

Lab Exercise

■ Add line numbers

- Create "week4" directory in your home directory
- Download "Aladdin.txt" file in your "week4" directory
 - » `$ wget http://www.fpx.de/fp/Disney/Scripts/Aladdin.txt`
- Create "Aladdin_num.txt" file which has line numbers preceding all text lines
 - » Format: Number Space | Space Text (i.e. "line" => "number | line")
 - » No new line at the end of file, both files should have the same number of lines
- The argument for the executable can be any file name, but the argument will always end with ".txt".
- **Only use** `open()`, `read()`, `write()`
- **Don't use others such as**
`scanf()`, `printf()`, `sprintf()`, `fscanf()`, `fprintf()`, `fopen()`, ...
 - » This also applies to string and int-to-str functions (itoa, etc.)
 - » Otherwise, **zero**

Lab Exercise

```
ALADDIN: THE COMPLETE SCRIPT
COMPILED BY BEN SCRIPPS <34RQNPQ@CMUVM.CSV.CMICH.EDU>
(Portions Copyright (c) 1992 The Walt Disney Company)

PEDDLER:  Oh I come from a land
          From a faraway place
          Where the caravan camels roam
          Where they cut off your ear /Where it's flat and immense
          If they don't like your face /And the heat is intense
          It's barbaric, but hey--it's home!
          When the wind's at your back
          And the sun's from the west
          And the sand in the glass is right
          Come on down,
          Stop on by
          Hop a carpet and fly
          To another Arabian night!
```

Aladdin.txt

```
1 | ALADDIN: THE COMPLETE SCRIPT
2 | COMPILED BY BEN SCRIPPS <34RQNPQ@CMUVM.CSV.CMICH.EDU>
3 | (Portions Copyright (c) 1992 The Walt Disney Company)
4 |
5 | PEDDLER:  Oh I come from a land
6 |          From a faraway place
7 |          Where the caravan camels roam
8 |          Where they cut off your ear /Where it's flat and immense
9 |          If they don't like your face /And the heat is intense
10 |         It's barbaric, but hey--it's home!
11 |         When the wind's at your back
12 |         And the sun's from the west
13 |         And the sand in the glass is right
14 |         Come on down,
15 |         Stop on by
16 |         Hop a carpet and fly
17 |         To another Arabian night!
```

Aladdin_num.txt

```
$ ls
ex4
$ wget http://www.fpx.de/fp/Disney/Scripts/Aladdin.txt
$ ls
Aladdin.txt      ex4
$ ./ex4 Aladdin.txt
$ ls
Aladdin_num.txt  Aladdin.txt      ex4
```

Lab Exercise

- **Submit source code of your exercise**

- via iCampus
- Bundle *source code* and *Makefile* with tar command
 - » *tar.gz* format
 - \$ **tar cvzf** *[student_id].tar.gz week4*
- We'll grade your submission with **make**
 - » If compilation fails, your points for this exercise will be zero
- Starting this week, if I cannot extract your file with the tar command, it will be zero, so please make sure you submit the correct file.

Lab Exercise

■ Note

- The number of lines might differ depending on which vim is used.
- To make sure the number of lines are the same, run the commands
 - » \$ `awk -v RS='WrWn' 'END{print NR}' Aladdin.txt`
 - » \$ `awk -v RS='WrWn' 'END{print NR}' Aladdin_num.txt`
- The values returned by awk should be the same.