Assembly

Guide to Installing the Lab software

Prerequisites
- Install Ubuntu 16.04 in a Virtual Machine (VMWare or Virtualbox)
- Have a Linux Computer

Install libraries
- sudo apt install nasm gcc-multilib vim

Install Template
Download the file
- wget http://cs.unk.edu/~miller/templateMake.tar.gz

Extract the software
- tar zxf templateMake.tar.gz

Install software
- ./templateMake/fix.sh

Logout

Create a project
- genMake.sh MyProject

Create a Project
Create a project
- genMake.sh Hello
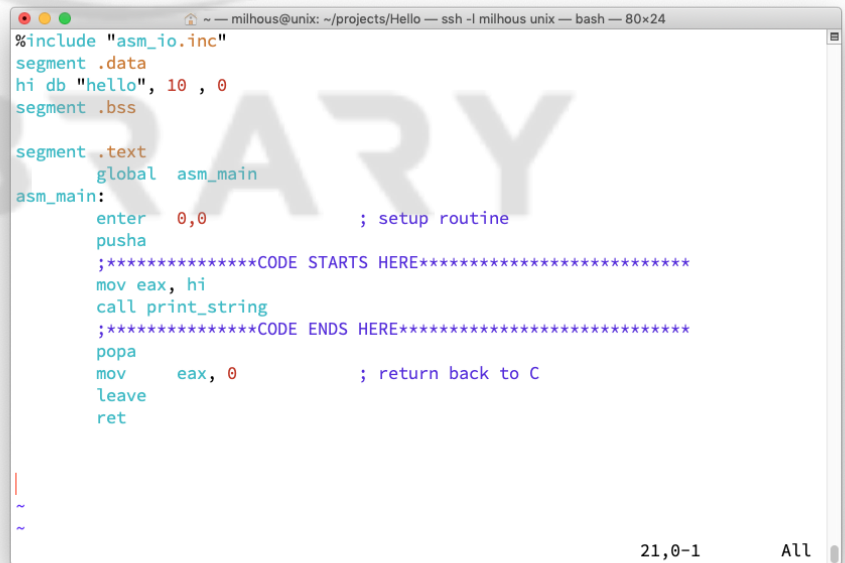
Enter the projects directory
- cd projects

Show files in directory
- ls

Enter the new project directory
- cd Hello
- ls

Use an editor of choice
- I use VI, it's everywhere

```
~ — milhous@unix: ~/projects/Hello — ssh -l milhous unix — bash — 80×24
%include "asm_io.inc"
segment .data
hi db "hello", 10 , 0
segment .bss

segment .text
        global   asm_main
asm_main:
        enter   0,0              ; setup routine
        pusha
        ;***************CODE STARTS HERE***************************
        mov eax, hi
        call print_string
        ;***************CODE ENDS HERE****************************
        popa
        mov     eax, 0           ; return back to C
        leave
        ret

|
~
~
                                          21,0-1        All
```

- vi Hello.ash

Add a string at the top
- hi db "hi",10,0

Add a call to print string
- mov eax, hi
- call print_string

Compile, run, repeat
- make