**Essential Shell Programming - 2**

Date: 07/04/2020

Topics to be covered:

* Calling a script by different names
* **while:** Looping,
* **for:** Looping with a list
* basename

**Calling a script by different names:**

Create a c file called t1.c to display Hello World

Create the shell script comc.sh (given in text book)

Observe the code

* first line will store the recently created t1.c in lastfile variable.
* any command you execute (which you will be executing later) will be stored in command variable
* using expr, t1 is extracted from t1.c and stored in executable variable.
* the case will be able to handle three commands namely

1. vic to open the file t1.c
2. comc to compile the c program
3. runc to run the executable

Later create 3 hard links for comc.sh and call it vic, comc and runc.

Now you be able to execute comc.sh script with 3 different names, vic, comc and runc.

**Exercise : Create comc.sh script using any editor. Also, keep ready the t1.c file. Create hard links using ln command. Then execute the commands vic, comc and runc one after the other. If vic, comc and runc commands gives error, execute them as ./vic, ./comc and ./runc**

**while loop**

while condition is true

do

commands

done

while is usually followed by test statement.

**Exercise : execute emp5.sh to know how to use while loop**

**Observation to be made :**

* the code and description that you enter will be appended to the file newlist
* Open the file newlist and see if all the entered code and descriptions are available in the file or not.
* Observe what happens if you remove /dev/tty following the echo statement and analyse the importance of using /dev/tty in scripting.

**Using while to wait for a file:**

**Exercise : create monitfile.sh available in the text book. The last line alloc.pl can be replaced by any echo statement like echo "This is a Test" .**

**This script is to be executed in background using &.**

**Now create the file invoice.lst with some data. Once this file is created, the while loop is terminated and the echo statement displays "This is a Test".**

Here your script waits for the file invoice.lst to created.

**Setting up an infinite loop:**

**while true**

**do**

**df -t**

**sleep 30**

**done &**

The above loop runs in background continuously. To stop the loop you must use kill $! command .

**for : Looping with a list**

**for variable in list**

**do**

**commands**

**done**

**Possible sources of list:**

**1. List of variables like $PATH, $HOME, $SHELL**

for var in $PATH $HOME $SHELL

do

echo $var

done

**2. List can be taken from a file using `cat clist` (command substitution)**

create 3 files t1.txt, t2.txt and t3.txt

store the filenames in clist file one below the other

for var in `cat clist`

do

cat $var

done

**3. List can be from wild cards like \*.c where all c files will be considered**

**create any 3 c files, call them as s1.c s2.c an s3.c**

for var in \*.c

do

cat $var

done

**4. List can be taken from positional parameters like $\* and "$@"**

**Execute emp6.sh script.**

**basename : Changing filename extensions**

* **basename is an external command**
* **it can be used for two purposes**

1. **extract filename from absolute pathname**

$basename /home/asus/vsem/unix/t1.c

t1.c ----- returns filename

1. **to change extensions**

$basename t1.txt txt

t1. ---- observe the extension is removed

Let us convert all txt files to doc files (create files like t1.txt, t2.txt ....)

for var in \*.txt

do

leftname=`basename $var txt`

mv $var ${leftname}doc

done

Put this code (for loop) in a script and check if all txt files are converted to doc files.