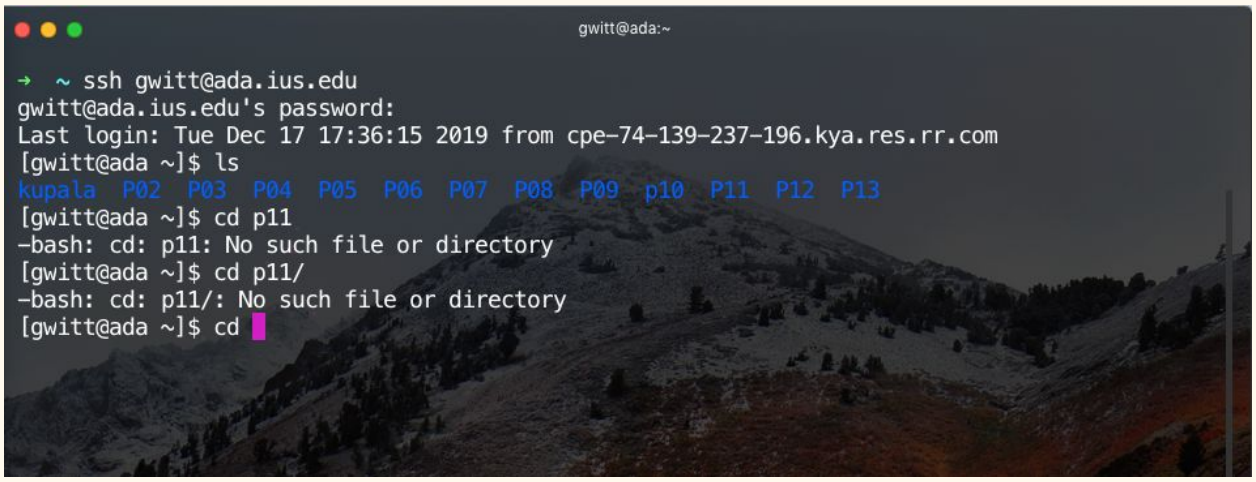
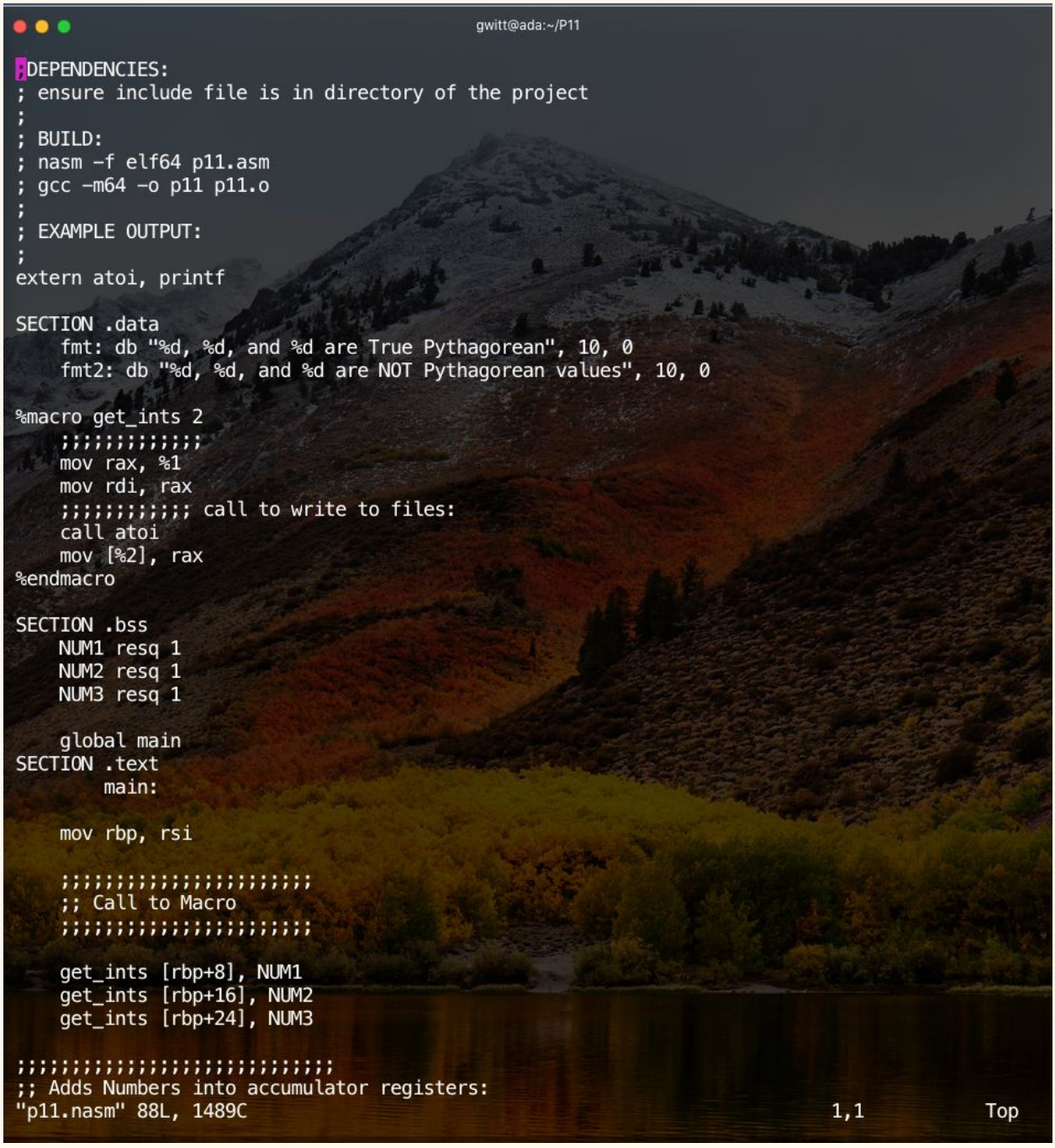
Computer Structures
Greg Witt

