

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”.

(Your script should result into the output like this sample screenshot after executing as shown below)

Ubuntu [Running] - Oracle VirtualBox

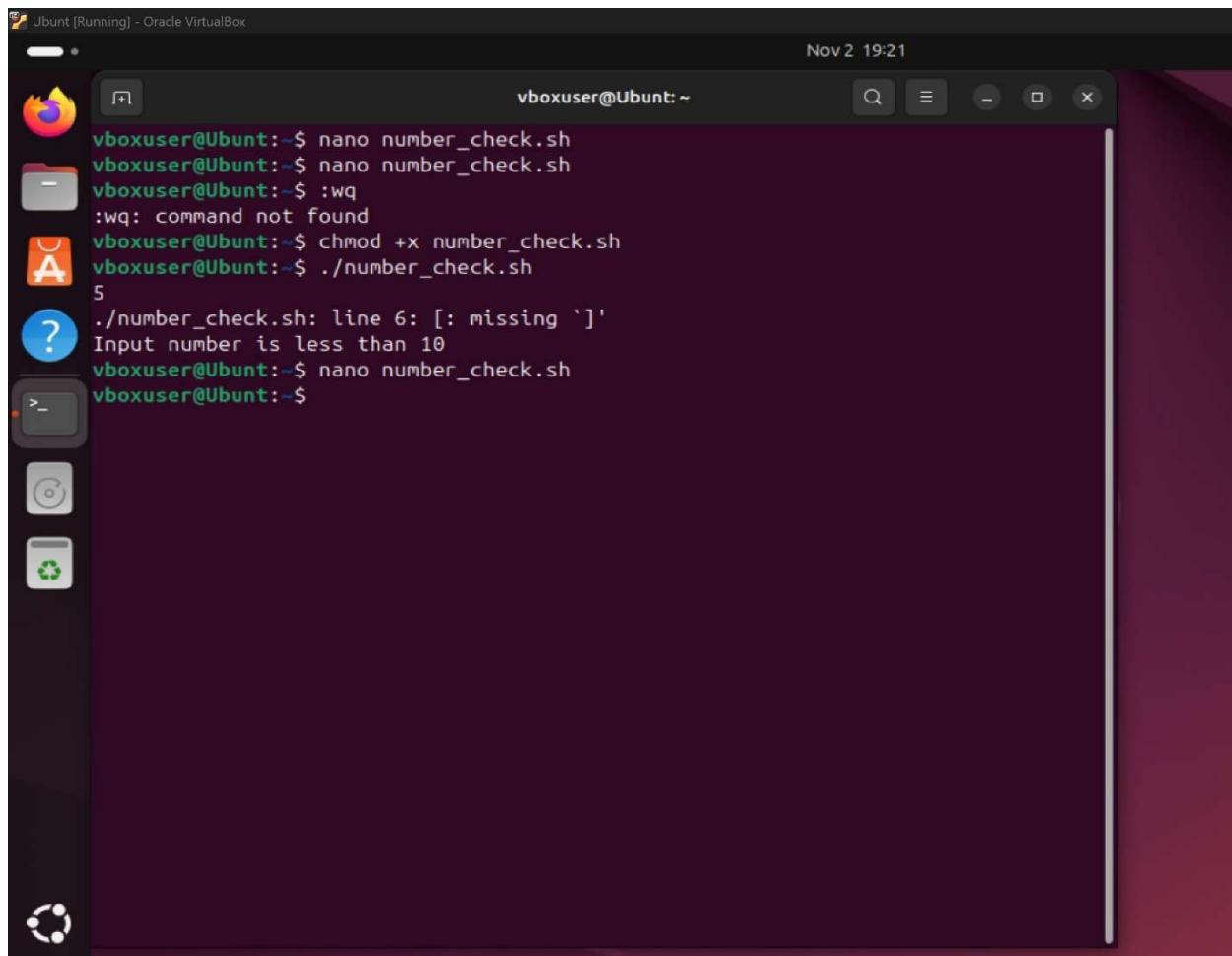
Nov 2 19:07

GNU nano 7.2 number\_check.sh

```
#!/bin/bash
# Script: number_checked.sh
# Author: Christos Dotson
# Purpose: Check if a number is greater than 10
read -p "5" num
if [ $num -gt 10 ]
then
echo "Input number is greater than 10"
else
echo "Input number is less than 10"
fi
```

[ Read 11 lines ]

^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location  
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line



```
vboxuser@Ubuntu:~$ nano number_check.sh
vboxuser@Ubuntu:~$ nano number_check.sh
vboxuser@Ubuntu:~$ :wq
:wq: command not found
vboxuser@Ubuntu:~$ chmod +x number_check.sh
vboxuser@Ubuntu:~$ ./number_check.sh
5
./number_check.sh: line 6: [: missing `]'
Input number is less than 10
vboxuser@Ubuntu:~$ nano number_check.sh
vboxuser@Ubuntu:~$
```

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.

