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07/07/2024
DATA-413-613
Assignment: HW1 (week1)

Exercise 1: What is your home directory? What files/folders exist in your home directory? Navigate to it and then navigate back to your notes.

Answer:

```
dwanith@Dwaniths-MacBook-Pro ~ % cd ~
dwanith@Dwaniths-MacBook-Pro ~ % ls
Applications    Desktop        Documents      Downloads      Library        Movies         Music          Pictures       Public
dwanith@Dwaniths-MacBook-Pro ~ % /Users/dwanith/Desktop/Semester\ \(2\)\ summer/DATA-413\ \(DS\)/notes
zsh: permission denied: /Users/dwanith/Desktop/Semester (2) summer/DATA-413 (DS)/notes
dwanith@Dwaniths-MacBook-Pro ~ % ▊
```

Code:
cd ~
ls
/Users/Dwanith/desktop/Semester\ \(2\)\ summer/DATA-413\ \(DS\)/notes

Exercise 2: Where does the following command take you? How does it work? cd ~ /../../..

Answer: The command takes you to the root directory, since the command '~' tilde represents the home directory. The ".." double full stop takes you one step further up, since there are 3 sets of "..", the command ends at the "/" which is the root directory.

Exercise 3: Read the manual page of ls. What does the a flag do? What does the l flag do?

Answer: in order to read the manual page, the command "man ls" is used. The "-a" shows all the files and the "-l" shows all the information of about each file and directory.

```
Last login: Sun Jul  7 17:37:01 on ttys001
[dwanith@Dwaniths-MacBook-Pro ~ % ls -l
total 0
drwx------@   7 dwanith  staff   224 May   7 02:20 Applications
drwx------@  26 dwanith  staff   832 Jul   7 17:15 Desktop
drwx------@  32 dwanith  staff  1024 Jul   5 20:28 Documents
drwx------+  43 dwanith  staff  1376 Jul   7 16:59 Downloads
drwx------@ 107 dwanith  staff  3424 May   5 05:17 Library
drwx------+   7 dwanith  staff   224 Dec   4  2023 Movies
drwx------+   6 dwanith  staff   192 Jul 25  2023 Music
drwx------+   4 dwanith  staff   128 Jun 21  2023 Pictures
drwxr-xr-x+   4 dwanith  staff   128 Jun 21  2023 Public
drwxr-xr-x    4 dwanith  staff   128 Dec 14  2023 PycharmProjects
drwxr-xr-x+   3 dwanith  staff    96 Apr   2 07:24 Sites
drwxr-xr-x    2 dwanith  staff    64 Apr   2 06:29 output
[dwanith@Dwaniths-MacBook-Pro ~ % ls -a
.                       .cache              .zshrc
..                      .config             Applications
.CFUserTextEncoding     .cups               Desktop
.DS_Store               .idlerc             Documents
.RData                  .local              Downloads
.RDataTmp               .serverauth.3601    Library
.RDataTmp1              .spss               Movies
.Rapp.history           .viminfo            Music
.Rhistory               .virtualenvs        Pictures
.Trash                  .vscode             Public
.Xauthority             .zprofile           PycharmProjects
.anydesk                .zsh_history        Sites
.bash_history           .zsh_sessions       output
dwanith@Dwaniths-MacBook-Pro ~ % ▮
```

Exercise 4: Create a new file with touch command. for instance touch myfile.txt. Run stat myfile.txt what information do you get?

Answer: We use the command "touch" to create a new file, and the "stat" command for the information about the new created file

```
[dwanith@Dwaniths-MacBook-Pro ~ % touch myfile.txt
[dwanith@Dwaniths-MacBook-Pro ~ % stat myfile.txt
 16777233 8251350 -rw-r--r-- 1 dwanith staff 0 0 "Jul  7 17:40:26 2024" "Jul  7 17:40:2
 6 2024" "Jul  7 17:40:26 2024" "Jul  7 17:40:26 2024" 4096 0 0 myfile.txt
 dwanith@Dwaniths-MacBook-Pro ~ % ▮
```

Exercise 5: Run ls and from there list select a file. Now run 'ls -l' to display the details of the files, showing that it has been created or updated. what information does it give you regarding the myfile.txt and your selected file.

Answer: The information includes, the date of creation of the file, time and size of the file.

```
[dwanith@Dwaniths-MacBook-Pro ~ % ls -l                                    ]
total 0
drwx------@   7 dwanith  staff   224 May   7 02:20 Applications
drwx------@  28 dwanith  staff   896 Jul   7 17:41 Desktop
drwx------@  32 dwanith  staff  1024 Jul   5 20:28 Documents
drwx------+  43 dwanith  staff  1376 Jul   7 16:59 Downloads
drwx------@ 107 dwanith  staff  3424 May   5 05:17 Library
drwx------+   7 dwanith  staff   224 Dec   4  2023 Movies
drwx------+   6 dwanith  staff   192 Jul 25  2023 Music
drwx------+   4 dwanith  staff   128 Jun 21  2023 Pictures
drwxr-xr-x+   4 dwanith  staff   128 Jun 21  2023 Public
drwxr-xr-x    4 dwanith  staff   128 Dec 14  2023 PycharmProjects
drwxr-xr-x+   3 dwanith  staff    96 Apr   2 07:24 Sites
-rw-r--r--    1 dwanith  staff     0 Jul   7 17:40 myfile.txt
drwxr-xr-x    2 dwanith  staff    64 Apr   2 06:29 output
dwanith@Dwaniths-MacBook-Pro ~ % ▮
```

Exercise 6: Add the following line This line is my first line to myfile.txt. Then run cat myfile.txt to show the line is added.

Answer: By adding a line to the file, we get the result "This is my first line"

```
Last login: Sun Jul  7 17:37:41 on ttys001
dwanith@Dwaniths-MacBook-Pro ~ % echo "This is my first line" > myfile.txt
dwanith@Dwaniths-MacBook-Pro ~ % cat myfile.txt
This is my first line
dwanith@Dwaniths-MacBook-Pro ~ % ▮
```

Exercise 7: Run touch myfile.txt then run ls -l myfile.txt does the "timestamp" for the file myfile.txt is updated? Show the output. Note: Another common use of the touch command is to update the timestamps of an existing file

Answer: Yes, after using the touch command with the "ls -l" command, the file is updated instantly at 17:52, as compared to the time 17:37:41 when the line was added to the myfile.txt.

```
Last login: Sun Jul  7 17:37:41 on ttys001
[dwanith@Dwaniths-MacBook-Pro ~ % echo "This is my first line" > myfile.txt
[dwanith@Dwaniths-MacBook-Pro ~ % cat myfile.txt
 This is my first line
[dwanith@Dwaniths-MacBook-Pro ~ % touch myfile.txt
[dwanith@Dwaniths-MacBook-Pro ~ % ls -l
 total 8
 drwx------@   7 dwanith  staff    224 May  7 02:20 Applications
 drwx------@  30 dwanith  staff    960 Jul  7 17:49 Desktop
 drwx------@  32 dwanith  staff   1024 Jul  5 20:28 Documents
 drwx------+  43 dwanith  staff   1376 Jul  7 16:59 Downloads
 drwx------@ 107 dwanith  staff   3424 May  5 05:17 Library
 drwx------+   7 dwanith  staff    224 Dec  4  2023 Movies
 drwx------+   6 dwanith  staff    192 Jul 25  2023 Music
 drwx------+   4 dwanith  staff    128 Jun 21  2023 Pictures
 drwxr-xr-x+   4 dwanith  staff    128 Jun 21  2023 Public
 drwxr-xr-x    4 dwanith  staff    128 Dec 14  2023 PycharmProjects
 drwxr-xr-x+   3 dwanith  staff     96 Apr  2 07:24 Sites
 -rw-r--r--    1 dwanith  staff     22 Jul  7 17:52 myfile.txt
 drwxr-xr-x    2 dwanith  staff     64 Apr  2 06:29 output
 dwanith@Dwaniths-MacBook-Pro ~ %
```