seminar 2 os – shell programming

#!/bin/bash

echo “hello ‘whoami’ !”

n=$1

echo $0 this is a command

echo $1 first command

loop:

for p in $\*

do

echo $p

done

? how many lines (non-empty) have we written?

grep -c “[^ ]” cfiles/readfile.c (name of the directory)

wc -l cfiles/readfile.c (cannot omit the empty lines)

d=$1(first directory)

//compute sum

s=0

for dir in $d/\*.c; do

n= `grep -c “ [^ ]” $dir`

s=`$s+$n`

done

echo $5

s=0

for dir in $d/\*.c; do

n=` grep -c “ [^ ]” $dir`

s= `expr $s + $n`

done

echo $5

//anything but space

//list all the .c directories: \*.c

ls cfiles/c\*.c ///files that start with letter c

//specific arithmetic operations we use expr

man expr

expr 1 + 2 //command with spaces between arguments

=>3

vim clc.sh

awk ‘/[^ ]/{s+=1} end {print s} ’ cfiles/\*.c

find

find cfiles //see the whole content of the directory

find cfiles -name “\*.c” //each of them are in a new line

s=0

for dir in $d -type f -name “\*.c”; do

n=` grep -c “ [^ ]” $dir`

s= `expr $s + $n`

done

echo $5

test

[]-allies for test – for any conditions

test -n “hello” //see nothing

? how to see exit 0?

echo $? =>0

test -n

echo $? =>0

test -z “hello”

echo $? =>1

!! any error can be seen no only with 1, but also 2,3,…

!! executed correctly => 0

test 1 -le 10 //compare numbers

echo $? =>0

[ 100 -le 10 ] //same as test !!pay attention to the spaces!!!

echo $? =>1

-f file //check if the file exists

-d file //check for directory existence

for a in $@; do

if [ -f $a ]; then

echo $a is a file

elif [ -d $a]

then

echo $a is a dir

elif echo $a | grep -e -q “^[0-9]\*$”; then

echo $a is a number

else

echo $a we do not know what $a is

fi

end

echo “string 99 “ | grep -e “[0-9]”

highlight the digits!

test 100 -eq “abc”

echo “string 99 “ | grep -e “[0-9]” – put something like this in front to validate “abc” string

#!/bin/bash

v=$1

if [ “$v” -eq “$v” ] 2>/dev/null$v

then

echo “$v is a number “

else

echo “$v is not a number”

fi

#!/bin/bash

F = “”

while test -z $F || ! test -f $F || ! test -r $F

do

read -p “give me a valid file with read permissions: ” F

done

chmod -r a.txt

#!/bin/bash

F = “”

while [ -z $F ] || ! [ -f $F ] || ! [ -r $F ]

do

read -p “give me a valid file with read permissions: ” F

done

// ! Can work also inside the []

//order some file according to the size

#!/bin/bash

for f in $@; do

if [ -f $f ] ; then

echo $f

fi

done

? how to get the size of a file

Du (this usage)

Du -b a.txt => 0 a.txt //empty file

Du -b

#!/bin/bash

for f in $@; do

if [ -f $f ] ; then

du -b $f

fi

done | sort -r -n

| sort =>output is sorted

| sort -n //sort numerically

| sort -n -r // sort numerically in reverse

#!/bin/bash

echo “” >file.txt

for f in $@; do

if [ -f $f ] ; then

du -b $f >>file.txt

fi

done | sort -n -r file.txt

//start with an empty file, add, sort

//monitor a directory when something changes

./director.sh . //monitor that keeps running

///create a new file => dir state change

!! while True; do

sleep=2