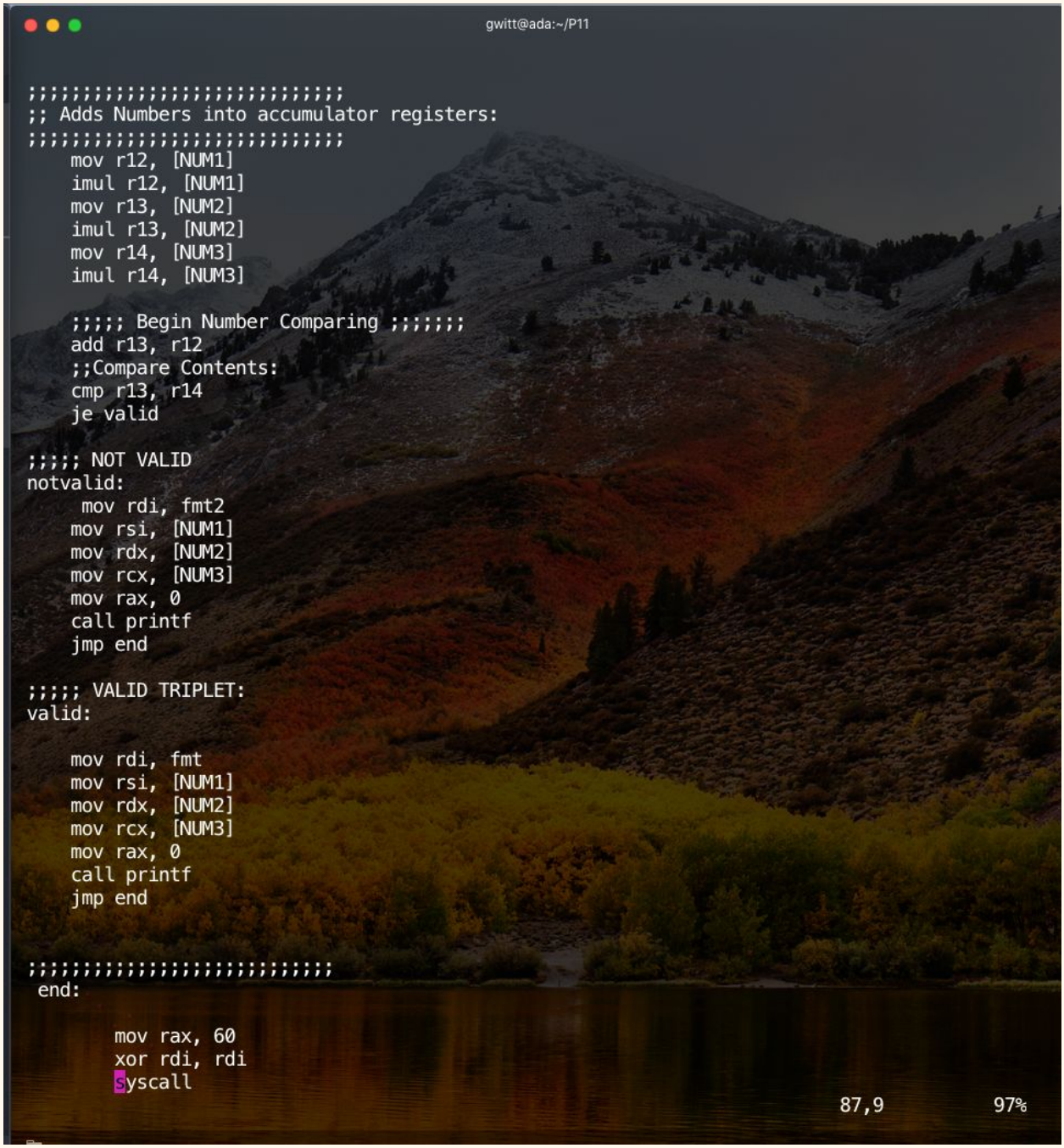
P-11

Login to ADA Via SSH



Code Execution With VIM


gwitt@ada:~/P11
;DEPENDENCIES:
; ensure include file is in directory of the project
;
; BUILD:
; nasm -f elf64 p11.asm
; gcc -m64 -o p11 p11.o
;
; EXAMPLE OUTPUT:
;
extern atoi, printf
SECTION .data
fmt: db "%d, %d, and %d are True Pythagorean", 10, 0
fmt2: db "%d, %d, and %d are NOT Pythagorean values", 10, 0
%macro get_ints 2
;;;;;;;;;;;;;
mov rax, %1
mov rdi, rax
;;;;;;;;;;;; call to write to files:
call atoi
mov [%2], rax
%endmacro
SECTION .bss
NUM1 resq 1
NUM2 resq 1
NUM3 resq 1
global main
SECTION .text
main:
mov rbp, rsi
;;;;;;;;;;;;;;;;;;;;;;
;; Call to Macro
;;;;;;;;;;;;;;;;;;;;;;
get_ints [rbp+8], NUM1
get_ints [rbp+16], NUM2
get_ints [rbp+24], NUM3
