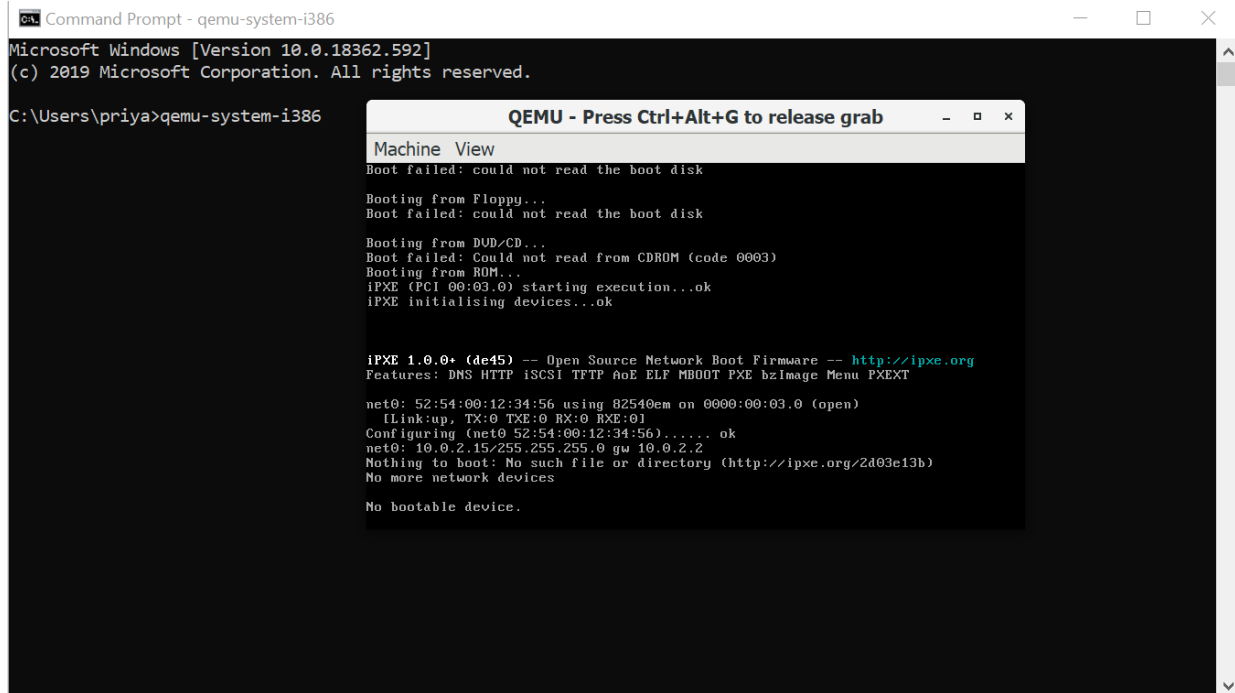


Usage guide for qemu and nasm:

