Report

df command displays the amount of available disk space in file systems that the user has read access. **-h** option displays the sizes in power of 1024. So this *human-readable* option shows space in megabytes and gigabytes size units.

I picked this command and option because I wanted to learn a new command that I do not know. I know the other commands, at least I am familiar with them. So I wanted to use something that I never used before that's why I chose **df** command. When I first ran the command the numbers seemed complicated and I did not understand what they mean. Then, when I looked at the **man** page of the **df** command, I saw the *human-readable* option (**-h**) and when I tried it I realized that all the numbers are actually representing megabytes and gigabytes. I think **-h** is an important option when using the **df** command.

Options

My shell command is: **man df | grep -A 1 -we "-h" > output.txt**

-A 1 : It prints 1 more line after the match. With this option user can also print the description of the option. Number represents the number of lines.

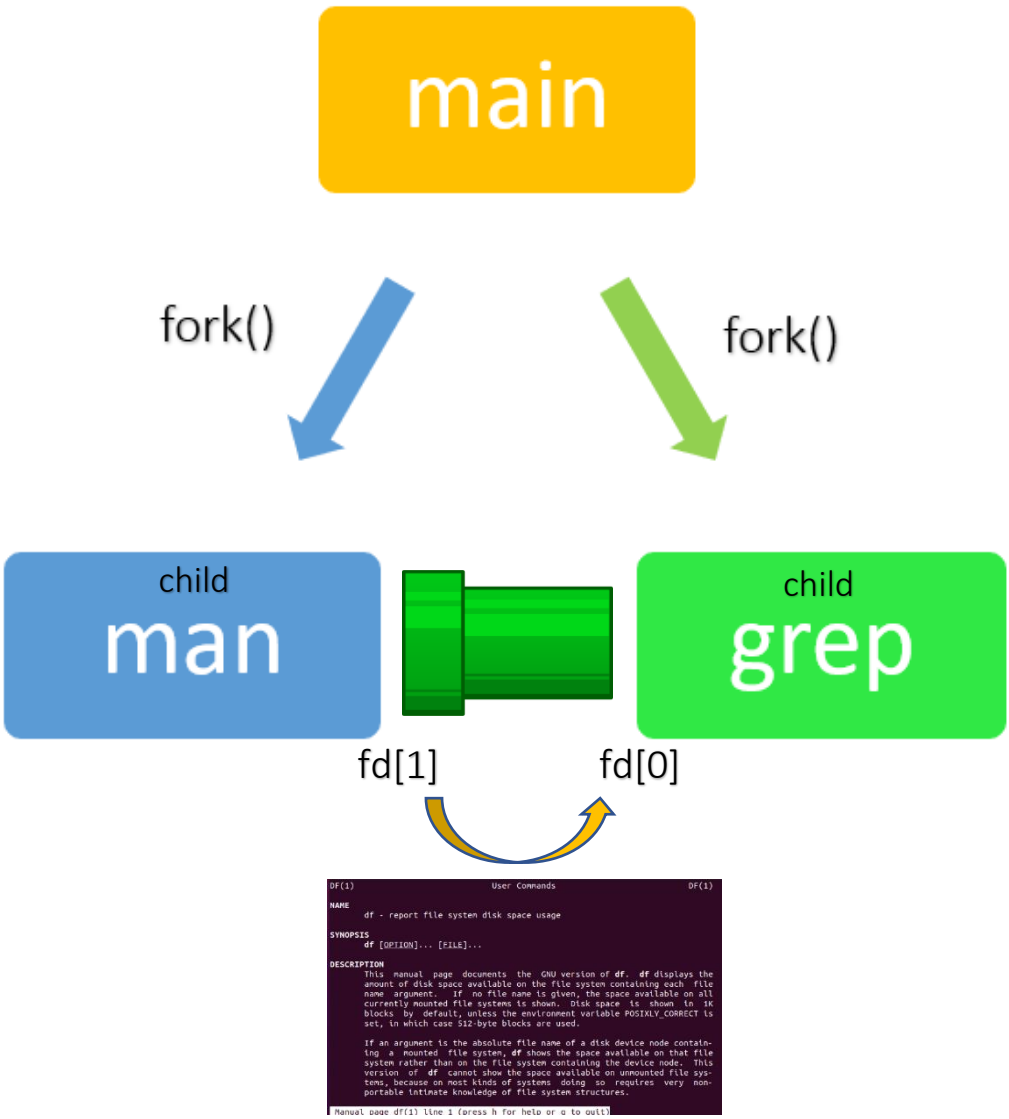
-we: This option is a combination of two options.

> -w: Selects only the exact string. It only takes what user wants to find. For example it will not take "-help" just because it contains "-h".
>
> -e: With this option, the shell can interpret the special character {-} as a part of the search query.

Process Hierarchy

Two fork() is called and individual processes are created for each command, man and grep. One child is connected to another child through a pipe. Since the two fork() is called in main to create two child, each of them has different process IDs. First fork() creates a process for man command and the second fork() creates another process for grep command. The output of the man command becomes the input of the grep command with the help of pipe between these two processes. To avoid non-determinism, wait() call is working

in their parent part. Parent will wait man and grep command to do their jobs. When two child process completed their works, the parent now can take place to complete the program. Thanks to the wait() call, we do not see something belong to the child after the prompt appears in the shell. First child is man command and its output goes to the second child of the parent which is a grep command.



Aysun Öğüt