

Introduction to Unix

Or: How do I get to all these corpora???

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What is Unix?

- ▶ operating system like DOS, Windows
- ▶ developed in 1969 by Bell Labs
- ▶ works well for single computers as well as for servers
- ▶ Linux: open source version of unix (mostly for PCs)
- ▶ now also underlying operating system for MACs

Unix

Remote Login

Directories

Files

Useful Commands

Permissions

Remote Login

- ▶ windows: SSH Secure Shell for Windows available from IUWare (<http://iuware.indiana.edu/>)
- ▶ linux machines/MACs: open a terminal
- ▶ command:
`ssh <name>@<computer>`

```
ssh guest@jones.ling.indiana.edu  
password: unix08
```

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Remote Login

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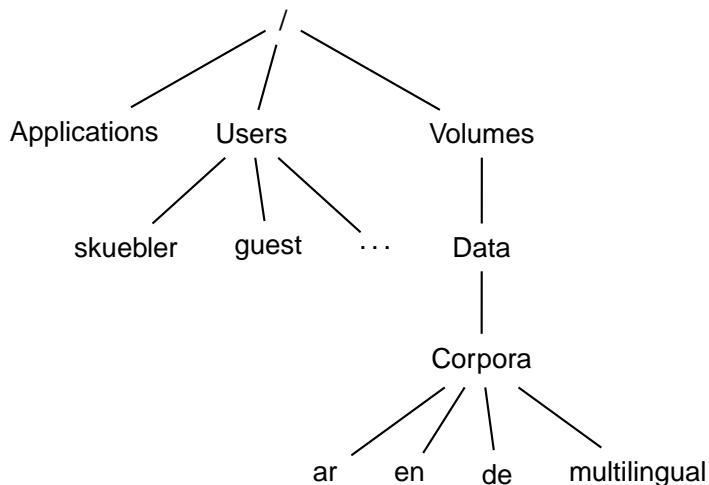
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- ▶ Don't forget to log out:

```
exit
```

Directory Structure

- ▶ directory = folder
- ▶ home directory: your private directory (/Users/guest)
- ▶ directory structure: tree structure
- ▶ root node: /
- ▶ important directories on a MAC:
 - ▶ /Applications
 - ▶ /Users
 - ▶ /Volumes
 - ▶ /Volumes/Data/Corpora

Graphical Representation



Useful Commands for Directories

- ▶ list files in current directory:
`ls`
- ▶ list files with more information:
`ls -l`

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Useful Commands for Directories

- ▶ list files in current directory:
`ls`
- ▶ list files with more information:
`ls -l`
- ▶ change directories:
`cd <to>`
- ▶ two possibilities to specify <to>:
 - ▶ from root:
`cd /Users/skuebler`

Useful Commands for Directories

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`cd /Users/skuebler`
 - ▶ from where we are:
`cd ../skuebler`
`..` means 'go up'

Useful Commands for Directories

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 - ▶ from root:
`cd /Users/skuebler`
 - ▶ from where we are:
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.. means 'go up'
- ▶ go back to home directory:
`cd`

Looking at Files

- ▶ display contents of file in terminal:
`cat <filename>`

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- ▶ display contents of file in terminal:
`cat <filename>`
- ▶ display page by page:
`less <filename>`

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Looking at Files

- ▶ display contents of file in terminal:
`cat <filename>`
- ▶ display page by page:
`less <filename>`
 - ▶ next page: space bar
 - ▶ quit: q

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Looking at Files

- ▶ display contents of file in terminal:
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 - ▶ go to beginning of file: `g`
 - ▶ go to end of file: `G`

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Looking at Files

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```
cat <filename>
```

- ▶ display page by page:

```
less <filename>
```

- ▶ next page: space bar
- ▶ quit: q
- ▶ go to beginning of file: g
- ▶ go to end of file: G
- ▶ search forward: /<expression> + hit return
- ▶ search backward: ?<expression> + hit return
- ▶ in search: next found occurrence: n

More Useful Commands

- ▶ list files that end in '.txt':

```
ls *.txt
```

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More Useful Commands

- ▶ list files that end in '.txt':

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- ▶ make directory:

```
mkdir <path/><dirname>
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subdirectory: `mkdir results`

in your home directory: `mkdir ~/results`

More Useful Commands

- ▶ list files that end in '.txt':
`ls *.txt`
- ▶ make directory:
`mkdir <path/><dirname>`
subdirectory: `mkdir results`
in your home directory: `mkdir ~/results`
- ▶ copy a file from one location to another:
`cp <filename> <path/>`

More Useful Commands

- ▶ list files that end in '.txt':

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- ▶ make directory:

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mkdir <path/><dirname>
```

subdirectory: `mkdir results`

in your home directory: `mkdir ~/results`

- ▶ copy a file from one location to another:

```
cp <filename> <path/>
```

- ▶ copy a (corpus) file to the directory 'results' in your home directory:

```
cp mycorpus.txt ~/results
```

More Useful Commands (2)

- ▶ sort your file:
`sort <filename>`

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- ▶ sort your file:
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- ▶ sort (numbers) in numeric order:
`sort -n <filename>`

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More Useful Commands (2)

- ▶ sort your file:
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- ▶ find a word in a file and display all the lines in which it occurred:
`grep <word> <fromfile>`

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`grep <word> <fromfile> > ~/<tofile>`

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- ▶ find a word in a file and display all the lines in which it occurred and save results into a file in your home directory:
`grep <word> <fromfile> > ~/<tofile>`
- ▶ example:
`grep linguistic mycorp.txt > ~/res.txt`

Permission System

▶ `ls -l`

```
-rw-r--r--    1 root   admin 168724 Nov  9  2003 Jokes.pdf
drwxr-xr-x   15 root   admin   510 Aug 31  2006 ar
drwxr-xr-x    3 root   admin   102 Aug  4  2004 cs
drwxr-xr-x    4 root   admin   136 Mar  2  2007 de
drwxr-xr-x   35 root   admin  1190 Feb 18 15:23 en
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- ▶ change permissions:

`chmod <who><+/-><what> <file/dir>`

<who>: user = u; group = g; others = o; all = a;

<what>: read = r; write = w; execute = x;

Permission System

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- ▶ example: give user write permissions for file 'hello.txt':

```
chmod u+w hello.txt
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Permission System

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- ▶ example: give user write permissions for file 'hello.txt':

```
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```

- ▶ example: deny others write and execute permissions for directory 'test':

```
chmod o-wx test
```

If You Want to Know More

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Ken Church: Unix for Poets.

will be available from the wiki ...

http://jones.ling.indiana.edu/~ncsander/moin.py/Professionalization_Workshop