

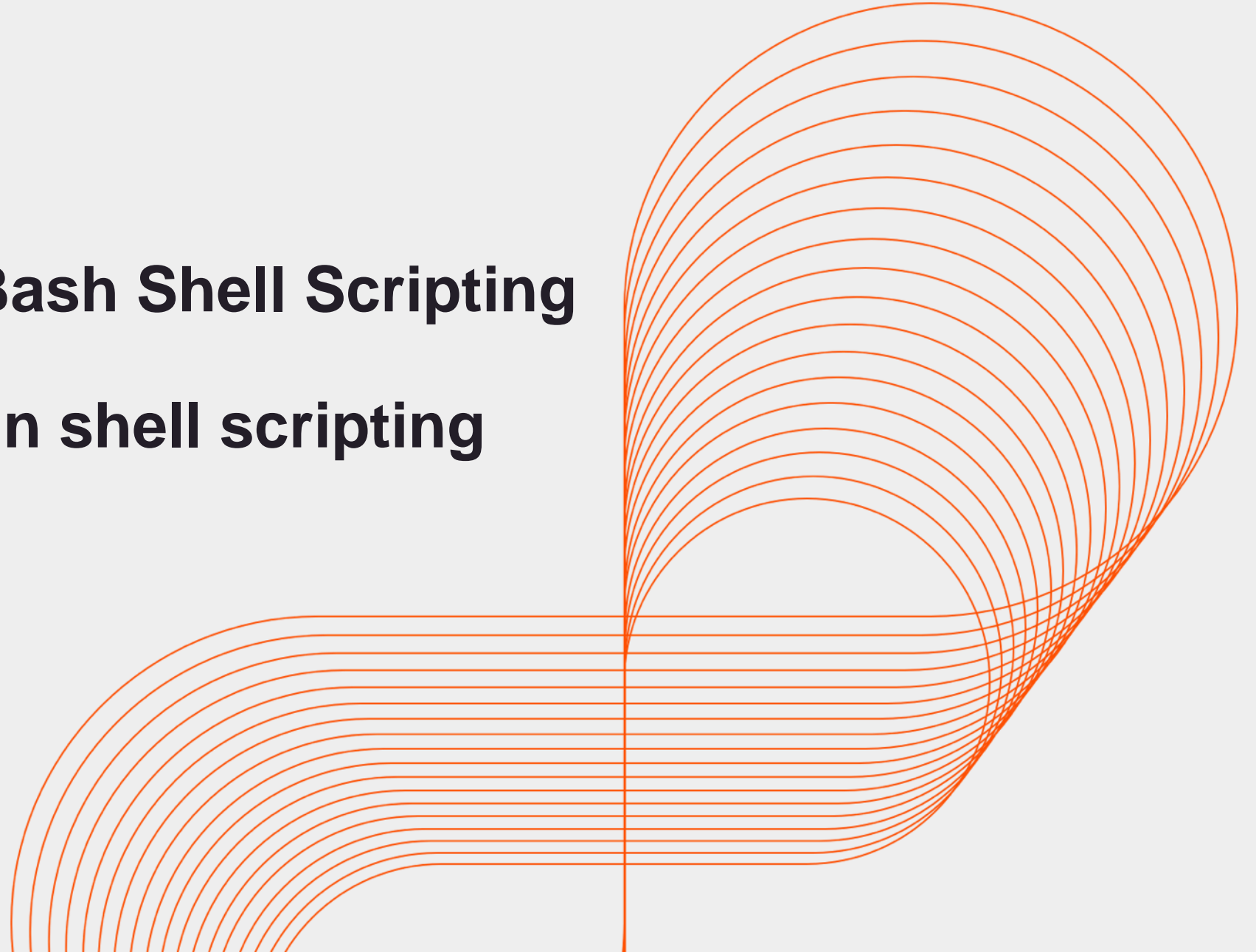


Persistent

Intermediate Bash Shell Scripting

File Handling in shell scripting

Persistent University



Contents

1. File Handling
2. At the end of this module , you will be able to understand:
3. File Write and append
4. Reading file using read command
5. Reading file contents in a loop

File write and append

- Empty files can be created using touch command.
- When user want to write data in the file using > operator existing data from the file will be overwritten.

E.g echo "Hello User" > file.txt

cat file.txt

Hello User.

Using this echo command existing data from the file.txt will be overwritten.

To avoid this problem >> operator is used to append data in the file.

e.g. echo "Hello How are you" >> file.txt

cat file.txt

Hello User

Hello How are you

File append operation - Example

```
#!/bin/sh
```

```
OP=$1
```

```
if [ "$1" == "-a" ];
```

```
then
```

```
ID=$2 FIRST=$3 LAST=$4 AGE=$5
```

```
echo "$ID,$FIRST,$LAST,$AGE" >> users.dat
```

```
echo "User Added"
```

```
elif [ "$1" == "-l" ];
```

```
then
```

```
cat users.dat
```

```
fi
```

Reading file using read command

- You can use while..do..done bash loop to read file line by line on a Linux
- Syntax of the while loop is as –
 `while read -r line; do COMMAND; done < input.file`
 - The -r option passed to read command prevents backslash escapes from being interpreted.
 - Add IFS= option before read command to prevent leading/trailing whitespace from being trimmed
 - e.g
 `while IFS= read -r line; do COMMAND_on $line; done < input.file`

Reading file using read command contd..

- Example of read contents of a file using read command and display it using while loop.

```
#!/bin/bash
```

```
file="/home/user1/data.txt"
```

```
while IFS= read -r line
```

```
do
```

```
    printf '%s\n' "$line"
```

```
done <"$file"
```

Reading file using read command contd..

- Example of read contents of a file filed wise using while loop

```
#!/bin/bash
file="/etc/passwd"
while IFS=: read user pass uid gid full home shell
do
echo -e "$full :\n\
Pseudo : $user\n\
UID :\t $uid\n\
GID :\t $gid\n\
Home :\t $home\n\
Shell :\t $shell\n\n"
done < $file
```

Reading file using read command contd..

- One may also read from a command instead of reading from a regular file using while loop.

```
cat file.txt | while IFS= read -r line;  
do  
    printf '%s\n' "$line"  
done
```


Reading file using for loop.

- Example of reading contents of a file using for loop

```
#!/bin/sh
old_IFS=$IFS    # save the field separator
IFS=$'\n'       # new field separator, the end of line
for line in $(cat file.txt)
do
    echo $line
done
IFS=$old_IFS    # restore default field separator
```

Quiz

- _____ command is used to read a file line by line using while loop
- State TRUE or FALSE
It is also possible to read contents of a file field wise using loops
- _____ operator is used to append data to a file
- If _____ operator is used, contents of a file will be overwritten
- Setting IFS= option before read command will prevent leading/trailing whitespace from being _____

Quiz

- read command is used to read a file line by line using while loop
- State **TRUE** or FALSE
It is also possible to read contents of a file field wise using loops
- >> operator is used to append data to a file
- If > operator is used, contents of a file will be overwritten
- Setting IFS= option before read command will prevent leading/trailing whitespace from being trimmed.

Summary : Functions

- In this module, we have learnt about functions in shell.
- Now, you should be able to answer following questions:
 - How to Write and append data in a file
 - How to read file using read command
 - How to read file contents in a loop

Reference material

- <http://ccm.net/faq/1757-how-to-read-a-linux-file-line-by-line>
- <http://mywiki.woledge.org/BashFAQ/001>
- <http://www.cyberciti.biz/faq/unix-howto-read-line-by-line-from-file/>

Key contacts

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Thank You !!!

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