Fall 2021 CSC332 Section M Quiz 1 100 Points.

Q1. 40 Points.

Convert the given code fragment to assembly code fragment,

***using only instructions of the following types.***

These instructions are generally discussed in class. Here

X,Y are any memory locations; R, R1, R2 are any general registers; L is a label in the code (you can use any names as labels, ex. L, L1, L2 etc. ).

* load X, R //copy contents of memory location X into R.
* store R, X //Store contents of R into Mem location X
* cmp R1, R2 //Compute R1-R2 and update condition codes;

//throw away result of subtraction.

* jmp L //Jump to location L in the code.
* jmpp L //If P bit is 1, Jump to location L in the code
* add X, R //Add contents of X,R and store result in R;

//**Also update the condition codes.**

if ((X + Y) > 0) then Y=X+Y

else X=Y+X

L:

**Q2. 60 Points.**

**Answer the following 3 questions, each in less than 30 words.**

1. **Does a compiler satisfy the Resource Management goal of an Operating System?**
2. **Does an ADD instruction change the contents of the PSW register? Explain.**
3. **What is the basic motivation to have a DMA?**