Experiment 3 Bash Shell Scripting

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Program 1: Write a shell script program to display the name of the current working

directory and date

#! /bin/bash

echo -e "Working Directory: \$(pwd)\nDate: \$(date)"

```
rohit@iris:/home/shared/Files/Programing/Bash/CSL204/Experiment 3 ./q 1.sh
Working Directory: /home/shared/Files/Programing/Bash/CSL204/Experiment 3
Date: Sunday 30 May 2021 10:21:57 AM IST
rohit@iris:/home/shared/Files/Programing/Bash/CSL204/Experiment 3$

Tohit@iris:/home/shared/Files/Programing/Bash/CSL204/Experiment 3

Tohit@iris:/home/shared/Files/Programing/Bash/CSL204/Experiment 3$
```

Program 2: Write a shell script program to perform arithmetic operation on two numbers.

echo -n "Enter number 1: "
read a
echo -n "Enter number 2: "
read b
let "c = \$a+\$b"
echo "Sum = \$c"

Screen shots:

#! /bin/bash

```
rohit@iris: ~/Programir
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q_2.sh
Enter number 1: 5
Enter number 2: 6
Sum = 11
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q 2.sh
Enter number 1: 1
Enter number 2: 9
Sum = 10
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q 2.sh
Enter number 1: 1
Enter number 2: 0
Sum = 1
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q 2.sh
Enter number 1: 58
Enter number 2: 28
Sum = 86
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$
```

Program 3: Write a shell script program to pass arguments to the program and display the count of arguments and content.

```
#! /bin/bash

for var in $@

do

echo "${var}"

done
```

```
rohit@iris:/home/shared/Files/Programing/Bash/CSL204/Experiment 3$ ./q_3.sh hello there master kenobi hello there master kenobi helper master kenobi helper
```

Program 4: Write a shell script program to test whether 3 arguments are being passed to it.

```
rohit@iris:/home/shared/Files/Programing/Bash/CSL204/Experiment 3$ ./q_4.sh hello
Three Arguments are not being passed
rohit@iris:/home/shared/Files/Programing/Bash/CSL204/Experiment 3$ ./q_4.sh hello there !
Three Arguments are being passed
rohit@iris:/home/shared/Files/Programing/Bash/CSL204/Experiment 3$ ./q_4.sh hello there !
Three Arguments are being passed
rohit@iris:/home/shared/Files/Programing/Bash/CSL204/Experiment 3$ ...
```

Program 5: Write a shell script program to check whether two strings sent as command line arguments are same or not using test command.

```
rohit@iris:/home/shared/Files/Programing/Bash/CSL204/Experiment 3$ ./q_5.sh order 66
The strings are not equal
rohit@iris:/home/shared/Files/Programing/Bash/CSL204/Experiment 3$ ./q_5.sh find find
The strings are equal
rohit@iris:/home/shared/Files/Programing/Bash/CSL204/Experiment 3$ ./q_5.sh so uncivilised
The strings are not equal
rohit@iris:/home/shared/Files/Programing/Bash/CSL204/Experiment 3$ ./q_5.sh so uncivilised
The strings are not equal
rohit@iris:/home/shared/Files/Programing/Bash/CSL204/Experiment 3$ ...
```

Program 6.a Let argument be a filename. Write a shell script program to check whether the file exists or not.

```
rohit@iris:-/Programing/Bash/CSL204/Experiment 3$ ls
f1 f3 file2 op q.11.sh q.13.sh q.15.sh q.2.sh q.4.sh q.6b.sh q.7.sh q.9.sh test
f2 file1 o q.10.sh q.12.sh q.14.sh q.1s.h q.3.sh q.5.sh q.6.sh q.8.sh school.dat
rohit@iris:-/Programing/Bash/CSL204/Experiment 3$ ./q.6.sh test
File test Exists
rohit@iris:-/Programing/Bash/CSL204/Experiment 3$ ./q.6.sh not_here
File doesnt exist
rohit@iris:-/Programing/Bash/CSL204/Experiment 3$ ./
```