1. Open terminal or cmd and type:

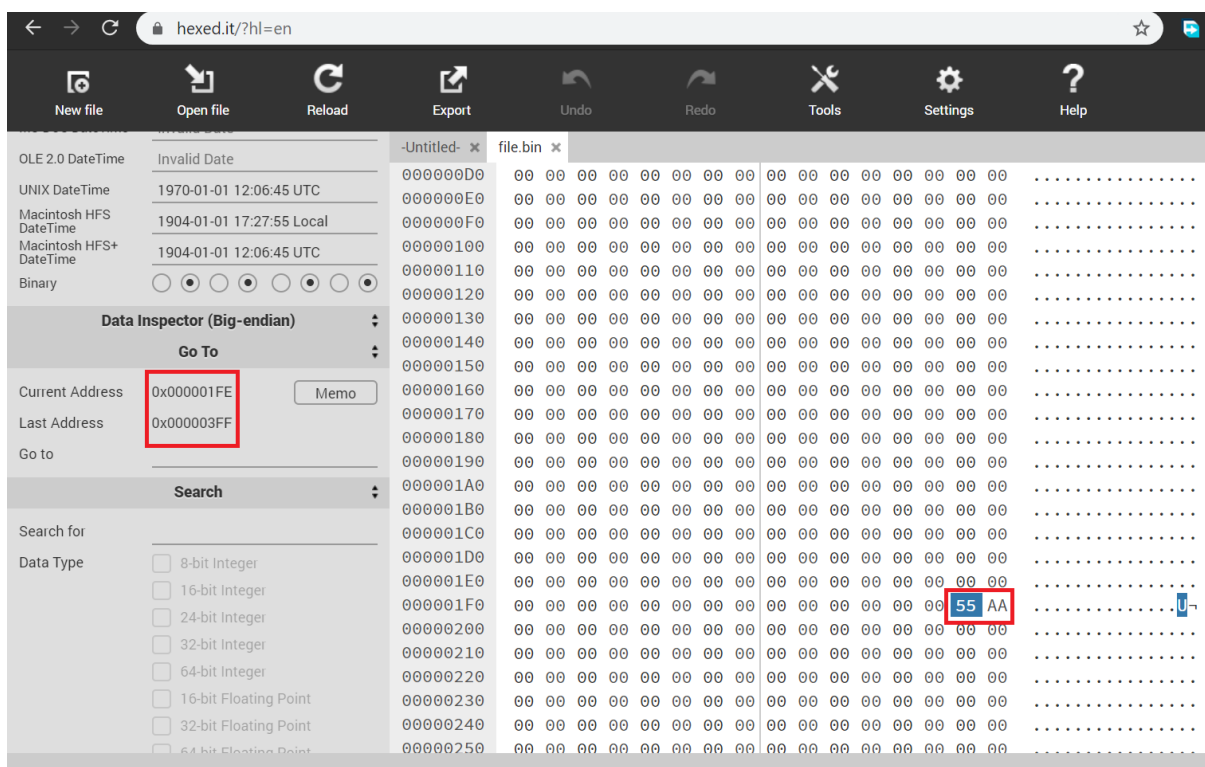
`qemu-system-i386`

It should open qemu and show no bootable disk found.



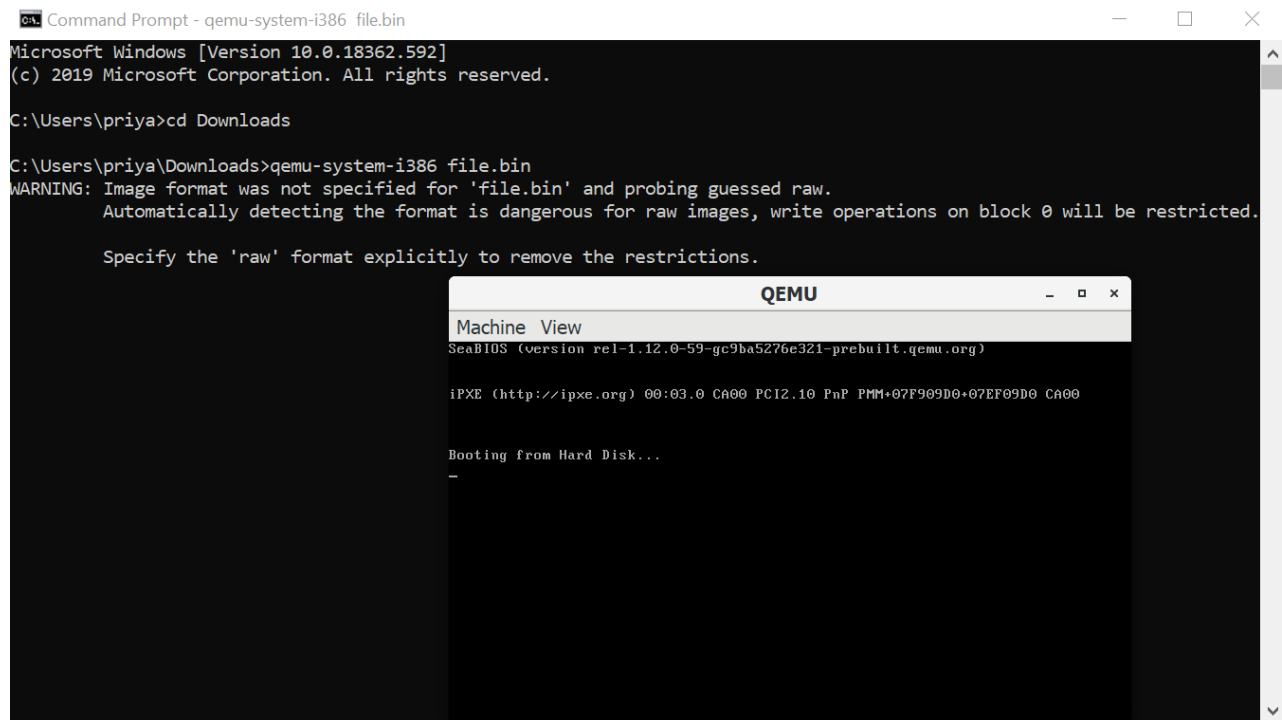
This means your emulator is up and working but we have not given it any file to open.

2. Now open your hex editor and go to location `0x000001FE` and change it to `55AA`. This makes your machine judge that the file or drive is bootable.



