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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 similar to this sample screenshot after executing as shown below)

```
File  Actions  Edit  View  Help
#!/bin/bash

echo "Enter a number:"
read number

if [ "$number" -gt 10 ]; then
        echo "Input number is greater than 10"
else
        echo "Input number is not greater than 10"
fi
```

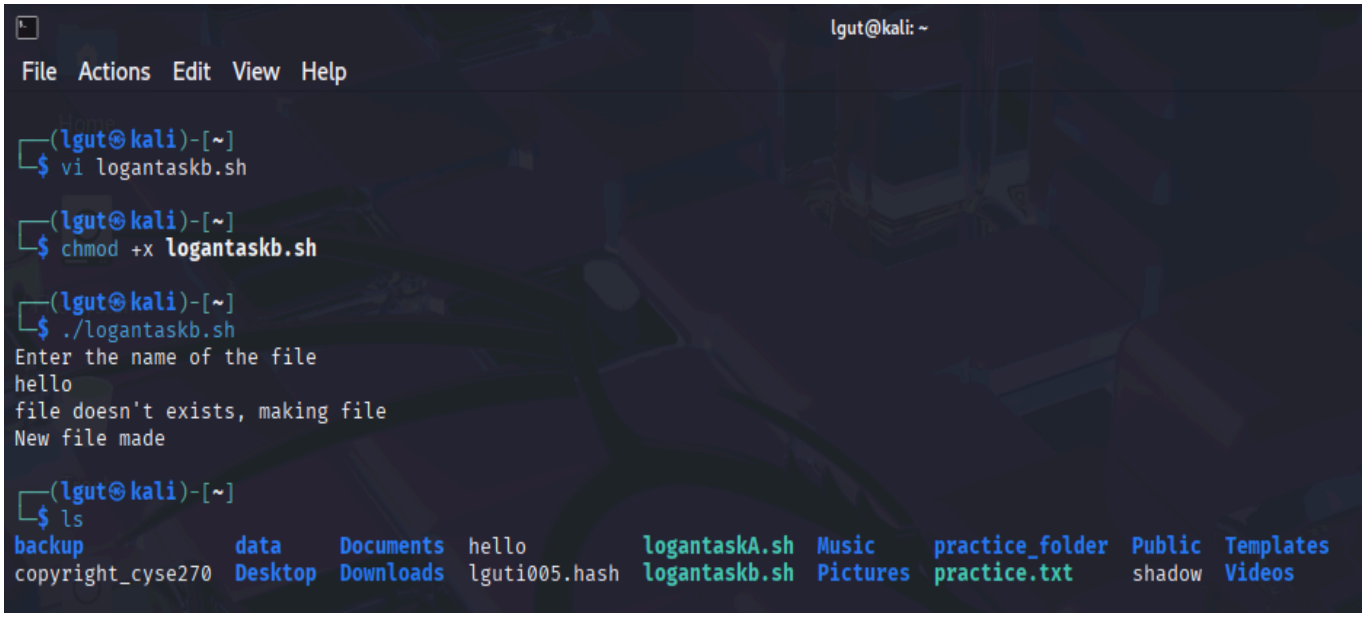
```
File  Actions  Edit  View  Help
┌──(lgut㉿kali)-[~]
└─$ vi logantaskA.sh

┌──(lgut㉿kali)-[~]
└─$ chmod +x logantaskA.sh

┌──(lgut㉿kali)-[~]
└─$ ./logantaskA.sh
Enter a number:
4
Input number is not greater than 10

┌──(lgut㉿kali)-[~]
└─$ ./logantaskA.sh
Enter a number:
11
Input number is greater than 10
```

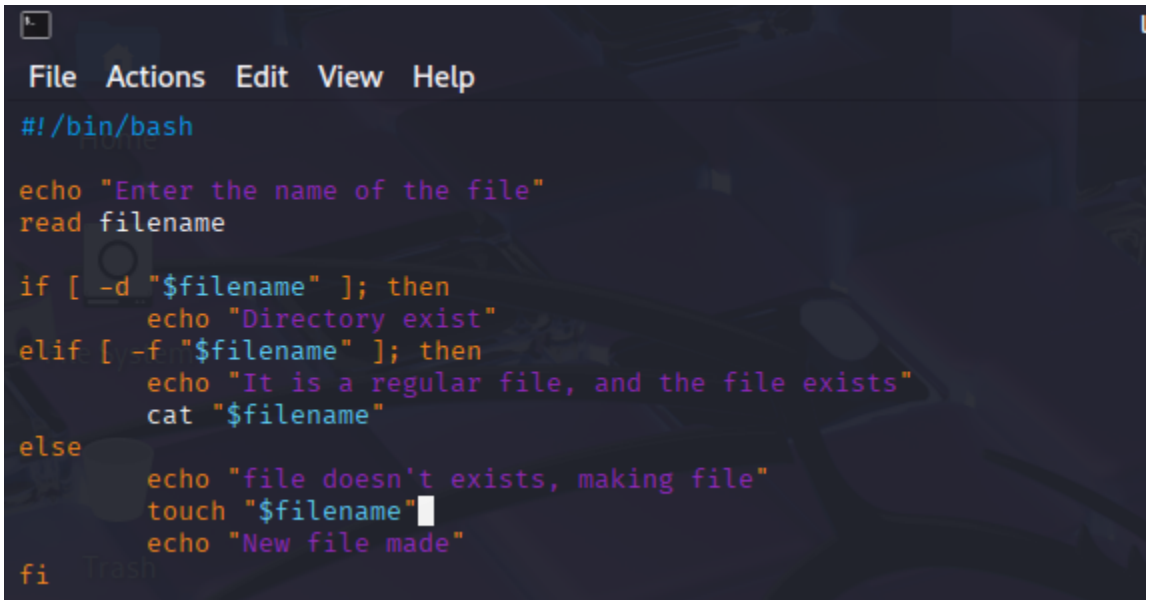
Task B (Correct script (25 points) + result/output after executing the script (25 points) - Shell Script to Create a new file