Program 6.b: Modify the above program to rename a filename with another name passed as argument, Also check number of parameters being passed.

```
rohit@iris:-/Programing/Bash/CSL204/Experiment 3$ ls
f1 f3 o q.10.sh q.12.sh q.14.sh q.1.sh q.3.sh q.5.sh q.6.sh q.8.sh school.dat
f2 filel op q.11.sh q.13.sh q.15.sh q.2.sh q.4.sh q.6b.sh q.7.sh q.9.sh test
rohit@iris:-/Programing/Bash/CSL204/Experiment 3$ ./q.6b.sh file2 file1
hello there
rohit@iris:-/Programing/Bash/CSL204/Experiment 3$ ./q.6b.sh file2 file1
File 'file2' doesnt exist
rohit@iris:-/Programing/Bash/CSL204/Experiment 3$ ls
f1 f3 o q.10.sh q.12.sh q.14.sh q.1.sh q.3.sh q.5.sh q.6.sh q.8.sh school.dat
f2 file2 op q.11.sh q.13.sh q.15.sh q.2.sh q.4.sh q.6b.sh q.7.sh q.9.sh test
rohit@iris:-/Programing/Bash/CSL204/Experiment 3$ ./q.6b.sh file2 file1
file2 renamed to file1
rohit@iris:-/Programing/Bash/CSL204/Experiment 3$ ls
f1 f3 o q.10.sh q.12.sh q.14.sh q.1.sh q.3.sh q.5.sh q.6.sh q.8.sh school.dat
f2 file2 renamed to file1
rohit@iris:-/Programing/Bash/CSL204/Experiment 3$ ls
f1 f3 o q.10.sh q.12.sh q.14.sh q.1.sh q.3.sh q.5.sh q.6.sh q.8.sh school.dat
f2 file1 op q.1.sh q.13.sh q.15.sh q.2.sh q.4.sh q.6b.sh q.7.sh q.9.sh test
rohit@iris:-/Programing/Bash/CSL204/Experiment 3$ ls
```

Program 7: Write a shell script program to test whether a string is present in a file or not

```
#! /bin/bash
if [ $# -lt 2 ]
then
        echo "Atleast two Argument is required"
        echo "./q 7.sh [file] [string to be searched]"
else
        if [ -f $1 ]; then
       found=$(grep $2 $1)
        if [ -n "$found" ]
        then
        echo "The string $2 exists in the file"
        else
        echo "The string $2 is not in the file"
        else
        echo "File doesnt exist"
fi
```

```
rohit@iris: ~/Programing/
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ cat test
hello this is your captain speaking.
We will be taking off from Mumbai ariport at
0700hrs and if the weather conditions are alright
we are expected to arraive at London airport
about 1200 GMT. We hope you have enjoy
the service and if you face any difficulties
our hosts will come to your assistance.
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q 7.sh test is
The string is exists in the file
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q 7.sh test and
The string and exists in the file
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q 7.sh test service
The string service exists in the file
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q 7.sh test bad
The string bad is not in the file
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q 7.sh test proper
The string proper is not in the file
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$
```

Program 8: Write a shell script program to copy content of file1 to file 2. If file2 exists then append the content of file1 to its original content.

#! /bin/bash

```
rohit@iris: ~/Programing/Bash/CSL204/Experiment 3
 rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ls
f1 f3 o q_10.sh q_12.sh q_14.sh q_1.sh q_3.sh q_5.sh q_6.sh q_8.sh school.dat f2 file1 op q_11.sh q_13.sh q_15.sh q_2.sh q_4.sh q_6b.sh q_7.sh q_9.sh test
 ohit@iris:~/Programing/Bash/CSL204/Experiment 3$ cat file1
hello there
 rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q 8.sh file
At least two arguments required ./q_8.sh file1 file2
 rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q_8.sh file1 file2
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ls
f1 f3 file2 op q_11.sh q_13.sh q_15.sh q_2.sh q_4.sh q_6b.sh q_7.sh q_9.sh f2 file1 o q_10.sh q_12.sh q_14.sh q_1.sh q_3.sh q_5.sh q_6.sh q_8.sh school.dat
                                                                                                                                            test
 rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ cat file2
 ohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q_8.sh file1 file2
 rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ cat file2
hello there
hello there
 rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q 8.sh file1 file2
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ cat file2
hello there
hello there
 rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ls
f1 f3 file2 op q_11.sh q_13.sh q_15.sh q_2.sh q_4.sh q_6b.sh q_7.sh q_9.sh f2 file1 o q_10.sh q_12.sh q_14.sh q_1.sh q_3.sh q_5.sh q_6.sh q_8.sh school.dat rohit@iris:~/Programing/Bash/CSL204/Experiment 3$
                                                                                                                                            test
```

