



# VIT<sup>®</sup>

**Vellore Institute of Technology**

(Deemed to be University under section 3 of UGC Act, 1956)  
CHENNAI

## **SWE3001 – Operating Systems Laboratory Manual**

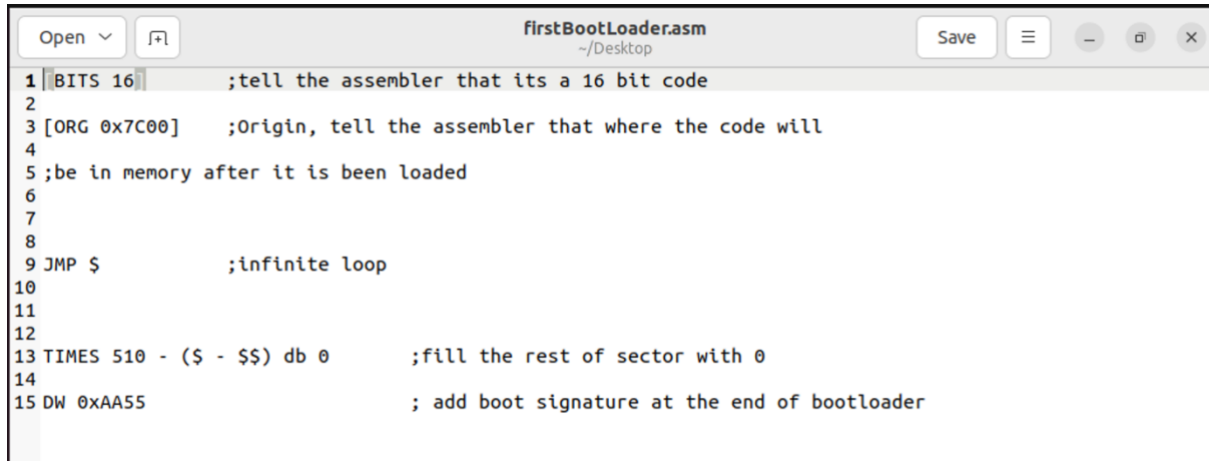
### **Lab - 04**

<b>Student Name</b>	Sam Prince Franklin
<b>Reg Number</b>	20MIS1115
<b>Subject Code</b>	SWE3001
<b>Slot</b>	L37,38
<b>Faculty</b>	Dr.M.Braveen

## SWE3001 – Operating Systems

### Lab – 04– Boot Loader

#### Creating an firstBootLoader file in ASM



```
1 |BITS 16|           ;tell the assembler that its a 16 bit code
2
3 |ORG 0x7C00|        ;Origin, tell the assembler that where the code will
4
5 ;be in memory after it is been loaded
6
7
8
9 JMP $              ;infinite loop
10
11
12
13 TIMES 510 - ($ - $$) db 0          ;fill the rest of sector with 0
14
15 DW 0xAA55              ; add boot signature at the end of bootloader
```

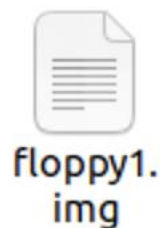
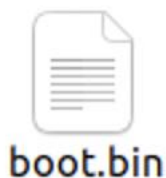
#### Compiling Code :

```
nasm firstBootLoader.asm -f bin -o boot.bin
```

