Operating System Kernel in C

Owais Chishti
p146011@nu.edu.pk

Faisal Usman
p146016@nu.edu.pk

April 26, 2016

1 Objective

To understand the internal structure of Operating system and mechanism through which it execute, handle user request using the keyboard interrupts, timer and VGA graphics to show output.

2 Motivation

While a bit of research, found out how a program (operating system) is loaded to the memory using boot loader, using the specification described in the documentation manual of Intel 8086 which is still compatible in latest CPU build to date.

3 Result

- Kernel loaded using GRUB boot loader.
- Interrupt Descriptive Table to handle common interrupts.
- Provide user with interactive command such as print, version, help, date, etc
- Utilize timer to minimizer busy waiting in kernel.
- Implement basic syscall for kernel modules.
- Basic memory management module.
- Utilize dual CPU to perform any task.

4 Submission

- To show, running Kernel on hardware instead of host operating system.
- To provide a virtual disk which include the whole environment used for the development of Kernel.
- Submit a document including all detail of research and problem while the process of learning/development.