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# Overview of the OS

Zaren is a simple operating system created for an in class project. It is built upon another operating system and is mainly used to demonstrate knowledge of different aspects of operating systems. Thus it is extremely limited in its capability.

# Summary of Commands

* Version
* Date
* Directory
* Exit
* Help
* PCB User Commands
* Suspend
* Resume
* Set Priority
* Show PCB
* Show All
* Show Ready
* Show Blocked.
* SJC
* FIFO
* STCF
* FPPS
* RR
* MLFQ
* LS

# Detailed Description of Commands

**Version**

Syntax: N/A

Use: Displays the current version of the Operating System.

Example: Zaren Version 1.0

Possible Errors: N/A

**Date**

Syntax: N/A

Use: Displays the current date and time.

Example: Monday 08/31/15 09:00:00

Possible Errors: N/A

**Directory**

Syntax: N/A

Use: Displays the files in the current directory.

Example: Technical Support Manual.docx

User’s Manual.docx

Zaren.cpp

Zaren.exe

Zaren.o

Possible Errors: N/A

**Exit**

Syntax: Y/N

Use: Asks the user to confirm if they wish to exit. The user either inputs Y to exit or N to

return to menu.

Example: Are you sure you wish to exit?

Y/N:

Possible Errors: If user input anything other than Y, y, N, n then an error will be

displayed “Not valid command”.

**Help**

Syntax: N/A

Use: Displays information on commands

Example: Help

Version – Displays current Operating System version

Date – Displays current date and time.

Directory – Displays all files in current directory.

Exit – Exits the operating system. User inputs Y to exit or N to return to menu.

Press any key to return to menu

Possible Errors: N/A

**PCB User Controls**

Give user PCB commands.

**Suspend**

Take name from user. It then suspends the PCB with given name.

**Resume**

Take name from user. It then resumes the PCB with given name.

**Set Priority**

Takes name and priority from user. It then changes the PCB with given name to given priority.

**Show PCB**

Takes name from user. It then displays the information of PCB with given name.

**Show All**

. Shows all PCB from all queues.

**Show Ready**

Shows all PCB from ready queue.

**Show Blocked**

Shows all PCB from blocked queue.

**SJF**

Reads from file and processes the file using a shortest job first scheduler.

**FIFO**

Reads from file and processes the file using a first in first out scheduler.

**STCF**

Reads from file and processes the file using a shortest to completion first scheduler.

**FPPS**

Reads from file and processes the file using a fixed priority pre-emptive scheduling scheduler.

**RR**

Reads from file and asks user for a time quantum and processes the file using a round robin scheduler and the time quantum.

**MLFQ**

Reads from file and asks user for number of queues, time allotment for each queue, and how many cycles should pass until all processes are moved to the top queue and processes the file using a multilevel feedback queue and the input information.

**LS**

Reads from file and asks user for number of tickets and schedules using lottery scheduleing.

# Error Messages

**Not valid Command –** The input command is invalid. Check for proper form of input and

constraints.

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