## HW4.8. RISC-V Coding

Write a function mean, which follows the following specification:

Input: a0, a1, a2, and a3 contain (signed) integers, with

 $\max(|a0|, |a1|, |a2|, |a3|) \le 500,000,000$ 

Output: Return in a0 the arithmetic mean of the input values. If the mean is not an integer, round the number down.

Example: If a0 contains 1, a1 contains 2, a2 contains 3, and a3 contains 4, then the mean is  $\frac{1+2+3+4}{4}=2.5$ . Thus, the expected output is 2.

Example: If a0 contains -1, a1 contains -2, a2 contains -3, and a3 contains -4, then the mean is  $\frac{-1-2-3-4}{4}=-2.5$ . Thus, the expected output is -3.

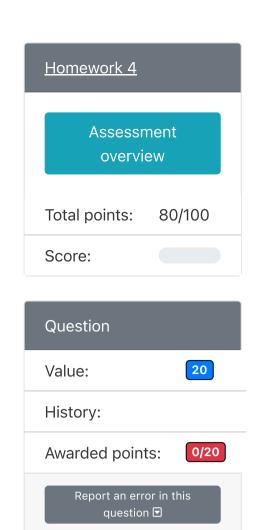
Hint: RISC-V standard does not have a division instruction or a multiplication instruction. However, some other instruction can be used to divide by certain numbers. What instruction is that?

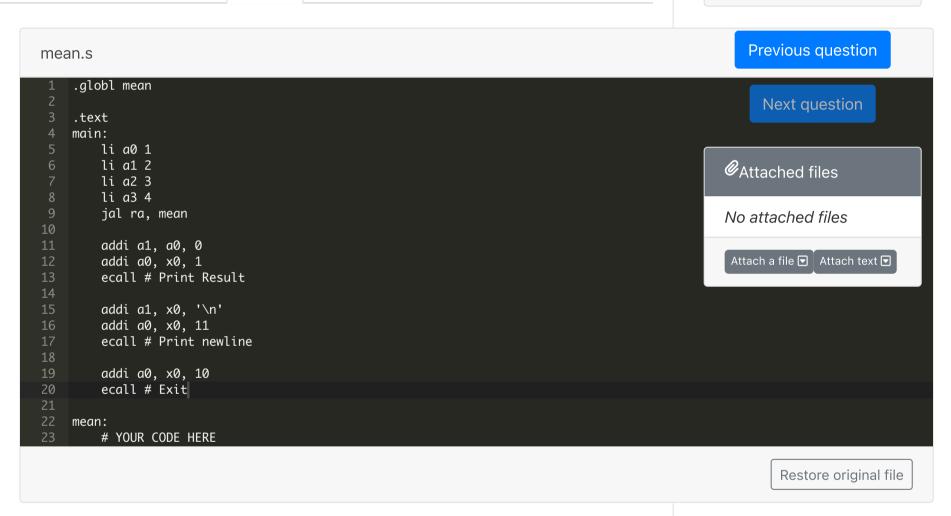
Assume that all registers, aside from those that are already provided, will initially contain garbage data.

Make sure you follow calling convention!

Editor

**Simulator** 





Save & Grade Unlimited attempts

Save only