is 1000)

This is why, y1 will become 1000 and x1 will change based on the swapped bytes.

**Problem 3:** output explanation

S1 points to the string “John” and S2 points to the string “Jessica”. swapG function swaps the memory addresses of s1 and s2, making s1 point to “Jessica” and s2 to “John”. After the swap, s1 will contain the address of the string “Jessica”, and s2 will contain the address of string “John”.