Winter ’15 CIS 314 Assignment 6 – 100/100 points – Due Friday, 2/27, 11:59 PM

Please submit individual source files for coding exercises (see naming conventions below) and a single solution document for non-coding exercises (.txt, .doc, or .pdf only). Your code and answers need to be documented to the point that the graders can understand your thought process. Full credit will not be awarded if sufficient work is not shown.

1. [70] Write a Y86 program that sorts an array of data using Bubble Sort. Use a hardcoded input array similar to that used by asum.ys (included with the Y86 simulator source) with at least 10 entries. Sort the array in place (i.e., no need to allocate additional memory for the sorted array). Follow the register usage conventions outlined in B&O’H section 3.7.3. Name your source file sort.ys.

2. [30] Consider the following Y86 code:

```
addl %eax %eax
movl 0(%ecx) %ebx
cmpl %ebx %eax
```

How many pipeline stalls (or bubbles) are required when running the above code with and without forwarding (see sections 4.5.5-4.5.8)?

Upload .zip file to Blackboard (see Assignments section for submission link).