

My Nguyen

Professor Al Kinoon

CYSE 270-18535

November 11, 2024

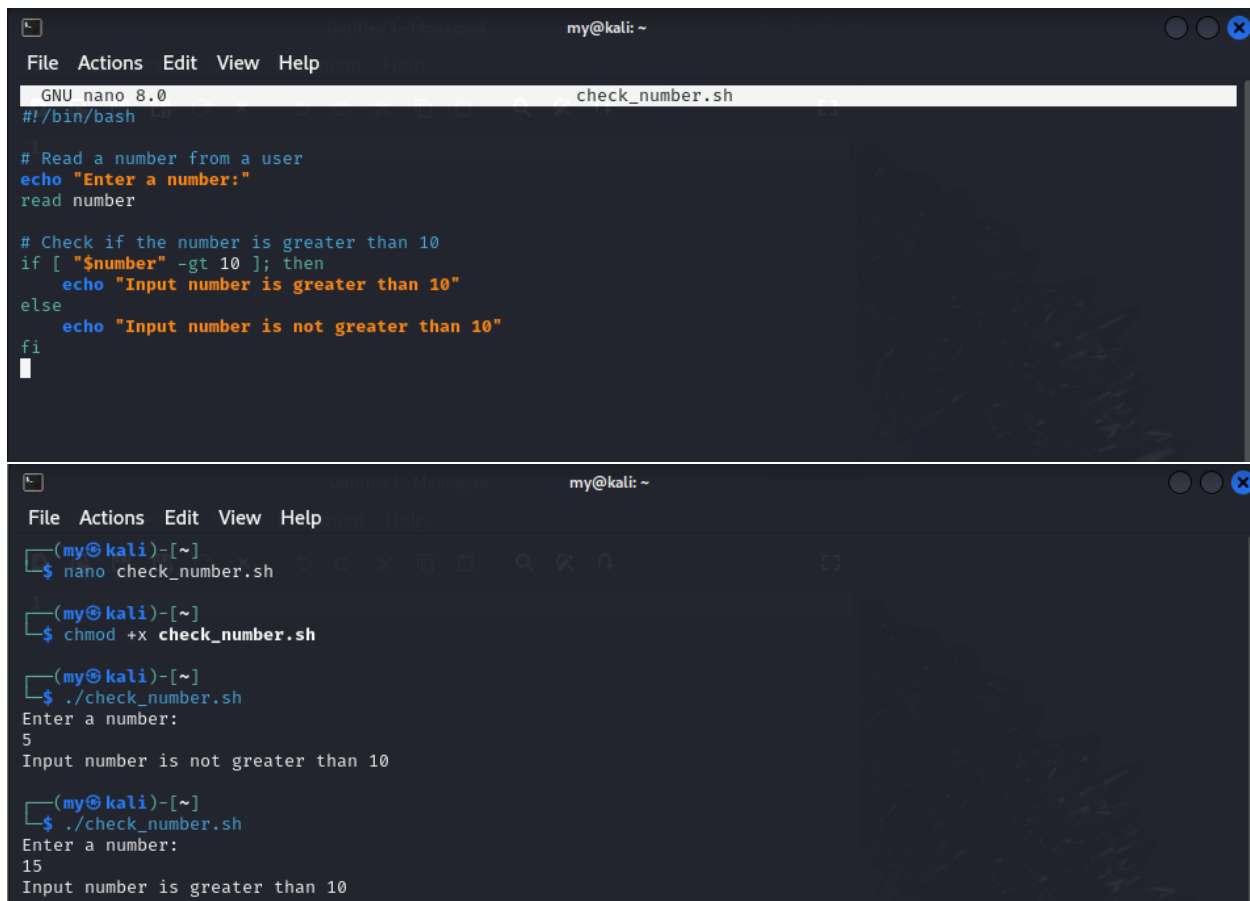
### Assignment 8: Shell Scripting

#### 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 similar to this sample screenshot after executing as shown below)



```
my@kali: ~  
File Actions Edit View Help  
GNU nano 8.0 check_number.sh  
#!/bin/bash  
  
# Read a number from a user  
echo "Enter a number:"  
read number  
  
# Check if the number is greater than 10  
if [ "$number" -gt 10 ]; then  
    echo "Input number is greater than 10"  
else  
    echo "Input number is not greater than 10"  
fi  
|  
  
my@kali: ~  
File Actions Edit View Help  
(my@kali)-[~]  
└─$ nano check_number.sh  
(my@kali)-[~]  
└─$ chmod +x check_number.sh  
(my@kali)-[~]  
└─$ ./check_number.sh  
Enter a number:  
5  
Input number is not greater than 10  
(my@kali)-[~]  
└─$ ./check_number.sh  
Enter a number:  
15  
Input number is greater than 10
```

## 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`

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

```
GNU nano 8.0 file_check.sh
#!/bin/bash

# Prompt for file or directory name
echo "Enter the filename to check: "
read filename

# Check if the input is a directory
if [ -d "$filename" ]; then
    echo "Directory exists"

# Check if the input is a regular file
elif [ -f "$filename" ]; then
    echo "It is a regular file, and the file exists"
    echo "The contents of the file are:"
    cat "$filename"

# If input name doesn't exist, create a new file with the given name
else
    echo "$filename does not exist, creating a new file with the given name."
    echo "My Nguyen" > "$filename"
    echo "The contents of the newly created file:"
    cat "$filename"
fi
```

```
(my@kali)-[~]
└─$ nano file_check.sh

(my@kali)-[~]
└─$ chmod +x file_check.sh

(my@kali)-[~]
└─$ ./file_check.sh
Enter the filename to check:
test.txt
It is a regular file, and the file exists
```

```
(my@kali)-[~]
└─$ chmod +x file_check.sh

(my@kali)-[~]
└─$ ./file_check.sh
Enter the filename to check:
lab8_example.txt
It is a regular file, and the file exists
The contents of the file are:
My Nguyen
```

### 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

(See the screenshot below where the script has been executed 3 times to check for the Three different directory names as the test input)

```
GNU nano 8.0 check_directory.sh
#!/bin/bash

#Prompt for user name and directory name
echo "Enter your name:"
read username
echo "Enter the directory name to check:"
read dirname

# Check if the directory exists
if [ -d "$dirname" ]; then
    echo "Hello, $username. The contents of the directory $dirname are:"
    ls "$dirname"
else
    echo "Sorry, the entered directory name is not a valid directory name."
fi
```

```
(my@kali)-[~]
└─$ nano check_directory.sh

(my@kali)-[~]
└─$ chmod +x check_directory.sh

(my@kali)-[~]
└─$ ./check_directory.sh
Enter your name:
My Nguyen
Enter the directory name to check:
/etc/systemd
Hello, My Nguyen. The contents of the directory /etc/systemd are:
journald.conf  network          pstore.conf  system        timesyncd.conf  user.conf
logind.conf    networkd.conf  sleep.conf   system.conf   user
```

```
(my@kali)-[~]
└─$ ./check_directory.sh
Enter your name:
My Nguyen
Enter the directory name to check:
/home
Hello, My Nguyen. The contents of the directory /home are:
cyse_project emma mnguy027 my olivia sophia strawberry
```

```
(my@kali)-[~]
└─$ ./check_directory.sh
Enter your name:
My Nguyen
Enter the directory name to check:
/fake_directory
Sorry, the entered directory name is not a valid directory name.
```