Program 9: Write a shell script program that take first 10 lines from first file and rest 10 lines from second file and move them in a third file. The filename will be sent as command line arguments.

```
#! /bin/bash
if [ $# -It 3 ]
then
       echo "Enter three file names"
else
       echo -ne "" > $3
       let i=0
       while IFS='\n' read -r line
       do
               if [$i -eq 10]
               then
                      break
               fi
               echo $line >> "$3"
               let "i=$i+1"
       done < $1
       let i=0
       while IFS='\n' read -r line
       do
               if [$i -eq 10]
               then
                       break
               fi
               echo $line >> "$3"
               let "i=$i+1"
       done < $2
```

```
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ cat fl
Hello I am file one
and my purpose is to be an
argument for question 9
but I will continue to exist
even after my purose is served
i just need 10 lines
which will be in file 3, eventually.
A word about file 2, he is not as
civil as me, anyway here we are
line 10 of file 1
these lines are just to make
sure that only the first ten lines
get copied into file3
i pity them, their existance is
almost as futile as mine,
but we together serve a greater purpose
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ cat f2
I am file two
and why am i the second one??
I am as capable as that file1
and why did you pass me as the
second argument, you are just incorrigible.
You are as vile as that file one
I shall exist even after the command and
what are you going to do about that
I don't think you deserve
line 10 of file 2
or these lines. I won't even
give these to file three no matter what
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q 9 f1 f2 f3
bash: ./q_9: No such file or directory
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./g 9.sh f1 f2 f3
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ cat f3
Hello I am file one
and my purpose is to be an
argument for question 9
but I will continue to exist
even after my purose is served
i just need 10 lines
which will be in file 3, eventually.
A word about file 2, he is not as
civil as me, anyway here we are
line 10 of file 1
I am file two
and why am i the second one??
I am as capable as that file1
and why did you pass me as the
second argument, you are just incorrigible.
You are as vile as that file one
I shall exist even after the command and
what are you going to do about that
I don't think you deserve
line 10 of file 2
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$
```

Program 10: Write a shell script program to show number of files in the current directory beginning with a specified character.

```
rohit@iris: ~/Programing/Bash/CSL204/Experiment 3
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ls
fl f3 file2 op q_11.sh q_13.sh q_15.sh q_2.sh q_4.sh q_6b.sh q_7.sh q_9.sh f2 file1 o q_10.sh q_12.sh q_14.sh q_1.sh q_3.sh q_5.sh q_6.sh q_8.sh school.dat rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q_10.sh
                                                                                                                     test
Enter a Charecter: Enter a vaild charecter
 ohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q 10.sh
Enter a Charecter: o
Number of files starting with 'o': 2
 ohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q 10.sh
Enter a Charecter: f
Number of files starting with 'f': 5
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q_10.sh
Enter a Charecter: q
Number of files starting with 'q': 16
 ohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q_10.sh
Enter a Charecter: Q
Number of files starting with 'Q': 0
 ohit@iris:~/Programing/Bash/CSL204/Experiment 3$
```

Program 11: Write a shell script program to read a line from a file and store them into another file after converting all the vowels from first file into uppercase.

```
rohit@iris:-/Programing/Bash/CSL204/Experiment 3$ ls

fl f3 o q_10.sh q_12.sh q_14.sh q_1.sh q_3.sh q_5.sh q_6.sh q_8.sh school.dat

f2 filel op q_11.sh q_13.sh q_15.sh q_2.sh q_4.sh q_6b.sh q_7.sh q_9.sh test

rohit@iris:-/Programing/Bash/CSL204/Experiment 3$ cat file1

"It's over Anakin, I have the high ground", "You underestimate my power", "Don't try it."

rohit@iris:-/Programing/Bash/CSL204/Experiment 3$ ./q 11.sh file1 file2

rohit@iris:-/Programing/Bash/CSL204/Experiment 3$ cat file2

"It's Over Anakin, I have the high groUnd", "YOU UnderestimAtE my pOwEr", "DOn't try It."

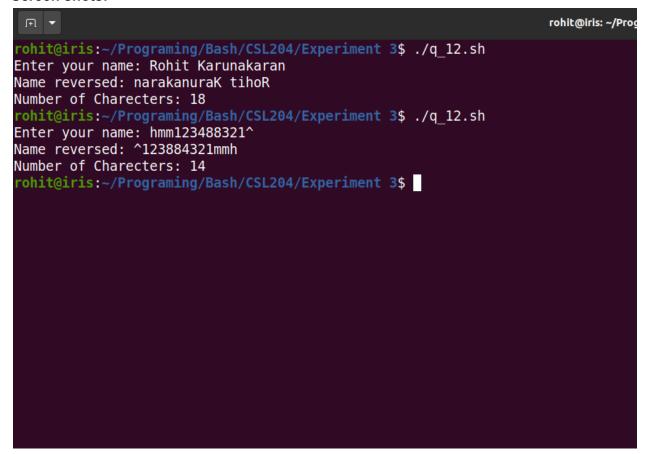
rohit@iris:-/Programing/Bash/CSL204/Experiment 3$

I end of the file of the fi
```

