

Mini Quiz 16

Name: _____

Kerberos: _____

Consider the following x86 assembly code:

```
func_F: // A function func_F
        // has a single parameter, say, 'x', passed in register rdi
enter $(8*3), $0 // function prologue, sets stack for locals
movq $0, -8(%rbp) // variable a
movq $0, -16(%rbp) // variable b
movq $0, -24(%rbp) // variable c

movq %rdi, %r10
movq %r10, -8(%rbp)
movq $1, %r10
movq %r10, -16(%rbp)
movq -8(%rbp), %r10
movq %r10, -24(%rbp)

movq -16(%rbp), %r10
addq %r10, -24(%rbp)
movq -24(%rbp), %rax // return value stored in %rax
leave // function epilogue
ret // returns to the caller function
```

Q: Write Decaf code that could have resulted in this x86 code: