

ASSIGNMENT-3

ADMISSION NO :: U19CS082

NAME :: SOURABH PATEL

1) Write a shell script, which finds the prime factors of a given number.

```
read -p "Enter a num: " n
flag=0
while [ `expr $n % 2` == 0 ]
do
    flag=1
    n=$((n / 2)) done
if [ $flag == 1 ]
then
    echo -n "2 "
fi
i=3
while [ `expr $i \* $i` -le $n ]
do
    while [ `expr $n % $i` == 0 ]
    do
        n=$((n / i))
        flag=1
    done
    echo -n "$i "
    i=$((i + 2)) done
if [ $n -gt 2 ]
then
    echo -n "$n"
fi
```

```
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3
3 5 7root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3# nano Q1.sh
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3# ./Q1.sh
Enter a num: 5
5
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3# ./Q1.sh
Enter a num: 888
2 3 5 37
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3#
```

- 2) Write a shell script that accepts a positive integer value from the user, say 34, and prints out all the divisors of 34 as a list:

Enter a positive integer: 34

The divisors of 34 are: 1, 2, 17, and 34

```
read -p "Enter a positive num: " n echo
"Its divisors:"
for (( i=1;i<=$n;i++ ))
do
    if [ $((n % i)) == 0 ]
    then
        echo
-n "$i "
    fi done
```

```
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3# nano Q2.sh
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3# ./Q2.sh
Enter a positive num: 56
Its divisors:
1 2 4 7 8 14 28 56
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3# ./Q2.sh
Enter a positive num: 89
Its divisors:
1 89
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3#
```

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- 3) Write a shell script, which prints good morning or good evening depending on the login time of the user.

```
time=$(date "+%H")
if [[ $time -lt 12 ]]
then
```

```

        echo "Good morning"
    elif [[ $time -lt 17 ]]
    then
        echo "Good Afternoon"
    else
        echo "Good Evening"
    fi

```



```

root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3# nano Q3.sh
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3# ./Q3.sh
Good Afternoon
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3#

```

- 4) A shell script, which takes as command line input a number n, and a word. It then print the word n times, once on each line.

```

if [ $# -lt 2 ]
then
    echo "Enter 2 arguments!"
else
    for ((i=0;i<$1;i++))
    do
        echo "$2"
    done
fi

