Lab 2 Report

Name: Nathan Fleet

List of Assembly Code Files:

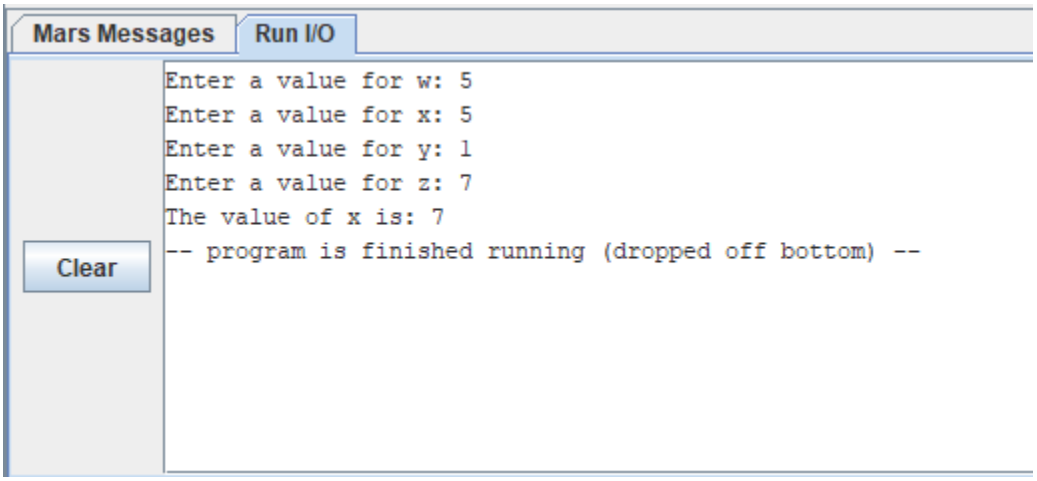
- lab2.1.asm
- lab2.2.asm

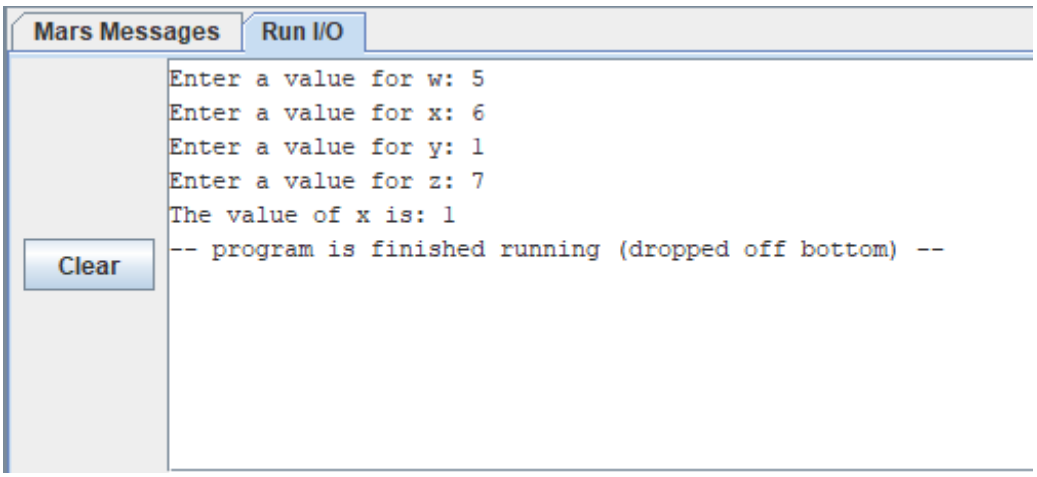
Summary of Project Implementation:

In this project I created two programs. The first program asks the user to input values for the variables w, x, y, and z. The program then stores those values into registers, and checks the following condition: (x-y) >= w. If this condition is true, it then sets the value of x to the value of y. If this condition is false, it then sets the value of x to the value of z. Finally, it prints the value of x to the console. For the second program, it asks the user to input values for two registers. After storing the values into registers, it swaps the values using only two registers. A third register was not utilized because it said in the instructions that the third register could be destroyed. At the end of the swap, it displays the values held by each register in order to confirm that the values were indeed swapped.

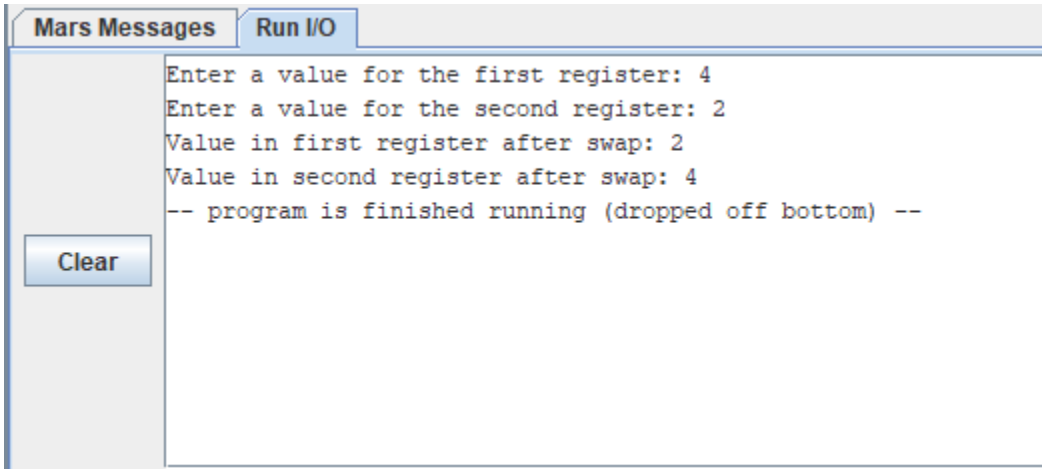
Results:

Part 1 Screen Prints (lab2.1.asm)





Part 2 Screen Prints (lab2.2.asm)



Conclusion:

This biggest problem I faced while completing this lab was translating the if-else statement into MIPS language. This was difficult for me because I didn't understand the jump commands very well, so I had some trouble getting the program to do what it was supposed to do. I eventually figured it out, and the program now works as intended. One lesson I learned when completing this lab was that you can use "bge" to check if the contents in a register are greater than or equal to the contents in another register. This was very helpful for me in the lab because it allowed me to do the >= condition with one single command.