

CANOS Project 2

MIPS Programming

(complete this project in groups of up to 3)

In this lab, you will write a program in the 32-bit MIPS architecture described in class. The function of the program is selected by your group and pre-approved by the instructor.

Design Criteria

- The calculator program should accept input from the user in the form of one or more prompts and/or files.
- The program should employ one or more system calls.
- The program should employ one or more procedures. These procedures should employ one or more of the $\$s$ registers internally and correctly place the registers on the stack. The procedure should also follow the other stack conventions described in lecture 5, such as using $\$a0$ - $\$a3$ registers to pass in arguments and using $\$v0$ - $\$v1$ arguments to return results.

For information on using system calls, refer to:

<https://courses.missouristate.edu/KenVollmar/mars/Help/SyscallHelp.html>

Your submission should contain:

- 1.) (10 pts) Your working .asm assembly code. You are encouraged to document your code with comments and make it easy to understand.
- 2.) (5 pts) A brief explanation of how the work was divided amongst your teammates.
- 3.) (5 pts) A paragraph or two of explanation about your design process. How did you set about designing this program? Did you try anything that ultimately did not work and had to be revised? What did you learn through completing this project?
- 4.) (5 pts) Include a printout of the code as it appears after going through the assembler. How is it different from the code you originally wrote? What did you learn?