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CPSC 300

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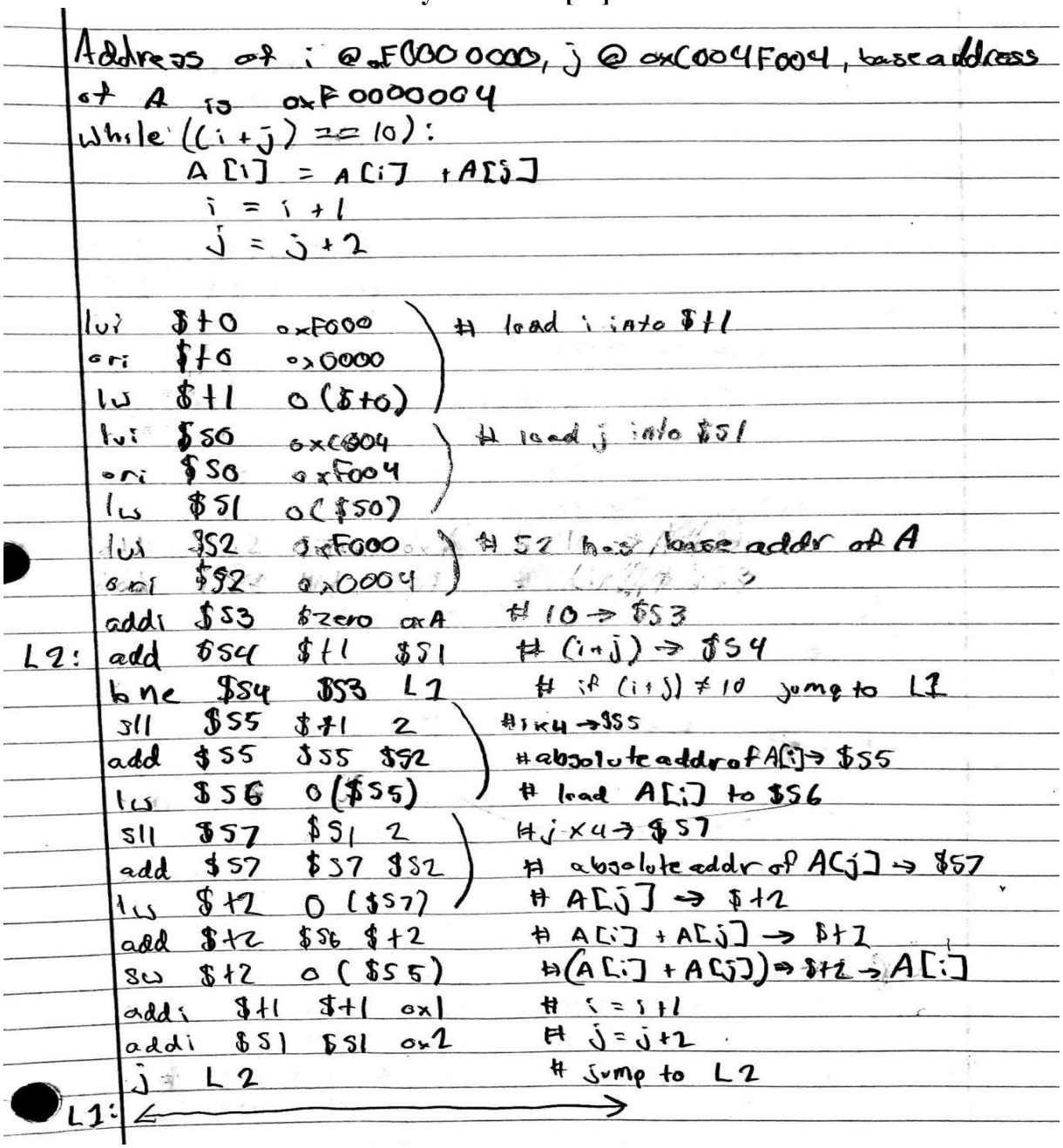
Homework 8

1. Write MIPS code for the below Python code. [20]



2. In the MIPS simulation code, add the following modifications to mips_regfile.py. [20]

a. Complete the Num2Reg function to return the alphanumeric register name ($t0, $s0 etc.) given the register number (8, 16 etc.).

Dictionary used on line 28 and the completed Num2Reg function is on line 41 in mips_regfile.py

b. $zero register always reads 0 in MIPS and data cannot be written into $zero register. Modify the code to reflect this fact.

Modification on line 60-62 in mips_regfile.py. I added an if statement to check if the destination register is equal to 0 ($zero). If it is, it won't write into the register. If it's not equal to 0, then it will write the datain into the destination register like normal.

Test code is located at line 94 in mips_regfile.py