

NAME - ASHUTOSH ARDU

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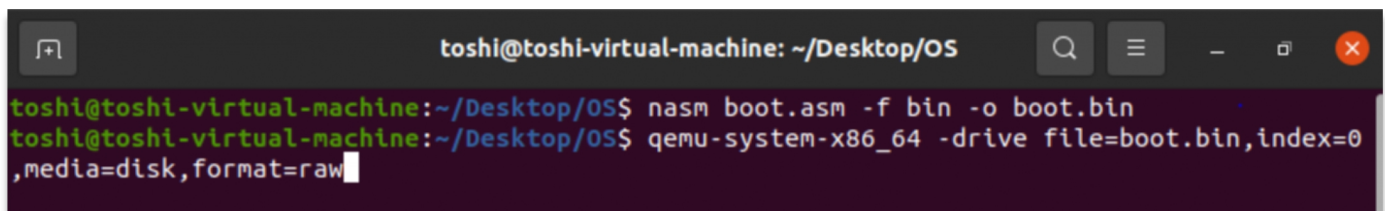
OS LAB - 1

CREATING A BOOTLOADER THAT DOES NOTHING

ASSEMBLY CODE

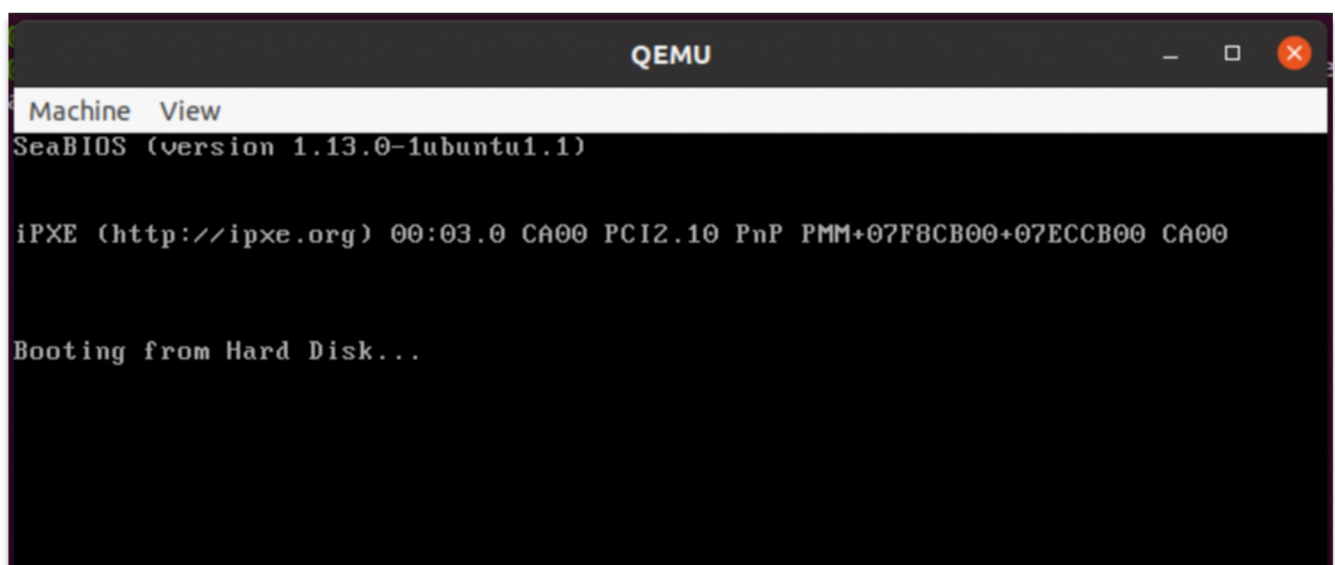
```
[BITS 16]
[ORG 0x7C00]

JMP $
TIMES 510 - ($ - $$) db 0
dw 0xAA55
```



```
toshi@toshi-virtual-machine: ~/Desktop/OS
toshi@toshi-virtual-machine:~/Desktop/OS$ nasm boot.asm -f bin -o boot.bin
toshi@toshi-virtual-machine:~/Desktop/OS$ qemu-system-x86_64 -drive file=boot.bin,index=0,media=disk,format=raw
```

OUTPUT



```
QEMU
Machine View
SeaBIOS (version 1.13.0-1ubuntu1.1)

iPXE (http://ipxe.org) 00:03.0 CA00 PCI2.10 PnP PMM+07F8CB00+07ECCB00 CA00

Booting from Hard Disk...
```