;;;;;;;;;;;;;;;;;;;;;;;;;;;;
;; Adds Numbers into accumulator registers:
"p11.nasm" 88L, 1489C
1,1
Top


gwitt@ada:~/P11
;;;;;;;;;;;;;;;;;;;;;;;;;;;;
;; Adds Numbers into accumulator registers:
;;;;;;;;;;;;;;;;;;;;;;;;;;;;
mov r12, [NUM1]
imul r12, [NUM1]
mov r13, [NUM2]
imul r13, [NUM2]
mov r14, [NUM3]
imul r14, [NUM3]
;;;;; Begin Number Comparing ;;;;;;;
add r13, r12
;;Compare Contents:
cmp r13, r14
je valid
;;;;; NOT VALID
notvalid:
mov rdi, fmt2
mov rsi, [NUM1]
mov rdx, [NUM2]
mov rcx, [NUM3]
mov rax, 0
call printf
jmp end
;;;;; VALID TRIPLET:
valid:
mov rdi, fmt
mov rsi, [NUM1]
mov rdx, [NUM2]
mov rcx, [NUM3]
mov rax, 0
call printf
jmp end
;;;;;;;;;;;;;;;;;;;;;;;;;;;;
end:
mov rax, 60
xor rdi, rdi
syscall
87,9
97%

Compiled Code via Commands Listed Terminated SSH Connection