

HW 7: $\mathbf{W} = \mathbf{X} + \mathbf{Y} + \mathbf{Z}$

Assignment: Write a **TOY** assembly language program to add the values of 3 variables, **X**, **Y**, and **Z**, in memory and store the sum in a fourth, **W**.

Details: The variables occupy consecutive words of memory starting with **W**. The address of **W** is in register **\$3**. Register **\$4** contains the constant **1**. *Do not change* the values in registers **\$0** through **\$4**. You can use registers **\$5** through **\$F** as you please. Your program should consist entirely of addition (**add**), load (**l**), and store (**st**) instructions.

Hint: You will need to construct the addresses of variables **X**, **Y**, and **Z** in a register or in registers. There are various ways to accomplish this.