LAB 11

Course Code: CSC 2209   Course Title: Operating Systems

Dept. of Computer Science
Faculty of Science and Technology

Lecturer No:	11	Week No:	11	Semester:	
Lecturer:	*Name & email*				

Lecture Outline

1. Array
2. File Parsing from Shell Script
3. File Parsing With Separator
4. Checking file existence

Array

- ❑ Bash Supports simple single dimension array

- ❑ In bash you can add value in any array position

- ❑ Gaps in indices are okay in bash

- ❑ You can treat any variable as an array but the value will be assigned into the 0th index

- ❑ Syntax

  os=('ubuntu', 'windows', 'linux')

  echo "${os[0]}"

  echo "${os[1]}"

  echo "${os[2]}"

Array (cont'd)

- Get the length of the array

    echo "${#os[@]}"

- Removing value from array

    unset os[2]

- Taking array as an input

    Read –a variablename [separate input with space and then press enter]

File Parsing from Shell Script

❑ File can be viewed with cat command easily.

❑ We can also parse file from shell script.

❑ For parsing file we need input redirection of file.

❑ Input redirection means the read command will read from file rather taking input from terminal.

❑ Input redirection is done by < operator.

❑ File is read by while loop.

Syntax

```
!# /bin/bash

while read filecontent

do

        echo $filecontent

done < filename
```

This will read the whole content of the file and give output in terminal.

File Parsing With Separator

Suppose we want to parse the file and its contents

For example the below is a content of a file

    Name-ID

    Tanvir Ahmed-123466

    Sabbir Ahmed-456792

    Masum Ahmed-454679

Here you can see the name and id are separated by -.

This is a separator. In many files linux uses separator to separate file contents.

Example

❑ Run cat /etc/passwd

    ❑ This file contains the user information like username, password, user home directory etc.

    See the below content. This contains username and user's home directory.

uuidd:/usr/sbin/nologin

dnsmasq:/usr/sbin/nologin

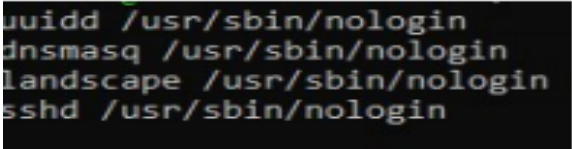landscape:/usr/sbin/nologin

sshd:/usr/sbin/nologin

❑ Here the contents are separated with : (colon). So, to read the attribute like user and user's home directory independently we have to use File Separator.

❑ To do so we need to use IFS = Internal Field Separator. It basically separates word with a separator.

Syntax

while IFS=':' read username userhomedirectory

do

echo $username $userhomedirectory

done < filename

```
uuidd /usr/sbin/nologin
dnsmasq /usr/sbin/nologin
landscape /usr/sbin/nologin
sshd /usr/sbin/nologin
```

Output of the above code.

For reading n attribute we need to use n variables. As we are reading 2 attributes we are using 2 variables.

Checking file existence

```
filename=info.txt

if [ -f $filename ]

then

        #do operation

else

        echo "File not exists"
```

Here the –f flag checks for the existence of the file.

Books

❑ Unix Shell Programming

   ❑ Written by Yashavant P. Kanetkar