```
1.cd data-shell/molecules/
         2. head -n 15 octane.pdb
         3. head -n 15 octane.pdb | tail -n 5
         4. vi middle.sh
make
                5. head -n 15 octane.pdb | tail -n 5
script
         6. bash middle.sh
         7. vi middle.sh
argument
                8.head -n 15 $1 | tail -n 5
         9.bash middle.sh octane.pdb
         10. bash middle.sh "high octane.pdb"
         11. vi middle.sh
quote your
                12.head -n 15 "$1" | tail -n 5
variable
         13. bash middle.sh "high octane.pdb"
         14. vi middle.sh
multiple
                15. # Select lines from the middle of a file.
arguments
                16. # Usage: bash middle.sh filename end line num lines
                17. head -n "$2" "$1" | tail -n "$3"
         18. bash middle.sh pentane.pdb 15 5
         19. bash middle.sh pentane.pdb 20 5
         20.cd ../creatures
loops
         21. vi list creatures.sh
                22. for filename in basilisk.dat unicorn.dat
                23. do
                24.
                       head -n 2 $filename | tail -n 1
                25. done
         26. bash list creatures.sh
```

```
Expanding 27.cp *.dat original-*.dat wildcard 28.vi copy_files.sh
```

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

shebang