# MA194 – Using Unix


Instructor: Dan Chaney (chaney@ms.uky.edu)

Office hours: Mon 2-3, 606-257-2150


Class #11 - Tuesday, February 20, 1996 – Week 6

In-class hotline: (606) 323–3681

Community Colleges: Tues 9:00-9:50 & 10:00-10:50 PM EST

UK/Lexington: Wed & Fri 9:00 PM EST, TCI Channel 16

URL: `http://www.ms.uky.edu/~ma194`

Mailing list: ma194-class@ms.uky.edu

To join the mailing list, send a note to ma194@ms.uky.edu

*Tonight's Topics*

– Command redirection (Conclusion)

– Homework 5 solutions/discussion

– Special characters (meta-characters)

# Unix and the user shell

Every user logs into a Unix system and runs a *shell* often called a *user shell*. It's the first and primary program the user will use as an interface to the Operating System.

Each command is run as an individual process and has three channels of communication: *stdin*, *stdout*, *stderr*.

stdin – Standard In
stdout – Standard Out
stderr – Standard Error (think about *that* one! :-)

# Other nice features of a shell

1. Command history

2. Aliases of commands

3. File completion

4. Job control

What if I want to pipe a command but redirect the output along the way?

```
last | grep chaney > /tmp/tmpfile
cat /tmp/tmpfile | sort | less
```

can also be written

```
last | grep chaney | tee /tmp/tmpfile | sort | less
```

# Homework 5

Re-write the following commands in a more 'efficient' manner, showing their output and preserving any remaining 'temporary' files.

```
ls -l /etc > /tmp/file
grep -v " 1995" < /tmp/file | sort +3 -n > /tmp/file2
less /tmp/file2
rm /tmp/file2

last | grep Feb > /tmp/file
grep -i chaney < /tmp/file | wc -l
```

```
finger @t6.mscf.uky.edu | grep -i Jan > /tmp/file
grep -i chaNEY /tmp/file | wc -l
rm /tmp/file
```

# Some other examples of piping

```
ls -lR /home | grep Feb
archie -s "UK Basketball" | tee /tmp/output | less
ls -l | sort +4 -n
```

# Extra credit, Homework 5

What is the command string (or series of commands joined with a pipe) to do the following:

– List the largest file in the /tmp directory?

– List all the files ending in **ps** with a February date?

– List users currently logged on a remote machine named **John**

– List all the intervening hops between **pigpen.ate.uky.edu** and **a.cs.okstate.edu** that do **NOT** use mci.net