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3

EXPLORER

...

OPEN EDITORS

main.asm finalproject U

atoi.asm finalproject U

readline.asm finalp... U

writeline.asm finalp... U

itoa.asm finalproject U

build.sh finalproject U

HOMework

ATol

Screenshot ATOI - atoi... U

Screenshot ATOI - mai... U

Screenshot ATOI - mai... U

Exchange

Fibonacci

FibonacciLoop

FibRecursive

finalproject

atoi.asm U

atoi.o U

build.sh U

itoa.asm U

itoa.o U

main U

main.asm U

main.o U

readline.asm U

readline.o U

writeline.asm U

writeline.o U

PrintLine

.gitignore M

compile.sh

FibonacciFunction

FibonacciFunction.cpp

main

main.asm

OUTLINE

TIMELINE

finalproject > ASM writeline.asm

1 global writeline

2 extern _write

3

4 section .text

5 ; rdi = address of null-terminated string

6 ; Writes a null-terminated string to stdout

7 writeline: ; copy string pointer to rsi

8 mov rsi, rdi ; rsi = pointer to string (needed for _write later)

9 xor rcx, rcx ; rcx = counter for string length, start at 0

10

11 .calc_len:

12 cmp byte [rsi], 0 ; check if current byte is null terminator

13 je .send ; if null terminator, jump to send

14 inc rsi ; move to next character

15 inc rcx ; increment length counter

16 jmp .calc_len ; repeat loop

17

18 .send:

19 mov rdx, rcx ; rdx = length of string (number of bytes to write)

20 mov rsi, rdi ; rsi = pointer to string (restore original pointer for _write)

21 mov rdi, 1 ; rdi = file descriptor 1 (stdout)

22 call _write ; call system _write to write string to stdout

23 ret ; return to caller

Ln 6, Col 44

Spaces: 4

UTF-8

LF

{ } x86 and x86_64 Assembly