## Task 3

### ACtions:

Required:  
sudo apt-get install build-essential curl file git  
sudo apt-get install qemu  
sudo apt-get install nasm

run:

sudo apt upgrade curl

/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"

if "zanders3/gcc\_cross\_compilers" is tapped, untap wth:

*brew untap zanders3/gcc\_cross\_compilers*

run:

*brew tap nativeos/i386-elf-toolchain  
brew install gcc  
brew install i386-elf-binutils i386-elf-gcc*

after which, if not in nasm directory, go to:

NASM directory where boot4.o, linker.ld and kmain.cpp are located.

run:

*nasm -f elf32 boot4.asm -o boot4.o*

*i386-elf-g++ kmain.cpp boot4.o -o kernel.bin -nostdlib -ffreestanding -std=c++11 -mno-red-zone -fno-exceptions -nostdlib -fno-rtti -Wall -Wextra -Werror -T linker.ld*

*qemu-system-x86\_64 -fda kernel.bin*