

CYSE 270: Linux System for Cybersecurity

Lab 8 – Shell Scripting

(Total 100 Points)

Please refer to the slides for **week 8 - Shell scripting** and write shell scripts to complete

the following tasks. **Submit the screenshot for the script and its output, both.**

NOTE: Please replace the name of the script with the name you used for the script. In the sample screenshot, I have used those names to create my script.

Step-1: Use vi or nano editor to write your script (Ex, **vi YourScriptName.sh**) for the following tasks.

Step-2: After saving the script, save and exit out of the editor and make the script

executable by adding execute permission (**chmod +x YourScriptName.sh**)

Step-3: Run your script using **./YourScriptName.sh**

Task A (Correct script (25 points) + result/output after executing the script (25 points)-

Conditional Statement

Write a shell script using nano or vi editor (eg, vi scriptname.sh) like below, that performs

the following task:

1. Add the Shebang (`#!/bin/bash`) as the first line in your script.
2. Read a number using read function
3. Using if statement, check if the input number is greater than 10, then print the message
“Input number is greater than 10”

4. If the number is not greater than 10, then print the message, “Input number is not greater than 10”

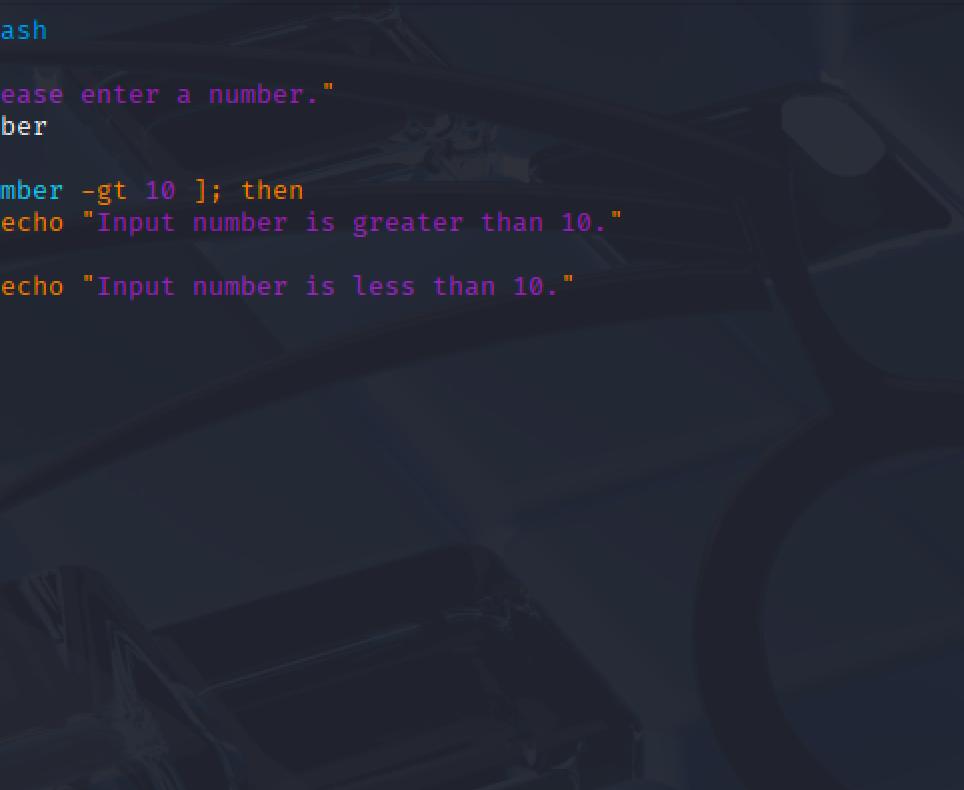
```
└─(alex㉿kali)-[~]
$ vim taskA.sh
```

```
└─(alex㉿kali)-[~]
$ chmod +x taskA.sh
```

```
└─(alex㉿kali)-[~]
$ ./taskA.sh
Please enter a number.
2
Input number is less than 10.
```

```
└─(alex㉿kali)-[~]
$ ./taskA.sh
Please enter a number.
11
Input number is greater than 10.
```

```
└─(alex㉿kali)-[~]
$ █
```



A terminal window titled "alex@kali: ~" displays a bash script named "taskA.sh". The script prompts the user to enter a number, reads it, and then checks if it is greater than 10. If it is, it outputs "Input number is greater than 10.", otherwise, it outputs "Input number is less than 10." The script ends with a closing brace "}" and a blank line.

```
#!/bin/bash

echo "Please enter a number."
read number

if [ $number -gt 10 ]; then
    echo "Input number is greater than 10."
else
    echo "Input number is less than 10."
fi
```

Task B (Correct script (25 points) + result/output after executing the script (25 points) -

Shell Script to Create a new file

Write a shell script using nano or vi editor (eg, nano scriptname.sh) like below, that performs the following task:

1. Add the Shebang (`#!/bin/bash`) as the first line in your script.
2. Reads the name of the file to check for a filename that exists.
3. Check whether the given input is a directory or regular file.

4. If the input is a directory and exists, then display the message “Directory exists”.
5. If the input is a regular file, then display the message “It is a regular file, and the file exists” and display the contents of the file.
6. If the given input name in step-1 doesn’t exist, then create the new file with the given name in step-1.

(Extra credit: 10 points) Add your name to the file (using redirection operator ‘>’) and display the contents for the newly created file.

7. Save and exit the editor and remember to make the script executable using the command chmod +x scriptname.sh)

```
(alex㉿kali)-[~]
$ vim taskB.sh
(alex㉿kali)-[~]
$ chmod +x taskB.sh

(alex㉿kali)-[~]
$ ./taskB.sh
Please enter the name of a file or directory.
cyse270
File does not exist. Creating ...
The file has been created and your name has been added.
Alex Bretana

(alex㉿kali)-[~]
$ ./taskB.sh
Please enter the name of a file or directory.
cyse270
It is a regular file, and the file exists.
Alex Bretana
```

```
(alex㉿kali)-[~]
$ ./taskB.sh
Please enter the name of a file or directory.
/home
Directory Exists.

alex@kali: ~
File Actions Edit View Help
#!/bin/bash

echo "Please enter the name of a file or directory."
read filename

if [ -d "$filename" ]; then
    echo "Directory Exists."
elif [ -f "$filename" ]; then
    echo "It is a regular file, and the file exists."
    cat $filename
else
    echo "File does not exist. Creating ... "
    touch $filename
    echo "Alex Bretana" > "$filename"
    echo "The file has been created and your name has been added."
    cat "$filename"
fi

~
~
~
~
~
~
"taskB.sh" 21L, 426B 21,1-8 All
```

Extra Credit (15 points)- Check Directory

Write a script like below that

1. Reads Two variables- your name and the name of the directory as input.
2. Your script should check for the validity of the given directory name, if the entered filename is a directory, then display its contents

3. If the directory doesn't exist, then print an error message
“Sorry, the entered directory name is not a valid directory name.”
4. You need to execute your script and test the following
directories to test with your script

- /etc/systemd
- /home
- A directory that does not exist

Display the contents for the directories you have entered