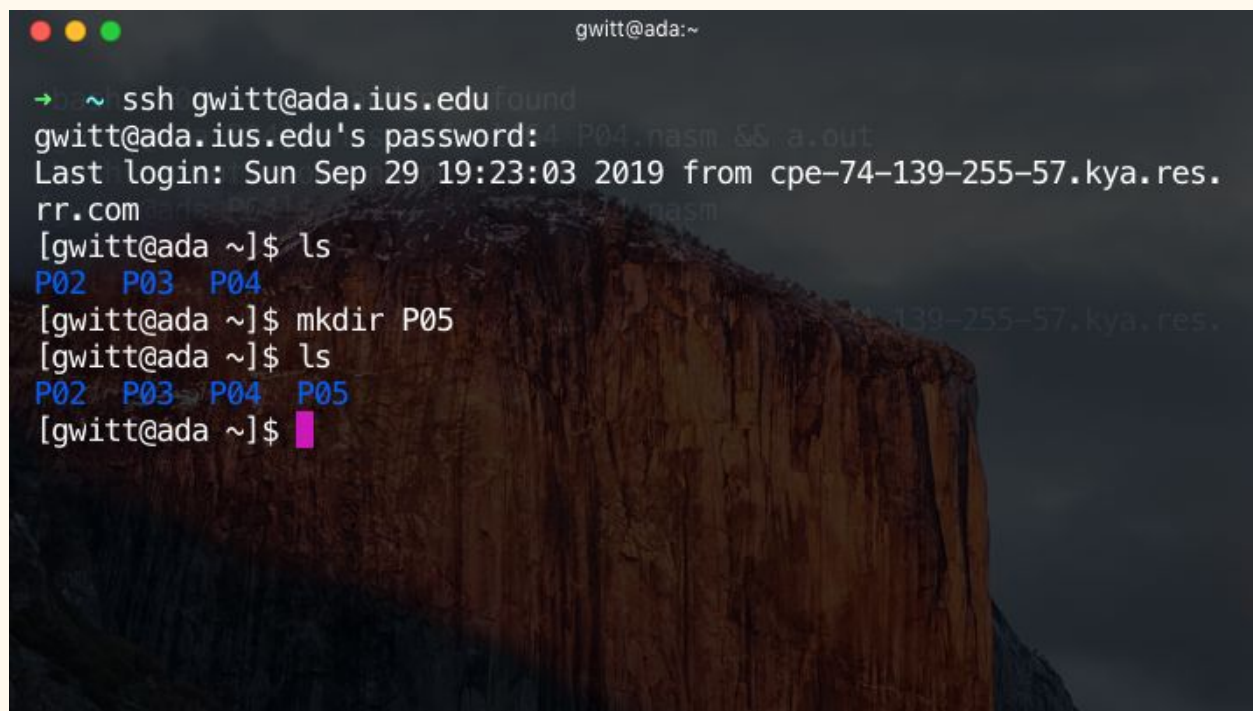


P-05

Login to ADA Via SSH

A terminal window with a dark background and a red, yellow, and green window control bar at the top. The terminal text shows an SSH session starting with a prompt 'gwitt@ada:~'. The user enters 'ssh gwitt@ada.ius.edu' and provides a password. The terminal displays the last login time and IP address. Subsequent commands 'ls' and 'mkdir P05' are executed, with the directory listing showing files P02, P03, P04, and P05. The prompt ends with a pink cursor.

```
gwitt@ada:~  
→ ~ ssh gwitt@ada.ius.edu found  
gwitt@ada.ius.edu's password: P04.nasm && a.out  
Last login: Sun Sep 29 19:23:03 2019 from cpe-74-139-255-57.kya.res.  
rr.com  
[gwitt@ada ~]$ ls  
P02 P03 P04  
[gwitt@ada ~]$ mkdir P05  
[gwitt@ada ~]$ ls  
P02 P03 P04 P05  
[gwitt@ada ~]$
```

