Kowalski

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".

```
  GNU nano 7.2                                                    check_number.sh *
#!/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
```

```
prescott-kowalski@CYSE270Linux:~$ ./check_number.sh
Enter a number:
5
Input number is not greater than 10
prescott-kowalski@CYSE270Linux:~$ ./check_number.sh
Enter a number:
69
Input number is greater than 10
prescott-kowalski@CYSE270Linux:~$
```

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.

```
  GNU nano 7.2                                                          FIL
#!/bin/bash
echo "Enter name of the file or directory:"
read input

if [ -d "$input" ]; then
        echo "Directory exists"
elif [ -f "$input" ]; then
        echo "It is a regular file, and the file exists"
        cat "$input"
else
        echo "File does not exist. Creating file..."
        echo "Prescott Kowalski" > "$input"
        echo "File created with your name. Contents:"
        cat "$input"
fi
```

```
prescott-kowalski@CYSE270Linux:~$ nano file_check.sh
prescott-kowalski@CYSE270Linux:~$ ./file_check.sh
Enter name of the file or directory:
jimmy
File does not exist. Creating file...
File created with your name. Contents:
Prescott Kowalski
```

(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)

```
prescott-kowalski@CYSE270Linux:~$ nano file_check.sh
prescott-kowalski@CYSE270Linux:~$ ./file_check.sh
Enter name of the file or directory:
jimmy
File does not exist. Creating file...
File created with your name. Contents:
Prescott Kowalski
```

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

```
prescott-kowalski@CYSE270Linux:~$ ./check_directory.sh
Enter your name:
Prescott
Enter the directory name:
/home
Hello Prescott, here are the contents of /home:
prescott-kowalski
prescott-kowalski@CYSE270Linux:~$ ./check_directory.sh
Enter your name:
Prescott
Enter the directory name:
/etc/systemd
Hello Prescott, here are the contents of /etc/systemd:
journald.conf  network        oomd.conf    resolved.conf  system       system-generators  user
logind.conf    networkd.conf  pstore.conf  sleep.conf     system.conf  timesyncd.conf     user.conf
prescott-kowalski@CYSE270Linux:~$ ./check_directory.sh
Enter your name:
Prescott
Enter the directory name:
/selflearningai
Sorry, the entered directory name is not a valid directory name.
```

```bash
#!/bin/bash
echo "Enter your name:"
read name
echo "Enter the directory name:"
read dir

if [ -d "$dir" ]; then
        echo "Hello $name, here are the contents of $dir:"
        ls "$dir"
else
        echo "Sorry, the entered directory name is not a valid directory name."
fi
```