

BITS Pilani - Hyderabad Campus

Operating Systems (CS F372)

Tutorial 2

The objective of this tutorial is to learn the concepts related to booting an OS.

1. GRUB (Grand Unified Boot Loader):

GRUB is the boot loader that Linux systems use to boot the operating system of your choice.

By default, in a single boot system the GRUB menu won't be displayed. So press Shift immediately after POST to make GRUB menu visible. You can see the list of OS installed in your system and can select one of them

You can change various options in the Grub in Linux.

```
$ sudo vi /etc/default/grub
```

```
<<snip>>
GRUB_DEFAULT=0
GRUB_HIDDEN_TIMEOUT=0
GRUB_HIDDEN_TIMEOUT_QUIET=true
GRUB_TIMEOUT=10
<<end snip>>
```

To make the GRUB changes above effective, you need to run :

```
$ sudo update-grub
```

Now, during next booting any changes made in /etc/default/grub will be effective.

Some of the options you can modify are:

```
GRUB_DEFAULT ← OS you want to boot, numbered 0 onwards. 0 by default.
GRUB_HIDDEN_TIMEOUT ← timeout to show GRUB (in sec)
GRUB_HIDDEN_TIMEOUT_QUIET=true ← to display the time for the above
GRUB_TIMEOUT ← time to load the default OS (in sec)
```

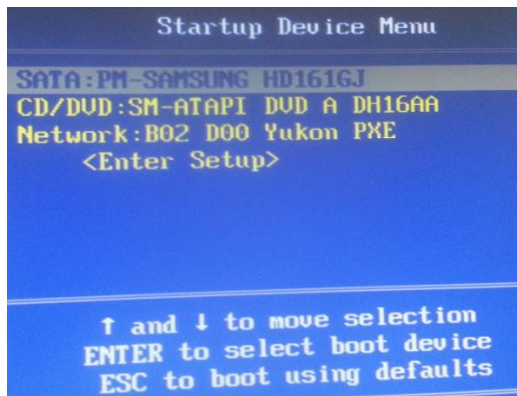
Make changes to GRUB_TIMEOUT; setting it to 0 would timeout immediately or you can increase the time to say 60. In this case, the menu will be displayed for 60 seconds.

2. BIOS

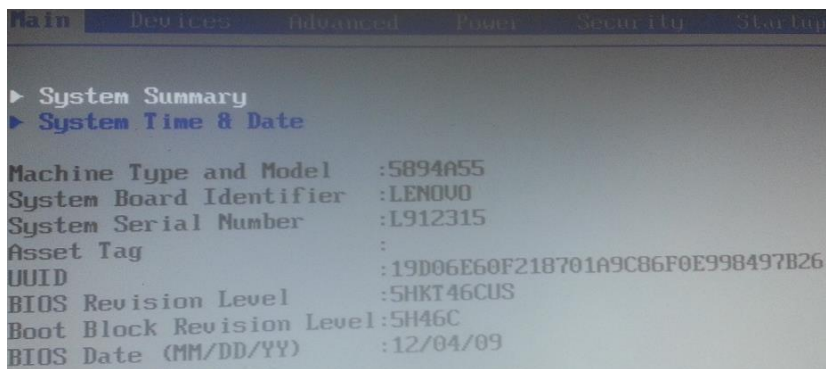
You can change options in ROM-BIOS which will affect the whole system.

Find out the interrupt key. It will likely be one of F8, F12, or Del. To find out the interrupt key, restart your system. When the system powers, press the interrupt key to enter the BIOS menu.

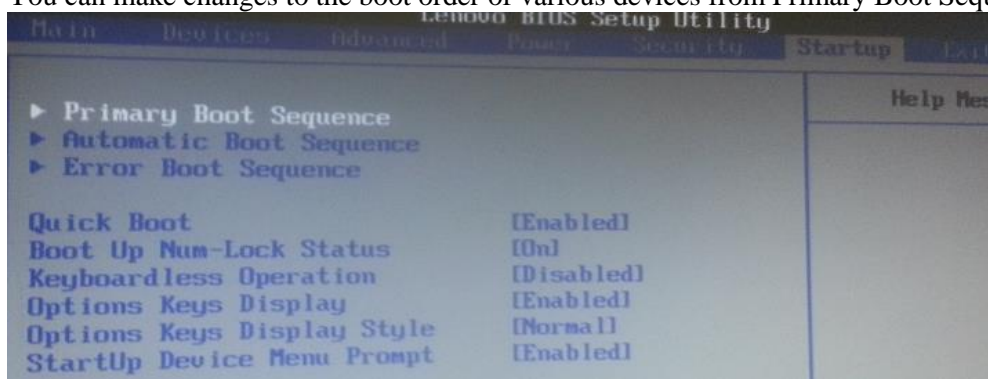
(NOTE: DO NOT CHANGE THE PASSWORD IN BIOS)



Select "Enter Setup". You will get screen like below. You can view various system related stuff or make changes to the system parameters here.



You can make changes to the boot order of various devices from Primary Boot Sequence.



Homework: Install Damn Small Linux in a thumb drive, and boot the OS from it.

See instructions on how to do at:

<http://www.pendrivelinux.com/all-in-one-usb-dsl/>