

CSC3320 System Level Programming

Lab Assignment 6 - Part 1 - In-Lab

Purpose: Learn how to correct a shell script and write more complicated shell scripts.

Part 1:

In order to finish the tasks in this lab, you must connect to snowball server to copy my checkError.sh

```
$cp /home/yye10/public/checkError.sh checkError.sh
```

In Lab 5, you may have tried the shell script **checkError.sh** in part 3. However, there are **four** errors on **four** different lines in that shell script. Please **correct** all the four errors by **writing down** the line number, the error and the correction as below:

Line #: 1, 3, 10, 21

Error:

```
(1)$#/bin/bash
(3)/ * Check Error Script */
(10)grep '[^a]*ce$' << END >> Result lance
(21)ls mail $1@student.gsu.edu < Result
```

Correction:

```
(1)$#!/bin/bash
(3)# Check Error Script
(10)grep '[^a]*ce$' << -ENDHERE >> Result lance (the word "lance" goes into line 11)
(21)mail $1@student.gsu.edu < Result
```

Note: please use **cat -n** to check the line numbers.

```

$#/bin/bash

/*  Check Error Script */

echo "Try to find out some errors!!!"

# Search for the words which can be matched by regex [^a]*ce
# And save the output to file "Result"
echo "The regex [^a]*ce can match the string(s):" > Result
grep '^[^a]*ce$' << END >> Result lance

ace
brace
decide
piece
-ENDHERE

# Check the existence of file "Result"
# Send the content in "Result" to your mailbox
# $1 is replaced by your campusID
ls      mail $1@student.gsu.edu < Result

# $1 is replaced by your campusID
echo    "The result has been sent to ${1}@student.gsu.edu"
echo    "Congratulations! You have corrected all the errors!"

```

Hints:

- *Following is a sample of the output once all the errors are corrected*

```

$ ./checkError.sh ylong4
Try to find out some errors!!!
checkError.sh Result
The result has been sent to ylong4@student.gsu.edu
Congratulations! You have corrected all the errors!

```
- *You would also receive an email sent from your snowball account once all the errors are corrected.*
- *You may need to use **CTRL-C** to terminate the execution of the command, especially for the script file with errors.*

Part 1 Screenshots:

```
[vdol10@gsuad.gsu.edu@snowball ~]$ cat -n checkError.sh
1  #!/bin/bash
2
3  # Check Error Script
4
5  echo "Try to find out some errors!!!"
6
7  # Search for the words which can be matched by regex [^a]*ce
8  # And save the output to file "Result"
9  echo "The regex [^a]*ce can match the string(s): " > Result
10 grep '^[^a]*ce$' << -ENDHERE >> Result
11 lance
12 ace
13 brace
14 decide
15 piece
16 -ENDHERE
17
18 # Check the existence of file "Result"
19 # Send the content in "Result" to your mailbox
20 # $1 is replaced by your campusID
21 mail $1@student.gsu.edu < Result
22
23 # $1 is replaced by your campusID
24 echo "The result has been sent to ${1}@student.gsu.edu"
25 echo "Congratulations! You have corrected all the errors!"
[vdol10@gsuad.gsu.edu@snowball ~]$
```

```
[vdol10@gsuad.gsu.edu@snowball ~]$ ./checkError.sh vdol10
Try to find out some errors!!!
The result has been sent to vdol10@student.gsu.edu
Congratulations! You have corrected all the errors!
[vdol10@gsuad.gsu.edu@snowball ~]$
```

```
[vdol10@gsuad.gsu.edu@snowball ~]$ cat Result
The regex [^a]*ce can match the string(s):
piece
[vdol10@gsuad.gsu.edu@snowball ~]$
```



vdo10 <vdo10@gsuad.gsu.edu>

Thu 9/30/2021 5:19 PM

To: Vivian Do

The regex [^a]*ce can match the string(s):
piece

[Reply](#)

[Forward](#)

Part 2:

Write a single shell script **hello.sh** which can finish the list of tasks as below:

1. Greet user. E.g. **Welcome to computer science society.**
2. Contain a comment section with your name, and email address.
3. Print the date.
4. Print the number of directories in **/home**.
5. Print the value of variables PATH, USER and SHELL.
6. Print your disk usage (**df**).
7. Print **Please, could you loan me \$25.00?**
8. Print **if x = 2, x * x = 4 , x / 2 = 1**
9. List all the **.sh** files with **c** at the beginning of the file name in current working directory.
10. Tell the user **Good bye** and the current hour (see manual page of **date** command refer to the webpage at <http://www.thegeekstuff.com/2013/05/date-command-examples>)

Include the content of **hello.sh** in your answer sheet. Besides, please also upload **hello.sh** as a separated file.