Program 12: Write a shell script program that accept the name of the user and prints the entire name in reverse and also print the length of the entire name

#! /bin/bash

echo -ne "Enter your name: "
read -r I
echo -ne "Name reversed: "
echo -e \$I | rev
echo -ne "Number of Charecters: "
echo -e \$I | wc -m



Program 13: Consider a file school.dat with the following fields: roll no, name and marks. Write a shell script program to sort the file in descending order of marks

#! /bin/bash

file="school.dat"

head -n 1 \$file tail -n +2 \$file| sort -s -r -nk3

```
rohit@iris: ~/Programing/Bash/CSL204/Experiment 3
 rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ls
f1 f3 file2 op q_11.sh q_13.sh q_15.sh q_2.sh q_4.sh q_6b.sh q_7.sh q_9.sh f2 file1 o q_10.sh q_12.sh q_14.sh q_1.sh q_3.sh q_5.sh q_6.sh q_8.sh school.dat rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ cat school.dat
                                                                                                                                  test
roll no
                                         marks
                 Adithya
                                          34
43
                 Ramananan
                                          39
                 Babu
                 Lolan
                                          12
10
                 George
                                          29
                                          39
11
                 Madhavan
 rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q_13.sh school.dat
                                        marks
roll no
                 name
                 Ramananan
                                          43
                                          39
                 Babu
                                          39
11
                 Madhavan
                 Adithya
                                          34
10
                                          29
                 George
                 Lolan
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$
```

Program 14: Write a shell script program to display sum of first n numbers

```
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q_14.sh
Enter a number: 10
Sum of numbers from 0 to 10 : 55
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q_14.sh
Enter a number: 5
Sum of numbers from 0 to 5 : 15
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q_14.sh
Enter a number: 8
Sum of numbers from 0 to 8 : 36
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q_14.sh
Enter a number: 100
Sum of numbers from 0 to 100 : 5050
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$
```

Program 15: Menu driven program to display the day when inputting 1 to 7

```
#! /bin/bash
echo "----Day Of The Week----"
let RUN=true
while [$RUN]
do
       echo -n "Enter a number between 1 and 7: "
       read -r n
       case $n in
       1)
       echo "Day is Monday";;
       echo "Day is Tuesday";;
       echo "Day is Wednesday";;
       echo "Day is Thursday";;
       5)
       echo "Day is Friday";;
       echo "Day is Saturday";;
       7)
       echo "Day is Sunday";;
       *)
       echo "Error: Enter a proper input" 1>&2
       esac
       echo -ne "Do you want to continue? (n to exit)"
       read ch
       if [ "$ch" = "n" ] || [ "$ch" = "N" ]; then
       exit 0
       fi
       echo ""
```

done

```
rohit@iris: ~/Programing/E
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$ ./q 15.sh
----Day Of The Week----
Enter a number between 1 and 7: 1
Day is Monday
Do you want to continue? (n to exit)y
Enter a number between 1 and 7: 4
Day is Thursday
Do you want to continue? (n to exit)
Enter a number between 1 and 7: 5
Day is Friday
Do you want to continue? (n to exit)y
Enter a number between 1 and 7: 3
Day is Wednesday
Do you want to continue? (n to exit)
Enter a number between 1 and 7: 8
Error: Enter a proper input
Do you want to continue? (n to exit)
Enter a number between 1 and 7: 7
Day is Sunday
Do you want to continue? (n to exit)y
Enter a number between 1 and 7: jf
Error: Enter a proper input
Do you want to continue? (n to exit)y
Enter a number between 1 and 7: 2
Day is Tuesday
Do you want to continue? (n to exit)n
rohit@iris:~/Programing/Bash/CSL204/Experiment 3$
```