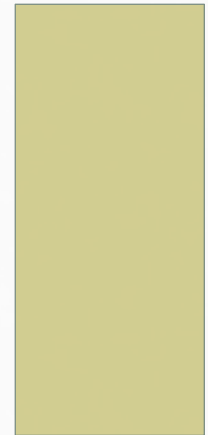# INTRODUCTION TO UNIX

NAVIGATING THE SERVER

UNIX

- Operating System (OS)

- OS = Kernel + Shell + Commands

  - Kernel – Manager/Organizer

  - Shell – Command line interpreter

  - Commands – To communicate with the kernel

FILE SYSTEM STRUCTURE

- / - Root of the filesystem structure

- /home

- /bin

- /lib

- /etc, /opt

- /dev, /media, /mnt

- /tmp

- /usr

SETTING UP, BEFORE LOGIN

- *Windows*
  - Putty: http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html
  - Xming: http://www.straightrunning.com/XmingNotes/

- *Mac*
  - You already have the tool.
  - Open Applications -> Utilities -> TERMINAL

LOGIN

$ ssh <username>@genomic.wustl.edu

  $ <username> = 1st letter of your first name + last name

  $ Eg: Vasavi Sundaram -> vsundaram

- Current password: *pleasechange*

- Change your password:

  - vsundaram@genomic:~$ passwd

  - Changing password for vsundaram.

  - (current) UNIX password:

  - Enter new UNIX password:

  - Retype new UNIX password:

  - passwd: password updated successfully

ACCESSING DIRECTORIES

- Creating a directory: $ mkdir <dir name>

- Moving TO a directory: $ cd <dir name>

- Moving a directory: $ mv <SOURCE dir> <TARGET dir>

- Removing a directory: $ rmdir <dir name>

- What's in the directory?: $ ls <dir name>

- What's the path to this directory? (Be in the directory): $ pwd

NAVIGATION COMMANDS

- Go to a subdirectory: $ cd <dir name>

- Go to a parent directory: $ cd ..

- Go up two levels: $ cd ../..

- Go to /: $ cd /

- Go to your home directory (~): $ cd ~

- *WILDCARDS (*): Use a single character to represent several different characters.*

  $ ls *.txt

  $ ls */*

VIM

- vim <filename>

- 'i' – insert text

- [Enter text]

- Exit – Esc + ':' + 'wq'

- Also, check up 'cat'

MORE, LESS, HEAD, TAIL

- $ more <filename>
  - ENTER – moves down the file, one line at a time
  - SPACEBAR – moves down the file, one page at a time
  - CTRL+C – exits 'more'
- $ less <filename>
  - Navigate in the same way as more
  - 'q' to exit
- $ head <filename>
  - $ head -<num> filename
- $ tail <filename>

GREP

- What is grep? $ man grep

$ grep " " <filename>

$ grep –c

$ grep -n

RE-DIRECTING

- '|'
  - Re-directing the output from one command to another command

- '>'

  - Re-directing the output from the std-output to a file

- '>>'

  - Re-directing the output from the std-output to append an existing file