Upload your answer sheet to the folder named "**Lab 6_P1**" of the dropbox in the iCollege system. Name your file in the format of **Lab6_P1_FirstnameLastname.pdf/doc**

Hints:

- When printing out strings using **echo**, to escape the special meaning of the meta character, please use back slash \ before the meta-character.
- To share files between remote server and the host machine, we can use **FileZilla - A FREE FTP**. The link to download this application is <https://filezilla-project.org/download.php>

_____Part 2 Screenshots:

```
[vdol10@gsuad.gsu.edu@snowball ~]$ cat hello.sh
#!/bin/bash

# Step 1
echo "Welcome to computer science society."

# Step 2
# Name: Vivian Do - Email: vdol10@student.gsu.edu

# Step 3
echo "Date is = `date`"

# Step 4
echo */ | wc

# Step 5
echo $PATH
echo $USER
echo $SHELL

# Step 6
echo "Printing disk usage"
echo "`df`"

# Step 7
echo "Please, could you loan me "$25.00?"

# Step 8
echo "if x = 2, x*x = 4, x/2 = 1"

# Step 9
echo "`ls *.sh | grep c`"

# Step 10
echo "Good Bye"
echo "Current Hour = `date +%H`"

# End of hello.sh script
[vdol10@gsuad.gsu.edu@snowball ~]$
```

```

[vdo10@gsuad.gsu.edu@snowball ~]$ sh hello.sh
Welcome to computer science society.
Date is = Thu Sep 30 16:37:16 EDT 2021
    1      5      40
/usr/local/bin:/usr/bin:/usr/local/sbin:/usr/sbin:/home/vdo10/.local/bin:/home/vdo10/bin
vdo10@gsuad.gsu.edu
/bin/bash
Printing disk usage
Filesystem      1K-blocks      Used Available Use% Mounted on
devtmpfs         3992456         0    3992456   0% /dev
tmpfs            4004476         8    4004468   1% /dev/shm
tmpfs            4004476    414300    3590176  11% /run
tmpfs            4004476         0    4004476   0% /sys/fs/cgroup
/dev/mapper/centos-root 36678148 3549812 33128336  10% /
/dev/sdb1        131979268 52480996 72771056  42% /home
/dev/sda1        1038336    193352    844984   19% /boot
tmpfs            800896         0    800896   0% /run/user/1331014231
tmpfs            800896         0    800896   0% /run/user/332794540
tmpfs            800896         0    800896   0% /run/user/332637388
tmpfs            800896         0    800896   0% /run/user/332625070
tmpfs            800896         0    800896   0% /run/user/332742644
tmpfs            800896         0    800896   0% /run/user/332710664
tmpfs            800896         0    800896   0% /run/user/1580440810
tmpfs            800896         0    800896   0% /run/user/332723654
tmpfs            800896         0    800896   0% /run/user/1580479440
tmpfs            800896         0    800896   0% /run/user/332703377
tmpfs            800896         0    800896   0% /run/user/332641300
tmpfs            800896         0    800896   0% /run/user/332765409
tmpfs            800896         0    800896   0% /run/user/332761114
tmpfs            800896         0    800896   0% /run/user/332761402
tmpfs            800896         0    800896   0% /run/user/332724178
tmpfs            800896         0    800896   0% /run/user/332730629
tmpfs            800896         0    800896   0% /run/user/332711505
tmpfs            800896         0    800896   0% /run/user/332729326
tmpfs            800896         0    800896   0% /run/user/332751054
tmpfs            800896         0    800896   0% /run/user/332716708
tmpfs            800896         0    800896   0% /run/user/332794885
tmpfs            800896         0    800896   0% /run/user/1580588965
tmpfs            800896         0    800896   0% /run/user/332691068
tmpfs            800896         0    800896   0% /run/user/332733601
tmpfs            800896         0    800896   0% /run/user/332789895
tmpfs            800896         0    800896   0% /run/user/332778180
tmpfs            800896         0    800896   0% /run/user/332721375
tmpfs            800896         0    800896   0% /run/user/332634812
tmpfs            800896         0    800896   0% /run/user/332713197
tmpfs            800896         0    800896   0% /run/user/332751802
tmpfs            800896         0    800896   0% /run/user/1580538242
tmpfs            800896         0    800896   0% /run/user/332733500
tmpfs            800896         0    800896   0% /run/user/1580512463
tmpfs            800896         0    800896   0% /run/user/1580447811
tmpfs            800896         0    800896   0% /run/user/332716305
tmpfs            800896         0    800896   0% /run/user/332627544
tmpfs            800896         0    800896   0% /run/user/332739756

```

```
tmpfs      800896      0      800896      0% /run/user/332633032
tmpfs      800896      0      800896      0% /run/user/1580512444
tmpfs      800896      0      800896      0% /run/user/332708226
tmpfs      800896      0      800896      0% /run/user/332640214
tmpfs      800896      0      800896      0% /run/user/332673326
tmpfs      800896      0      800896      0% /run/user/332621198
tmpfs      800896      0      800896      0% /run/user/332753738
tmpfs      800896      0      800896      0% /run/user/332610608
tmpfs      800896      0      800896      0% /run/user/332769953
tmpfs      800896      0      800896      0% /run/user/332605836
tmpfs      800896      0      800896      0% /run/user/332733207
tmpfs      800896      0      800896      0% /run/user/332679073
tmpfs      800896      0      800896      0% /run/user/332712944
tmpfs      800896      0      800896      0% /run/user/1331008281
tmpfs      800896      0      800896      0% /run/user/332731781
tmpfs      800896      0      800896      0% /run/user/332702905
tmpfs      800896      0      800896      0% /run/user/332739687
tmpfs      800896      0      800896      0% /run/user/332680600
tmpfs      800896      0      800896      0% /run/user/332664111
tmpfs      800896      0      800896      0% /run/user/332714209
tmpfs      800896      0      800896      0% /run/user/1580504032
tmpfs      800896      0      800896      0% /run/user/1580592971
tmpfs      800896      0      800896      0% /run/user/1580525273
tmpfs      800896      0      800896      0% /run/user/332676935
Please, could you loan me 25.00?
if x = 2, x*x = 4, x/2 = 1
checkError.sh
Good Bye
Current Hour = 16
[vdo10@gsuad.gsu.edu@snowball ~]$
```