3. Save the file with .bin extension and open terminal and type:

`qemu-system-i386 file.bin`



```
Command Prompt - qemu-system-i386 file.bin
Microsoft Windows [Version 10.0.18362.592]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\priya>cd Downloads

C:\Users\priya\Downloads>qemu-system-i386 file.bin
WARNING: Image format was not specified for 'file.bin' and probing guessed raw.
Automatically detecting the format is dangerous for raw images, write operations on block 0 will be restricted.

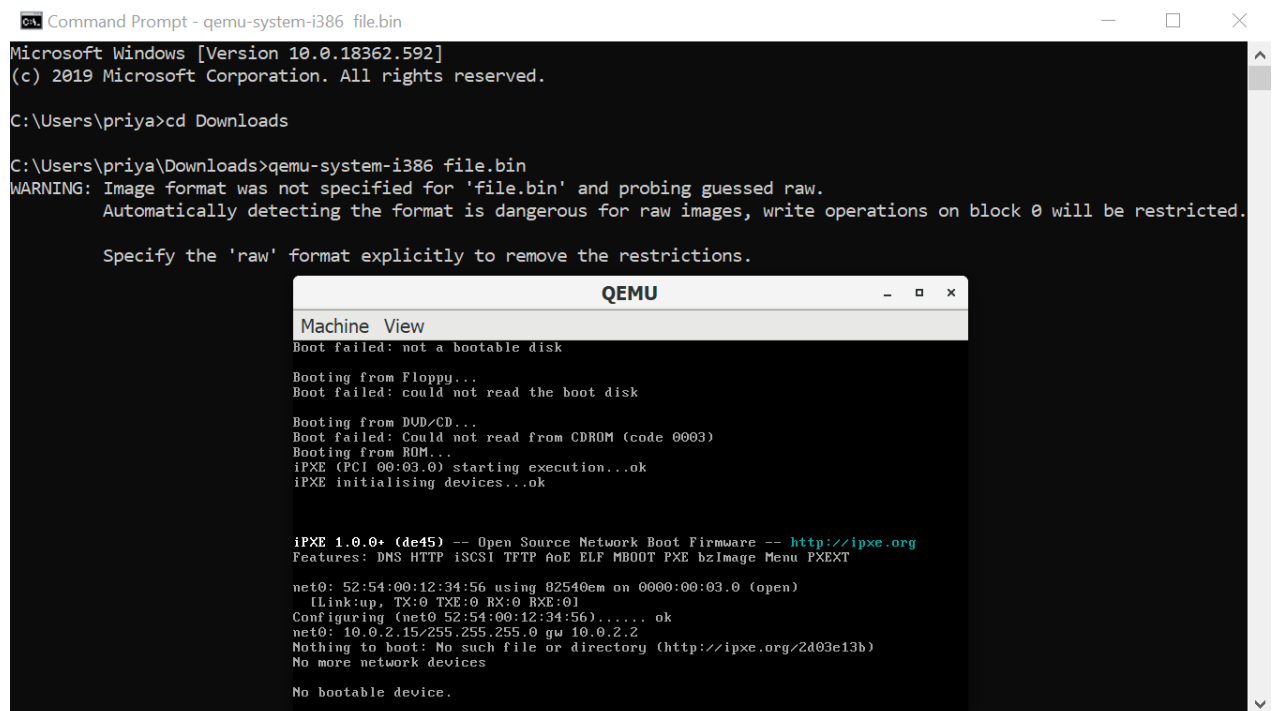
Specify the 'raw' format explicitly to remove the restrictions.

QEMU
Machine View
SeaBIOS (version rel-1.12.0-59-gc9ba5276c321-prebuilt.qemu.org)

iPXE (http://ipxe.org) 00:03.0 CA00 PCI2.10 PnP PMM+07F909D0+07EF09D0 CA00

Booting from Hard Disk...
-
```

If anything else than 55AA is given at location 0x000001FE in the file then it won't accept it as a bootable drive.



```
Command Prompt - qemu-system-i386 file.bin
Microsoft Windows [Version 10.0.18362.592]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\priya>cd Downloads

C:\Users\priya\Downloads>qemu-system-i386 file.bin
WARNING: Image format was not specified for 'file.bin' and probing guessed raw.
Automatically detecting the format is dangerous for raw images, write operations on block 0 will be restricted.

Specify the 'raw' format explicitly to remove the restrictions.

QEMU
Machine View
Boot failed: not a bootable disk

Booting from Floppy...
Boot failed: could not read the boot disk

Booting from DUD/CD...
Boot failed: Could not read from CDBROM (code 0003)
Booting from ROM...
iPXE (PCI 00:03.0) starting execution...ok
iPXE initialising devices...ok

iPXE 1.0.0+ (de45) -- Open Source Network Boot Firmware -- http://ipxe.org
Features: DNS HTTP iSCSI TFTP AoE ELF MB00T PXE bzImage Menu PXEXT

net0: 52:54:00:12:34:56 using 82540em on 0000:00:03.0 (open)
[Link:up, TX:0 TXE:0 RX:0 RXE:0]
Configuring (net0 52:54:00:12:34:56)..... ok
net0: 10.0.2.15/255.255.255.0 gw 10.0.2.2
Nothing to boot: No such file or directory (http://ipxe.org/2d03e13b)
No more network devices

No bootable device.
-
```

4. The same code can be written in assembly language and converted to binary using nasm.
5. To use nasm, save your assembly level code in a file with extension .asm and use command.

```
nasm file.asm -o file.bin
```

6. Use the bin file to run on qemu.
7. Some screenshots:

print_X.bin:



helloworld.bin:

