

Homework 3

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Question 1

Implement the following C code in MIPS assembly. Show the contents of the stack after the function call to the function "compare" is made. Assume that the stack pointer is originally at address 0x7FFFFFFc.

Solution:

Address	Value (+0)	Value (+4)	Value (+8)	Value (+12)	Value (+16)	Value (+20)	Value (+24)	Value (+28)	Value (+32)
0x7ffffe0	0	0	0	0	0	0	0	4194316	0
0x7ffff000	0	0	0	0	0	0	0	0	0
0x7ffff020	0	0	0	0	0	0	0	0	0
0x7ffff040	0	0	0	0	0	0	0	0	0
0x7ffff060	0	0	0	0	0	0	0	0	0
0x7ffff080	0	0	0	0	0	0	0	0	0

Question 2

Implement the following C code in the table in MIPS assembly. Suppose that fib_iter was called with n = 4, show the contents of the stack after the function call to the function "fib_iter" is made. Assume that the stack pointer is originally at address 0x7fffffc.

Solution: