

Syd Olson

PHY 494

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1/17/19

HW1

1.1 Commands and Paths

- a) The cd command changes the directory that the shell is working in while the pwd command prints the directory you are currently in.
- b) One command would be cd. Another command would be cd ~. You could also use the cd command to go to a specific user ID's home directory by typing "cd ~USERNAME" while in the root directory.
- c) i) The path in question is absolute because it goes from root directory to the destination directory through each step.
ii) cd Documents/../data/bases
- d) The command will land you in the home directory.

1.2 Copy, rename, and delete

- a) arcwr@LAPTOP-5Q8OPTNL MINGW64 ~

```
$ ls -R PHY494/01_shell
```

```
PHY494/01_shell:
```

```
data/ Documents/
```

```
PHY494/01_shell/data:
```

```
PHY494/01_shell/Documents:
```

```
work/
```

```
PHY494/01_shell/Documents/work:
```

```
'~$son_Sydney_hw1.docx' 'assignment_01 (1).pdf' Olson_Sydney_hw1.docx TODO
```

1.3 Danger Zone

- a) The command rm -rf / will indiscriminately delete the root directory and everything in it. The rm means remove, the -rf basically says you know what will happen with this command, and will avoid fail safes if there are any, and the / is your root directory, the victim. Maybe the command could be used to erase a completely infected hard drive before installing a new OS.

1.4 Pipes and Filters

- a) wc -l planets_2.dat; Planets_2.dat contains 120 lines because the file is a concatenation of two copies of planets.dat
- b) sort -k 2,2 -n -r planets.dat | head -3 > biggest_planets; The three biggest planets are Bepin, Kamino, and Malastare.
- c) grep "ice" planets.dat > bases; 2 planets have terrains with ice, Hoth and Mygeeto.

- d) `cut -b 1,1 planets.dat | sort | uniq -c | sort`; S and C appear 7 times while F, J, V, Q, Y all appear one time as the first letters of planet names.