## **Command Line: Bash Scripting Workshop Handout**

```
1 cd shell-novice-data/bash-scripting/molecules/
                 2 head -n 12 octane.pdb
                 3 head -n 12 octane.pdb | tail -n 10
                 4 vi middle.sh
make
                          head -n 12 octane.pdb | tail -n 10
script
                 6 bash middle.sh
                 7 vi middle.sh
argument
                          head -n 12 $1 | tail -n 10
                 9 bash middle.sh octane.pdb
                10 bash middle.sh "high octane.pdb"
                11 vi middle.sh
quote your
                          head -n 12 "$1" | tail -n 10
variable
                12
                13 bash middle.sh "high octane.pdb"
                14 vi middle.sh
multiple
                15
                          # Select lines from the middle of a file.
arguments
                          # Usage: bash middle.sh filename end line num lines
                 16
                          head -n "$2" "$1" | tail -n "$3"
                17
                18 bash middle.sh pentane.pdb 12 10
                19 bash middle.sh pentane.pdb 19 17
                 20 cd ../creatures
loops
                21 vi list creatures.sh
                          for filename in basilisk.dat unicorn.dat
                 22
                          do
                 23
                             head -n 2 "$filename" | tail -n 1
                 24
                 25
                          done
                 26 bash list creatures.sh
```

Note: Line numbers are inserted for the ease of refering to each command. Indented are the lines that should be typed in the file.

```
Processing
                 29
                           do
                               echo "$filename"
Files
                 30
                 31
                           done
                 32 bash copy files.sh
                 33 vi copy files.sh
                           for filename in *.dat
                 34
                 35
                                echo 'cp "$filename" original-"$filename"'
                 36
                           done
                 37
                 38 bash copy files.sh
                 39 vi copy files.sh
                           for filename in $@
Introduce $@
                 40
                           do
                 41
                               echo 'cp "$filename" original-"$filename"'
                 42
                               cp "$filename" original-"$filename"
                 43
                           done
                 45 bash copy files.sh *.dat
                 46 rm original*.dat
Permission
                 47 ls -1 copy files.sh
to execute
                 48 chmod +x copy files.sh
and define
                 49 vi copy files.sh
shebang
                           #!/usr/bin/env bash
                 50
                           for filename in $@
                 51
                           do
                 52
                               echo 'cp "$filename" original-"$filename"'
                 53
                               cp "$filename" original-"$filename"
                 54
                 55
                           done
                 56 ./copy files.sh *.dat
```

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