**CSE231: Operating System**

**Assigment1**

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A simple made in c which uses use standard C libraries, including Linux system calls such as

fork(),exec() family system calls and wait() family of system calls. It can handle the following commands

|  |  |  |
| --- | --- | --- |
| Commands | Flag 1 | Flag 2 |
| cd- goes to directory | * Goes to previous visited directory | ~ goes to home directory |
| Pwd prints current directory | -L prints logical path | -P prints physical path |
| Echo – prints string | -n prints string without newline | -h prints help |
| Ls prints all files and directory | -r prints all files and directory in reverse order | -a prints all files and directory including hidden files |
| Cat – prints content of files | -n prints content of file followed by line number | -E prints contents of file followed by $ |
| Date prints local date and time | -r prints last modified date and time of a file | -u prints date and time in UTC format |
| Rm – removes files | -I gets confirmation before deleting file | -v  Announces the file deletion |
| Mkdir – makes directory | -p makes parent directory if it doesn’t exist | -v  Announces directory being creates |

Assumptions:

1. All external files are in the same directory as the shell
2. Command length will not exceed 1024
3. Command history is maintained for 1024 commands only.

Command:

1. **CD** 
   1. **Errors handled:**
      1. **No such file or directory**
      2. **Invalid syntax**
2. **Echo**
   1. **Errors handled:**
      1. **No error needs to be handled**
3. **PWD**
   1. **Errors handled**
      1. **Invalid syntax**
      2. **Invalid option**
4. **ls**
   1. **Errors handled:**
      1. **Invalid syntax -**
      2. **Invalid option**
5. **Cat**
   1. **Errors handled:**
      1. **No such file**
      2. **Invalid syntax**
      3. **Invalid option**
6. **mkdir**
   1. **Errors handled:**
      1. **No such file or directory**
      2. **Invalid syntax**
      3. **Invalid option**
7. **rm**
   1. **Errors handled:**
      1. **No such file**
      2. **Invalid syntax**
8. **date**
   1. **Errors handled:**
      1. **No such file or directory**
      2. **Invalid syntax**

















