

# **Operating Systems Lab**

## **Fall 2024**

### **Lab Task 09:**

#### **Shell Scripting – Basics**

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## Lab Task 09

**Note:** Your all exercises should be well commented.

### Exercise 1:

Run following script. And examine output.

**01**

```
#!/bin/sh
clear
date > lab9
echo -e "lab9 file contains:"
cat < lab9
```

```
#!/bin/sh
clear
date > lab9
echo -e "lab9 file conatins:"
cat < lab9
```

```
"basic.sh" [New] 6L, 708 written
[root@localhost ~]# cat basic.sh
#!/bin/sh
clear
date > lab9
echo -e "lab9 file conatins:"
cat < lab9

[root@localhost ~]# chmod 777 basic.sh
[root@localhost ~]# ./basic.sh
```

```
lab9 file conatins:  
Sun Oct 20 03:53:30 AM UTC 2024  
[root@localhost ~]#
```

## Exercise 2:

A file contains following script. Execute this code.

**01**

```
#!/bin/sh  
clear  
x=5  
y=0  
echo "The value of X = " $x  
y=$(expr $x + 5)  
echo "The value of Y = " $y
```

```
#!/bin/sh  
clear  
x=5  
y=0  
echo "the value of x = "$x  
y=$(expr $x + 5)  
echo "the value of y =" "$y"  
  
"  
"  
"  
"
```

```
the value of x = 5
./basic.sh: line 6: 10: command not found
the value of y = 0
[root@localhost ~]#
```

### Exercise 3:

Write shell script that reads 2 integer values from user and print their sum on screen. **02**

```
#!/bin/bash
echo `expr 6 + 8`
```

```
"basic.sh" 3L, 33B written
[root@localhost ~]# chmod 777 basic.sh
[root@localhost ~]# ./basic.sh
14
[root@localhost ~]#
```

### Exercise 4:

Write shell script that takes string from user, and make folder with named with string. Folder should contain file with named timestamp. Having current time and date written on it.

02

```
#!/bin/sh
clear

echo "Enter a name for the folder: "
read folder_name # Read folder name

mkdir $folder_name # Create folder

current_time=$(date) # Store current date and time

echo $current_time > $folder_name/timestamp # Create 'timestamp' file with current time

echo "Folder $folder_name created with timestamp."
```

```
Enter a name for the folder:
testFile1
Folder testFile1 created with timestamp.

de11@DESKTOP-L0TECTG MINGW64 ~
$ vi timestamp.sh

de11@DESKTOP-L0TECTG MINGW64 ~
$ ls -l timestamp
total 1
-rw-r--r-- 1 dell 197121 29 Oct 20 04:35 timestamp

de11@DESKTOP-L0TECTG MINGW64 ~
$ ls timestamp
timestamp

de11@DESKTOP-L0TECTG MINGW64 ~
$ cat timestamp/timestamp
Sun Oct 20 04:35:49 PST 2024

de11@DESKTOP-L0TECTG MINGW64 ~
$ |
```

## Exercise 5:

Write a shell script to get the total count of the word “Linux” in all the “.txt” files and also across files present in subdirectories.

```
MINGW64/c/Users/dell
#!/bin/sh
clear

#!/bin/sh
clear

# Count occurrences of "Linux" in all .txt files, including subdirectories
count=$(grep -rno "Linux" --include="*.txt" . | wc -l)

# Output the total count
echo "Total count of 'Linux': $count"
```

```
MINGW64/c/Users/dell
grep: ./AppData/Local/ElevatedDiagnostics: Permission denied
my name is XYZ and i am Studentgrep: ./AppData/Local/Temp/msdtadmin: Permission denied
tTotal count of 'Linux': 34

dell@DESKTOP-LOTECTG MINGW64 ~
$ my name is XYZ and i am Student
```

### Exercise 6:

Write shell script that defines 2 integers and one float value like

a=5

b=7

c=5.5

Perform multiplication of integers then divide with float.

and finally print result with four decimal places. like 6.3636

you have to use pipe operator ( | ) to send variables to **bc** utility for arithmetic.

**02**

**Total Marks: 10**