Code Execution With Vim

```

gwwitt@ada:~/P05
extern printf; vim P05.nasm ;stdlib C function
(gwwitt@ada: P05)$ nasm -f elf64 P05.nasm
section .text ;gcc P05.o ;code section
global main ;standard GCC entry point
The End

;EXITPRGM MACRO
%macro EXITPRGM 0
    mov rax, 60
    mov rdi, 0
%endmacro

main:
    push rbp ;set up stack frame: must be aligned

    ; Add 10+18+25
    mov rax, 10
    add ax, 18
    add ax, 25

    ; Save and print sum
    push rax
    mov rdi, fmt1 ;printf format string
    mov rsi, rax ;1st parameter
    mov rdx, 0 ;No 2nd parameter
    mov rax, 0 ;No xmm registers
    call printf

    ; Compute and print average
    mov dx, 0 ;Clear dividend, high
    pop rax ;dividend, low <= sum
    mov cx, 3 ;divisor
    div cx ;ax= high, dx= low

    ; Print average
    mov rdi, fmt2 ;printf format string
    mov rsi, rax ;1st parameter

```

33,0-1 Top

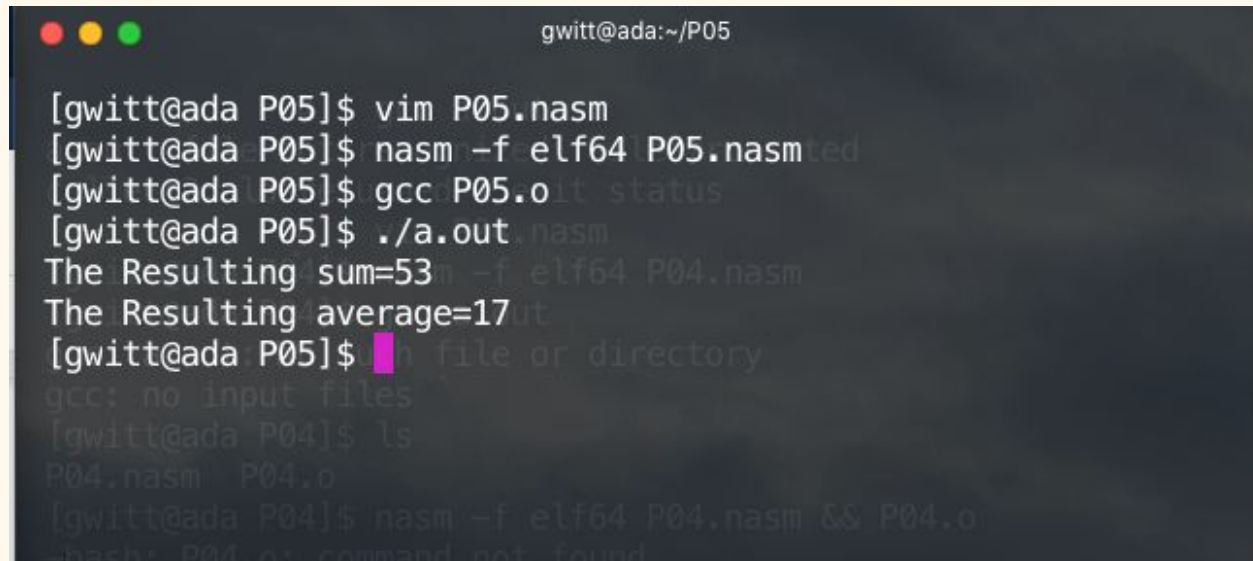
```
    ; Print average
    mov     rdi,fmt2                ;printf format string
    mov     rsi,rax                ;1st parameter
    mov     rdx,0                  ;No 2nd parameter
    mov     rax,0                  ;No xmm registers
    call    printf

    ; Exit program
    pop rbp
    mov rax,0
    EXITPRGM

section .data                      ;data section
fmt1:
    db      "The Resulting sum=%d ",0xa,0
fmt2:
    db      "The Resulting average=%d",0xa,0
```

50,1 Bot

Execution With Hyper Term



```
gwitt@ada:~/P05  
[gwitt@ada P05]$ vim P05.nasm  
[gwitt@ada P05]$ nasm -f elf64 P05.nasm  
[gwitt@ada P05]$ gcc P05.o  
[gwitt@ada P05]$ ./a.out  
The Resulting sum=53  
The Resulting average=17  
[gwitt@ada P05]$  
gcc: no input files  
[gwitt@ada P04]$ ls  
P04.nasm P04.o  
[gwitt@ada P04]$ nasm -f elf64 P04.nasm && P04.o  
-bash: P04.o: command not found
```