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)

```
#!/bin/bash

echo "Enter the name of the file"
read filename

if [ -d "$filename" ]; then
        echo "Directory exist"
elif [ -f "$filename" ]; then
        echo "It is a regular file, and the file exists"
        cat "$filename"
else
        echo "file doesn't exists, making file"
        touch "$filename"
        echo "Logan" > "$filename"
        echo "New file made"
        cat "$filename"
fi
```

```
┌──(lgut㉿kali)-[~]
└─$ ./logantaskb.sh
Enter the name of the file
test
file doesn't exists, making file
New file made
Logan
```

```
┌──(lgut㉿kali)-[~]
└─$ ./logantaskb.sh
Enter the name of the file
hello
It is a regular file, and the file exists
```

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

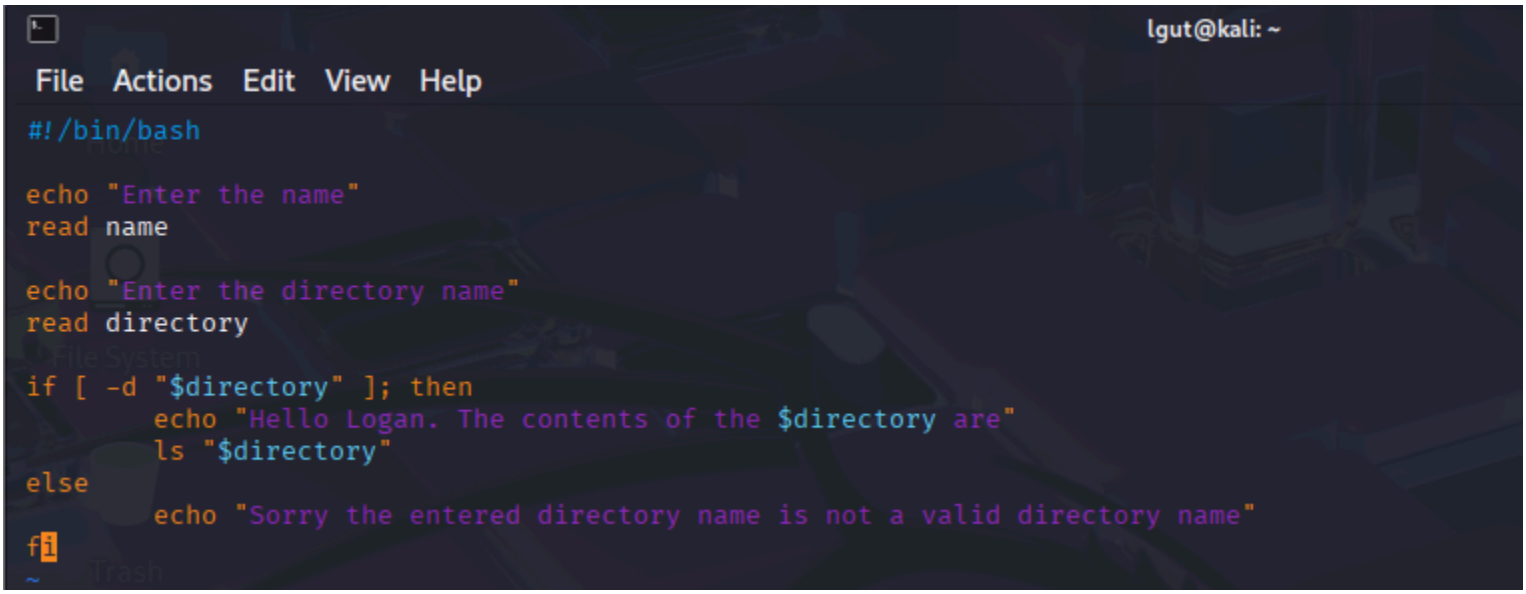
3. If the directory doesn't exist, then print an error message "Sorry, the entered directory name is not a valid directory name."

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)



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