CREATING A COMPILER WHICH PRINTS 'A' ON THE SCREEN

ASSEMBLY CODE

```
[BITS 16]
[ORG 0x7C00]
```

```
MOV AL, 65
CALL PrintCharacter
JMP $
```

PrintCharacter:

```
MOV AH, 0x0E
MOV BH, 0x00
MOV BL, 0x07
```

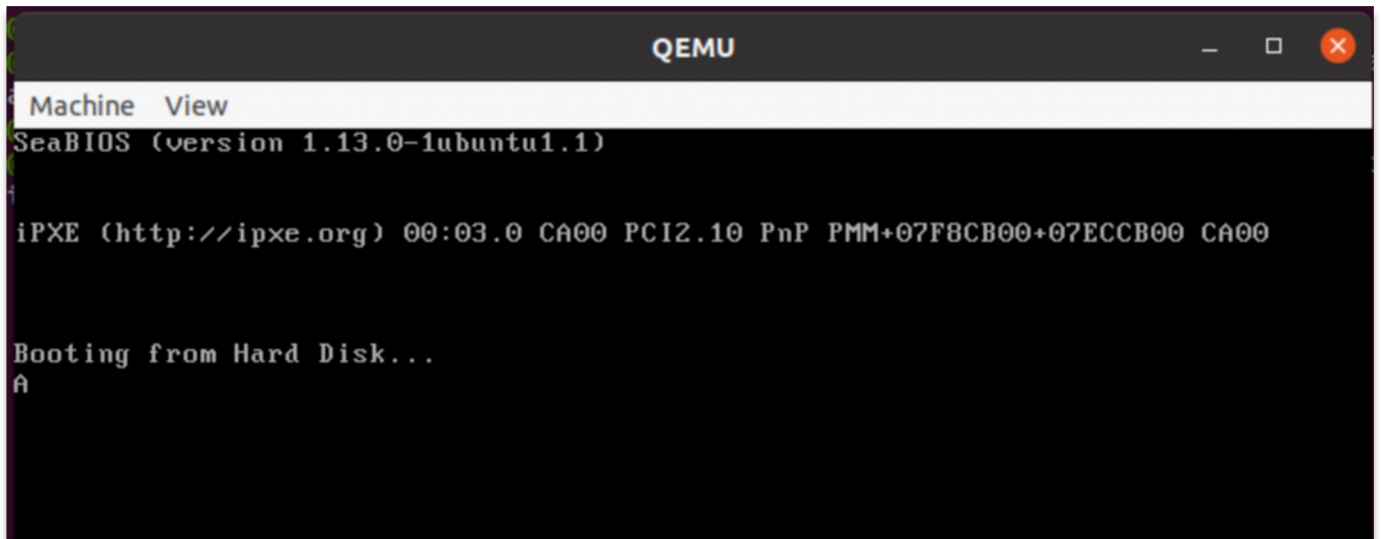
```
INT 0x10
RET
```

```
TIMES 510 - ($ - $$) db 0
DW 0xAA55
```

```
toshi@toshi-virtual-machine:~/Desktop/05$ nasm boot1.asm -f bin -o boot1.bin
toshi@toshi-virtual-machine:~/Desktop/05$ qemu-system-x86_64 -drive file=boot1.bin,index=
0,media=disk,format=raw
```

OUTPUT





CREATING A BOOTLOADER WHICH PRINTS A STRING ASSEMBLY CODE

```
[BITS 16]
[ORG 0x7C00]

start:
mov si,message
call print
jmp $

print:
mov bx,0
.loop:
lods b
cmp al,0
je .done
call print_char
jmp .loop
.done:
ret
print_char:
mov ah,0eh
```

```
int 0x10
ret
message:db 'Hello World!,I m Ashutosh
',0
times 510-($ - $$) db 0
dw 0xAA55
```

```
toshi@toshi-virtual-machine: ~/Desktop/OS
toshi@toshi-virtual-machine:~/Desktop/OS$ nasm boot2.asm -f bin -o boot2.bin
toshi@toshi-virtual-machine:~/Desktop/OS$ qemu-system-x86_64 -drive file=boot2.bin,index=0,media=disk,format=raw
```

OUTPUT

```
QEMU
Machine View
SeaBIOS (version 1.13.0-1ubuntu1.1)

iPXE (http://ipxe.org) 00:03.0 CA00 PCI2.10 PnP PMM+07F8CB00+07ECCB00 CA00

Booting from Hard Disk...
Hello World!,I m Ashutosh_
```