```



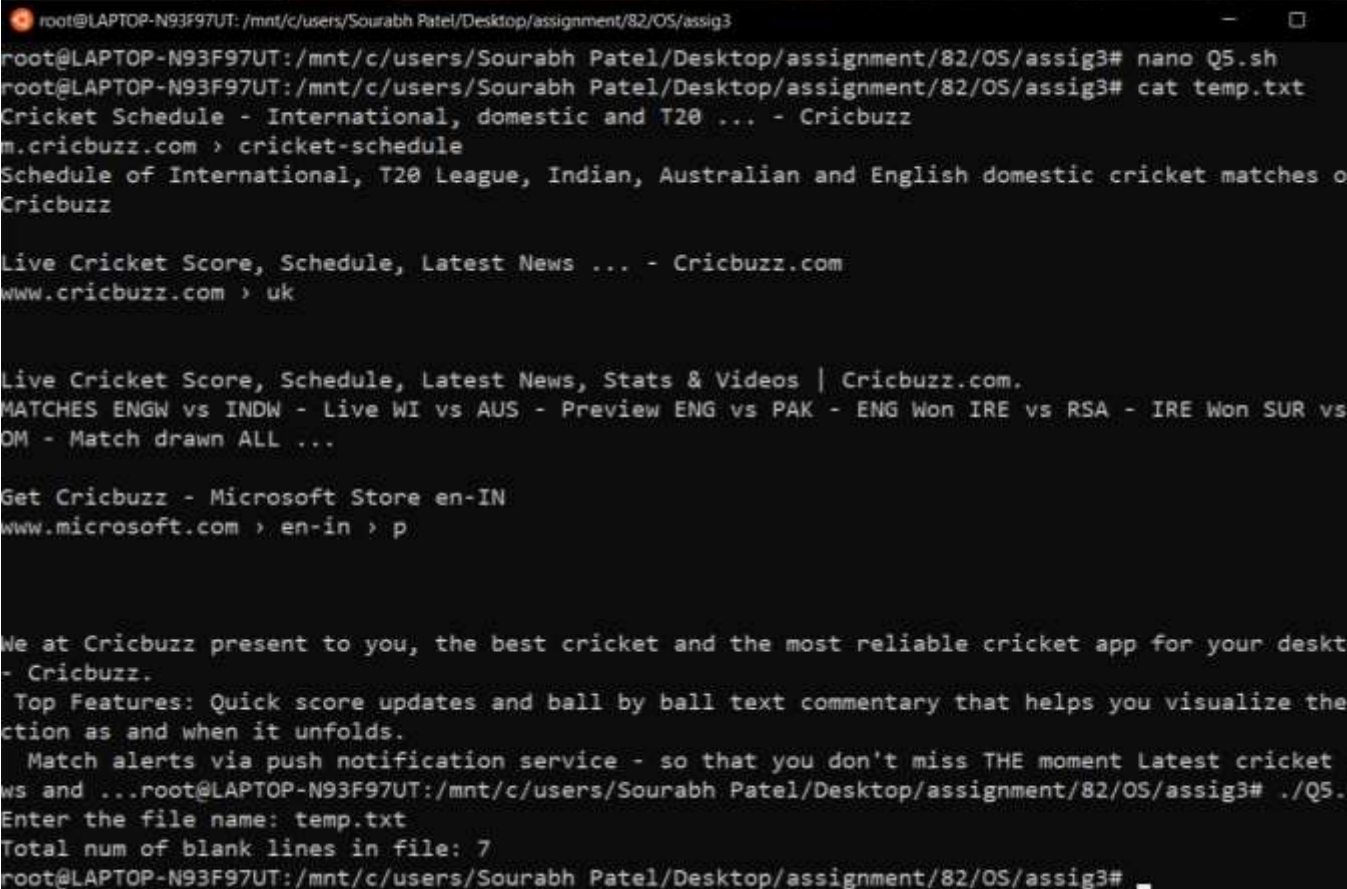
```

root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3# nano Q4.sh
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3# ./Q4.sh 10 OS
OS
OS
OS
OS
OS
OS
OS
OS
OS
OS
OS
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3#

```

- 5) Write a shell script, which finds the total number of blank lines in the given file.

```
read -p "Enter the file name: " file
if [ -e $file ]
then
    echo -n "Total num of blank lines in file: "
    grep -cvP '\S' $file
else
    echo "File does not exist"
fi
```



```
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3# nano Q5.sh
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3# cat temp.txt
Cricket Schedule - International, domestic and T20 ... - Cricbuzz
m.cricbuzz.com > cricket-schedule
Schedule of International, T20 League, Indian, Australian and English domestic cricket matches o
Cricbuzz

Live Cricket Score, Schedule, Latest News ... - Cricbuzz.com
www.cricbuzz.com > uk

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MATCHES ENGW vs INDW - Live WI vs AUS - Preview ENG vs PAK - ENG Won IRE vs RSA - IRE Won SUR vs
OM - Match drawn ALL ...

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Top Features: Quick score updates and ball by ball text commentary that helps you visualize the
ction as and when it unfolds.
Match alerts via push notification service - so that you don't miss THE moment Latest cricket
ws and ...root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3# ./Q5.
Enter the file name: temp.txt
Total num of blank lines in file: 7
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3#
```

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- 6) A shell script, which reports the names and sizes of all the files in a directory whose size exceeds 1000 bytes, in descending order of their sizes and the total number of such files.

```
read -p "Enter the directory name: " dir
if [[ -e $dir ]] then
    echo "Files greater than 1000 bytes:"
    find $dir -type f -size +1k -exec du -h {} \; | sort -rh
    echo -n "No of files: "
    find $dir -type f -size +1k -ls | wc -l
else echo "Directory does not exist"
fi
```

```
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3# nano Q
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3# ./Q6.s
Enter the directory name: ^V
Directory does not exist
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3# ./Q6.s
Enter the directory name: 82
Directory does not exist
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3# ./Q6.s
Enter the directory name: /mnt/c/users/"Sourabh Patel"/Desktop/assignment/82/OS
Directory does not exist
root@LAPTOP-N93F97UT: /mnt/c/users/Sourabh Patel/Desktop/assignment/82/OS/assig3# _
```