

CS450 Group 1

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USER MANUAL

The user will start with the menu printed out to the terminal. The menu contains the following options:

- 0. Help:** When a user enters '0', it explains to the user how each of the functions in the menu works.
- 1. Set Date:** When the user enters '1', it prompts them to set the current date for the OS.
 - a. *Date:* when the user is prompted to enter the date, it should be in MM/DD/YY format.
- 2. Set Time:** When the user enters '2', it prompts them to set the current time for the OS.
 - a. *Time:* when the user is prompted to enter the time, it should be in HH:MM:SS format
- 3. Get Date:** When the user enters '3', it will then display the date the user has set in the system to the terminal screen.
- 4. Get Time:** When the user enters '4', it will display the time that the user has set in the system to the terminal screen.
- 5. Version:** When the user enters '5', it displays the current version of the code as well as when each version of the code has been completed.
- 6. Shutdown:** Upon entering '6', the system will then launch the shutdown sequence which will ask the user if they would like to shut down with two given options that the user could input.
 - a. If the user would like to shut down, they type a 'y' and press the enter key
 - b. If the user is still trying to access the system they can enter 'n' which will bring them back to the menu screen.

7. **Suspend:** When the user enters '7', it prompts the user to enter the process name of the process that is going to be suspended.
 - a. name: when the user is prompted to enter the process name, it should be at least eight characters.
8. **Resume:** When the user enters '8', it prompts the user to enter the process name of the process that is going to be unsuspended.
 - a. name: when the user is prompted to enter the process name, it should be at least eight characters.
9. **Set Priority:** When the user enters '9', it lets the user change the priority of a process and set it to a new one.
 - a. name: when the user is prompted to enter the process name, it should be at least eight characters.
 - b. priority: the priority should be an integer between 0 and 9 inclusive.
10. **Show PCB:** When the user enters '10', it prompts the user for the process name and then shows details about the process.
 - a. name: when the user is prompted to enter the process name, it should be at least eight characters.
11. **Show All:** When the user enters '11', it displays all of the queues that have PCBs within them.
12. **Show Ready:** When the user enters '12', it displays the ready queue to the screen.
13. **Show Blocked:** When the user enters '13', it displays the blocked queue to the screen.
14. **Create PCB:** When the user enters '14', it will prompt the user to enter the PCB name, the class, either a 0 for application or 1 for a system class, and the priority which must be an integer between 0-9 with 9 having the highest priority.
15. **Delete PCB:** When the user enters '15', it prompts the user for the process name of the process that is going to be deleted.
 - a. name: when the user is prompted to enter the process name, it should be at least eight characters
16. **Block:** When the user enters '16', it prompts the user for the process name of the process that is going to be blocked.
 - a. name: when the user is prompted to enter the process name, it should be at least eight characters
17. **Unblock:** When the user enters '17', it prompts the user for the process name of the process that is going to be unblocked (removed from the block queue).
 - a. name: when the user is prompted to enter the process name, it should be at least eight characters.
18. **Different on R3 and R4**
 - a. **R3: Yield:** When the user enters '18', Comhandle yields to other processes.
 - b. **R4: Set Alarm:** When the user enters '18' on R4, it prompts the user to set an alarm. It prompts the user to name the alarm, enter the message that will be displayed and the time when the alarm will be triggered.

- i. Name: when the user is prompted to enter the alarm name, it should be less than 10 characters.
- ii. Message: when the user is prompted to enter the alarm message, it should be less than 30 characters.
- iii. Time: when the user is prompted to enter the alarm time, the user has to specify hours, minutes and seconds respectively.

19. R4 and R3: LoadR3: When the user enters '19', the processes proc1, proc2, proc3, proc4, and proc5 are entered into memory in the suspended ready state.

20. R4 and R3: Resume All: Sets all processes to "Not Suspended"

21. R4: Remove Alarm: When the user enters '21' in R4, it will prompt the user to enter the name of the alarm they wish to remove, and will remove the alarm with a matching name if one exists.

22. Show Free: When the user enters '22', it prints all the cmcbs' address and size from the free memory list.

23. Show Alloc: When the user enters '23', it prints all the cmcbs' address and size from the free memory list.