User Manual

OVERVIEW

The MPX project is a terminal based operating system that can receive and execute commands given by a user.

FUNCTIONS

1 - Help

-Provides usage instructions for each command.

> -**Type “help” in the MPX terminal. Instructions will be automatically displayed.**

2 - Version

-Prints the current version of MPX and its completion date.

> -**Type “version” in the MPX terminal. The version and completion date will be displayed.**

3 - Get Date

-Retrieves the current date of the system.

> -**Type “getdate” in the MPX terminal. The current date will be displayed.**

4 - Set Date

-Sets the current date of the MPX upon user input.

> -**Type “setdate” in the MPX terminal. Enter date in the format MM/DD/YYYY, where M stands for the month, D stands for the day, and Y for the year.**

5 - Get Time

-Returns the current time of the system.

> -**Type “gettime” in the MPX terminal. The currenttime will be displayed.**
>
> ***NOTE: time is displayed in Military Time.**

6 - Set Time

-Sets the current time of the MPX upon user input.

> -**Type “settime” in the MPX terminal. Enter time in format HH:MM:SS and hit enter.**
>
> ***NOTE: time is to be entered in Military Time.**

7 - Shutdown

-Shuts down the machine upon user request

> -**Type “shutdown” in the MPX terminal. When selected a confirmation will be needed to fully shutdown the machine, “1” for yes, and “2” for no.**

8 - Suspend

-Places a PCB in the suspended state and reinserts it into the appropriate queue

> -**Type “suspend” in the MPX terminal. Once entered, type the name of the PCB to be Suspended. Process must exist, or an invalid error will be returned.**

9 - Resume

-Places a PCB in the not suspended state and reinserts it into the appropriate queue

> -**Type “resume” in the MPX terminal. Once entered, type the name of the PCB to be Resumed. Process must exist, or an invalid error will be returned.**

10 - Set Priority

-Sets a PCB's priority and reinserts the process into the correct place in the correct queue

-**Type “setpriority” in the MPX terminal. Enter the process name and priority when directed. Priorities must range from values 0 to 9, and process must exist, or an invalid error will be returned.**

11 - Show PCB

-Displays the process name, class, state, suspended status and priority of a given PCB

-**Type “showpcb” in the MPX terminal. When directed enter the process name to show the information of the PCB. Process must exist, or an invalid error will be returned.**

12 - Show all Processes

-Displays the process name, class, state, suspended status and priority of all PCB’s in both the ready and blocked queues

-**Type “showall” in the MPX terminal. All PCB’s of both the ready and blocked queues will be displayed automatically.**

13 - Show Ready Processes

-Displays the process name, class, state, suspended status and priority of all PCB’s in the ready queue

-**Type “showready” in the MPX terminal. All PCB’s in the ready queue will be displayed Automatically.**

14 - Show Blocked Processes

-Displays the process name, class, state, suspended status and priority of all PCB’s in the blocked queue

-**Type “showblocked” in the MPX terminal. All PCB’s in the blocked queue will be displayed automatically.**

15 - Delete PCB

-Removes a PCB from the appropriate queue and then frees all associated memory

-**Type “deletepcb” in the MPX terminal. Enter the process name when directed. The process must exit or an invalid error will be returned.**

16 - Yield (temporary - only in R3)

-Causes commhand to yield to other processes (gives up CPU time)

-**Type “yield” in the MPX terminal. Processes ready will be executed.**

17 - Loadr3 (temporary - only in R3)

-Loads all r3 “processes” (proc3.c file eCampus) into memory in a suspended ready state at any priority of your choosing

-**Type “loadr3” in the MPX terminal.**

18 - Alarm

-Creates a new alarm that contains a specified message and outputs the message at a given time

-**Type “alarm” in the MPX terminal. Enter the message to be assigned to the alarm and the time that the alarm should print the statement (HH:MM:SS).**

***NOTE: time is to be entered in Military Time.**