Ubuntu [Running] - Oracle VirtualBox

vboxuser@Ubuntu:~

Nov 2 20:11

GNU nano 7.2 file\_check.sh

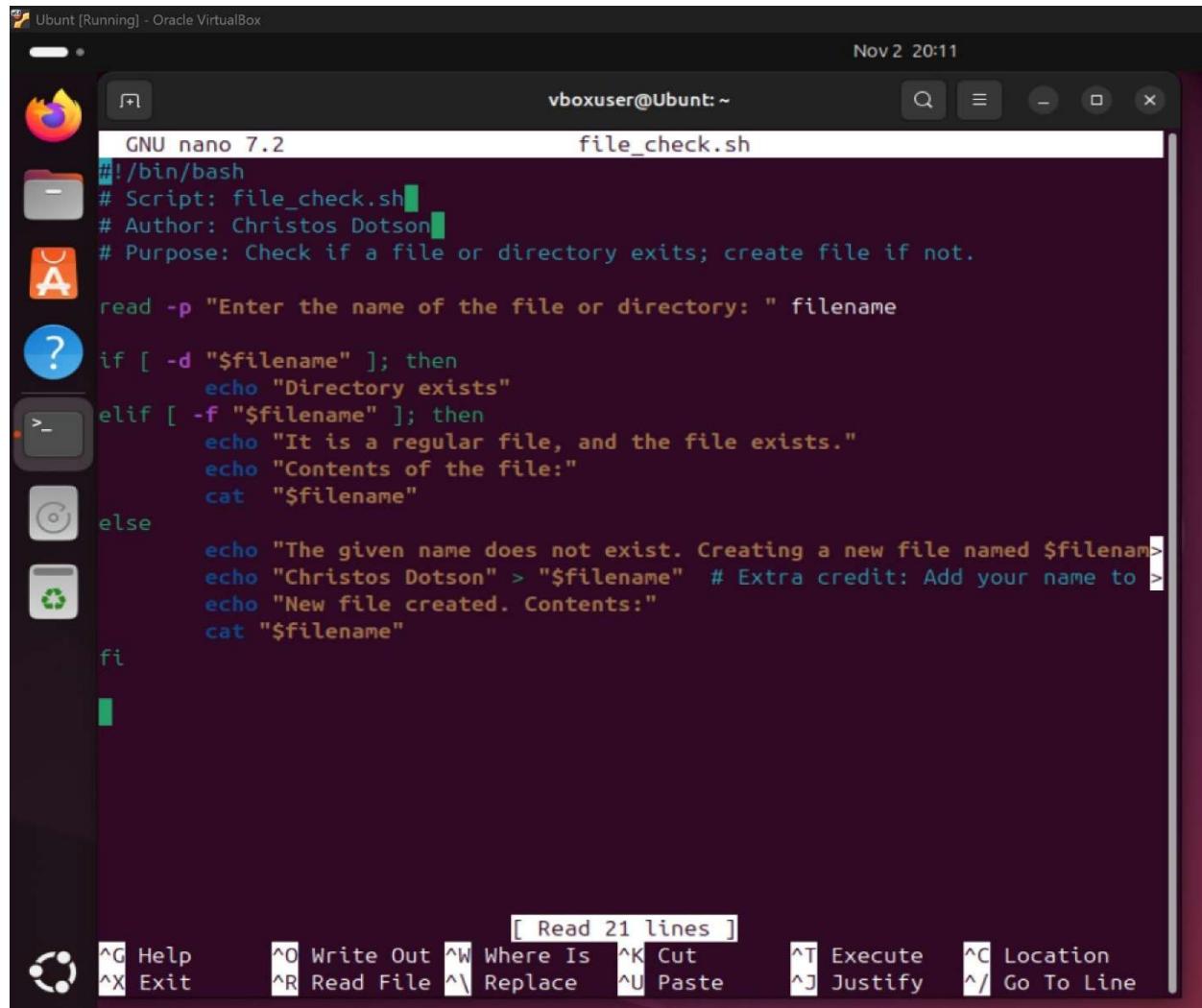
```
#!/bin/bash
# Script: file_check.sh
# Author: Christos Dotson
# Purpose: Check if a file or directory exists; create file if not.

read -p "Enter the name of the file or directory: " filename

if [ -d "$filename" ]; then
    echo "Directory exists"
elif [ -f "$filename" ]; then
    echo "It is a regular file, and the file exists."
    echo "Contents of the file:"
    cat "$filename"
else
    echo "The given name does not exist. Creating a new file named $filename"
    echo "Christos Dotson" > "$filename" # Extra credit: Add your name to >
    echo "New file created. Contents:"
    cat "$filename"
fi
```

[ Read 21 lines ]

^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location  
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line

A screenshot of a terminal window on an Ubuntu desktop. The window title is 'Ubuntu [Running] - Oracle VirtualBox'. The terminal title bar shows 'vboxuser@Ubuntu:~' and the date 'Nov 2 20:11'. The main content of the terminal is a bash script named 'file\_check.sh' in the nano editor. The script checks if a file or directory exists and creates it if it doesn't. It also adds the user's name to the file. The terminal has a dark theme with a sidebar on the left containing icons for various applications like a browser, file manager, and terminal. The bottom of the terminal shows a menu of nano editor commands.

Ubuntu [Running] - Oracle VirtualBox

Nov 2 20:10

```
vboxuser@Ubuntu:~$ chmod +x file_check.sh
vboxuser@Ubuntu:~$ ./file_check.sh
Enter the name of the file or directory: /etc
Directory exists
vboxuser@Ubuntu:~$ ./file_check.sh
Enter the name of the file or directory: test.txt
The given name does not exist. Creating a new file named test.txt ...
New file created. Contents:
Christos Dotson
vboxuser@Ubuntu:~$ ./file_check.sh
Enter the name of the file or directory: newfile.txt
The given name does not exist. Creating a new file named newfile.txt ...
New file created. Contents:
Christos Dotson
vboxuser@Ubuntu:~$
```

