CMPT 295 Assignment 1

Name: Zhixin Huang ID: 301326521

2.process virtual machine

3.

a) output is 6.

When n = 16, output is 6.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| n | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| output | 0. | 0. | 1. | 2. | 2. | 2. | 2. | 3. | 4. | 4. | 4. | 4. | 5. | 6. | 6. | 6. |

b) Count how many letter ‘o’ are there from the first letter of the string the nth letter.

c) Keep tracking from the nth letter to the first letter one by one.

d) The main loop progress backward through str, because the function uses %rcx to track the letter, and %rcx starts from the nth letter, then dexq %rcx.

4.

.globl times

times:

movl $0, %eax #result = 0

movl $1, %ecx #count = 1

loop:

cmpl %esi, %ecx #count - b ? 0

ja endl #exit loop if count > b

addl %edi, %eax #result = result + a

incl %ecx #count ++

jmp loop #enter the loop again

endl:

ret #return