Programmer’s Manual

TeamB - MPX

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interface.c functions

unsigned char read_rtc(unsigned char reg)

Method to read a byte from RTC.

Author: Nada Boutahar & Othmane Sabor

void write_rtc(unsigned char reg, unsigned char value)

Method to write a byte to RTC.

Author: Nada Boutahar & Othmane Sabor

void unsigned char bcd_to_binary(unsigned char bcd)

Method to convert BCD value to binary.

Author: Nada Boutahar & Othmane Sabor

void unsigned char binary_to_bcd(unsigned char binary)

Method to convert binary value to BCD.

Author: Nada Boutahar & Othmane Sabor

void binary_to_ascii(unsigned char value, char *buffer)

Method to convert binary value to ASCII representation.

Author: Nada Boutahar & Othmane Sabor

void get_date_command()

Method to get the current date of the operating system. Date formatted as follows - mm/dd/yy

Author: Nada Boutahar

void get_time_command()

Method to get the current time of the operating system. Time formatted as follows - hh:mm:ss

Author: Nada Boutahar

void trim_input(char *buf)

Method to remove any trailing whitespace characters from the buffer.

Author: Nada Boutahar & Othmane Sabor

void version_command(const char *args)

Method to display the version to the user.

Author: Othmane Sabor

void help_command(const char *args)

Method to display all commands to the user.

Author: Othmane Sabor

void shutdown_command(const char *args)

Method to shut down the operating system.

Author: Othmane Sabor

void set_date_command(const char *date_str)

Method to set the date of the operating system. Date formatted as follows - mm/dd/yy

Author: Nada Boutahar

void set_time_command(const char *time_str)

Method to set the time of the operating system. Time formatted as follows - hh:mm:ss

Author: Nada Boutahar

void comhand(void)

Method that handles all commands from the user. Determines which command is being used then calls the appropriate method to handle the command.

Author: Othmane Sabor

pcb.c functions

void create_pcb_command(const char *createpcb_str)

Command for creating a pcb in the format: 'createpcb [name] [class] [priority]'

Author: Danny Mancini

void show_pcb_command(const char *showpcb_str)

Command for showing a pcb in the format: 'showpcb [name]'

Author: Danny Mancini

void show_queue(struct queue *q)

Show the pcbs in a given queue

Author: Othmane Sabor

void show_all()

Shows all the pcbs in all the queues

Author: Othmane Sabor

void show_all_pcbs_command(const char *args)

Command for showing all the pcbs in All the queues

Author: Othmane Sabor

void show_ready_pcbs_command(const char *args)

Show ready pcbs

Author: Othmane Sabor

void show_blocked_pcbs_command(const char *args)

Show blocked pcbs

Author: Othmane Sabor

void delete_pcb_command(const char *name)

Deletes pcb command

Author: Nada

void suspend_pcb_command(const char *name)

Suspends pcb command

Author: Alexanthros Stavrulakis

void resume_pcb_command(const char *resumepcb_str)

Resumes pcb command

Author: Alexanthros Stavrulakis

void block_pcb_command(const char *blockpcb_str)

Blocks pcb command

Author: Alexanthros Stavrulakis

void unblock_pcb_command(const char *unblockpcb_str)

Unblocks pcb command

Author: Alexanthros Stavrulakis

void set_pcb_priority_command(const char *args)

Command for setting the priority of a PCB in the format: 'setpcbpriority [name] [newpriority]'

Author: Othman Sabor

struct pcb *allocate(void)

Function to allocate memory for a new PCB

Author: Danny Mancini/ Brock Brillhart

int pcb_free(struct pcb *pcb)

Function to free memory associated with a PCB

Author: Danny Mancini

struct pcb *pcb_setup(const char *name, int process_class, int priority)

Function to allocate and initialize a new PCB

Author: Danny Mancini/ Brock Brillhart

struct pcb *pcb_find(const char *name)

Function to find a PCB by name

Author: Danny Mancini

void pcb_insert(struct pcb *pcb)

Function to insert a PCB into the appropriate queue

Author: Danny Mancini

int pcb_remove(struct pcb *pcb)

Function to remove a PCB from its current queue

Author: Nada

int pcb_set_priority(const char *name, int new_priority)

Function to set the priority of a PCB

Author: Danny Mancini

struct queue* get_ready_q()

Getter to access the queues from the interface.c file

struct queue* get_blocked_q()

Getter to access the queues from the interface.c file

struct queue* get_susp_ready_q()

Getter to access the queues from the interface.c file

struct queue* get_susp_blocked_q()

Getter to access the queues from the interface.c file