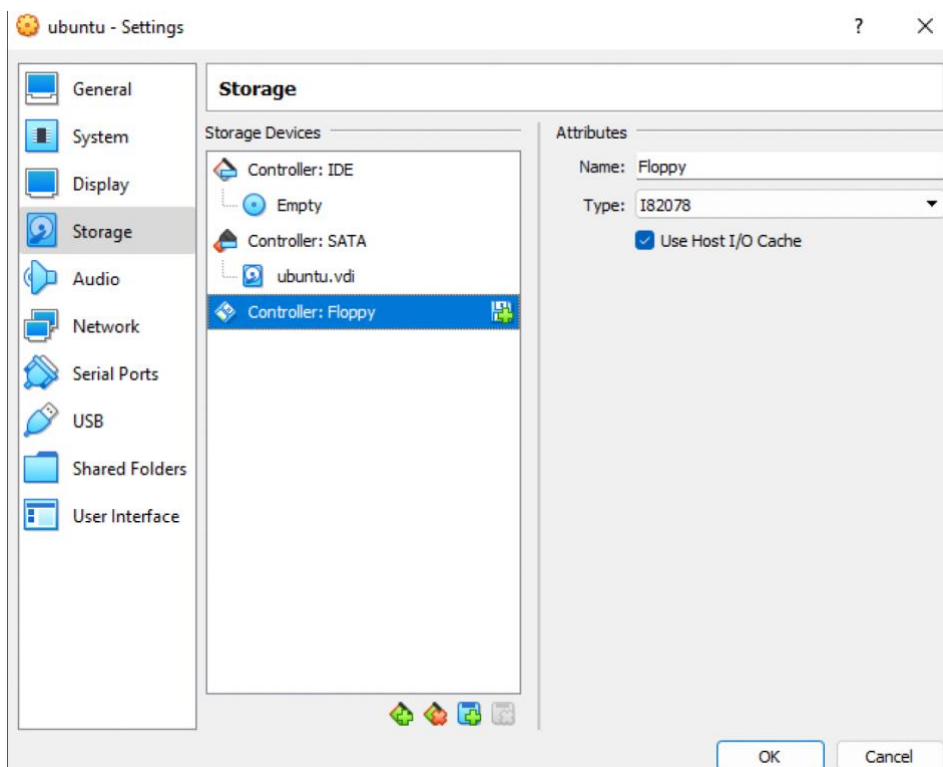
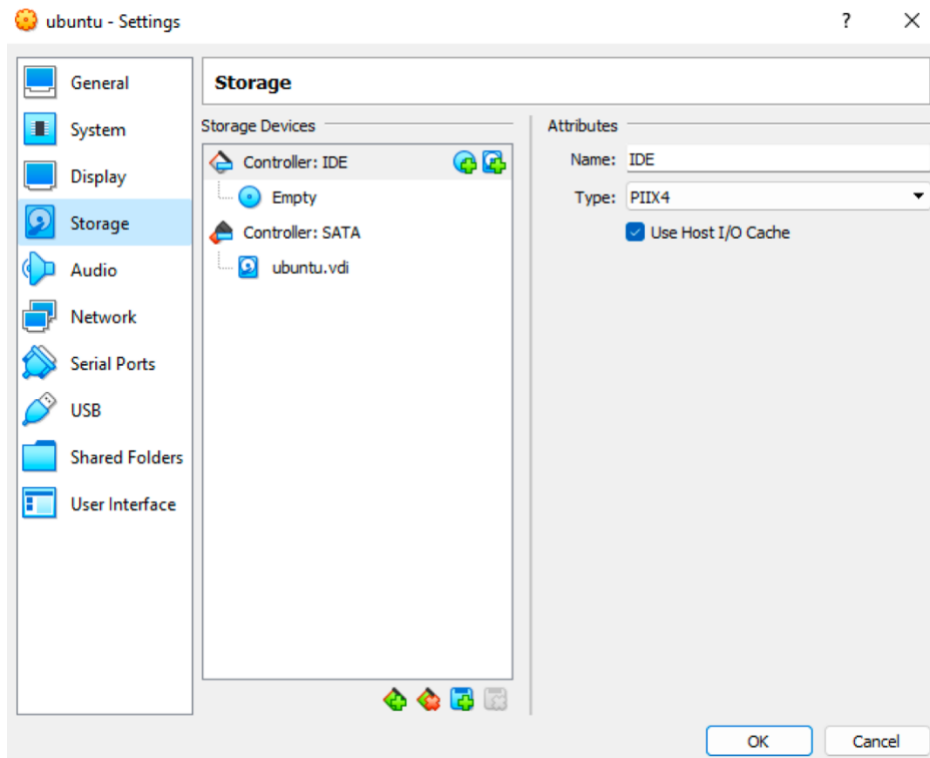
#### Creating a Floppy Image :

```
dd if=boot.bin bs=512 of=floppy1.img
```

```
parallels@ubuntu-linux-22-04-desktop:~$ touch firstBootLoader.asm
parallels@ubuntu-linux-22-04-desktop:~$ nasm firstBootLoader.asm -f bin -o boot.
bin
parallels@ubuntu-linux-22-04-desktop:~$ dd if=boot.bin bs=512 of=floppy1.img
0+0 records in
0+0 records out
0 bytes copied, 0.00038974 s, 0.0 kB/s
parallels@ubuntu-linux-22-04-desktop:~$
```



## Attaching the images :



## Boot Loader Execution :

