

## OS Lab Assignment - 16

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**Section -: C**

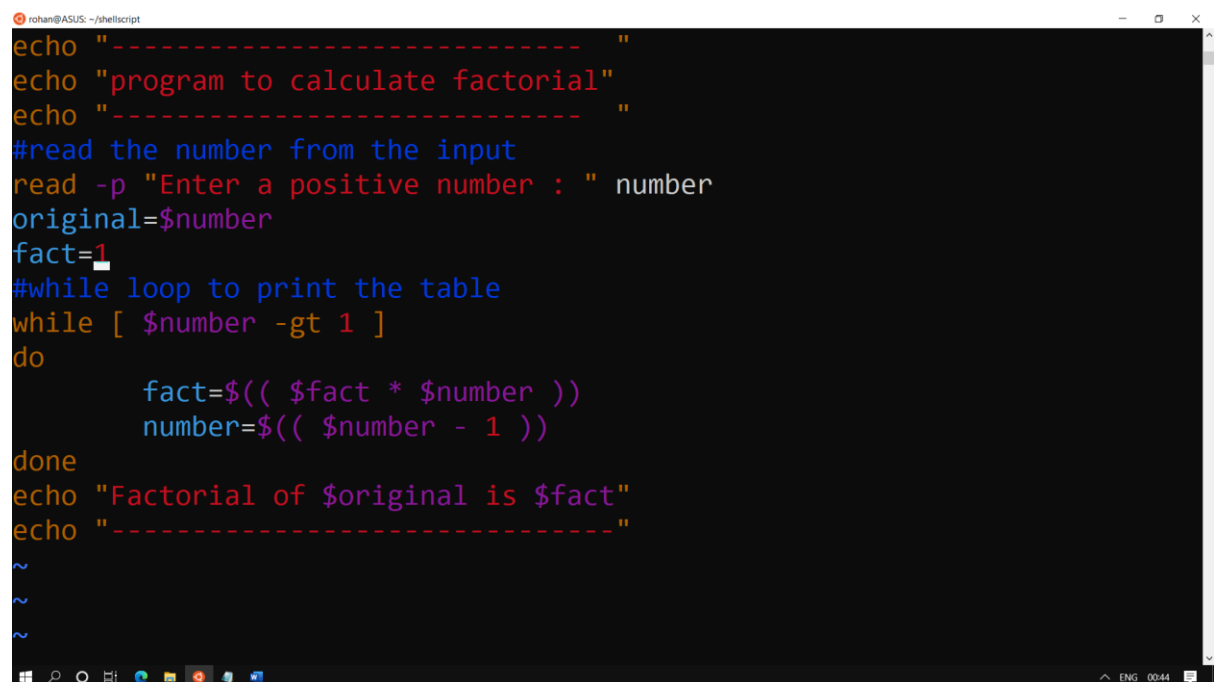
**Roll No. -: 52**

**Subject -: Operating System Lab (BCSC 0803)**

**Submitted To -: Ms. Nidhi**

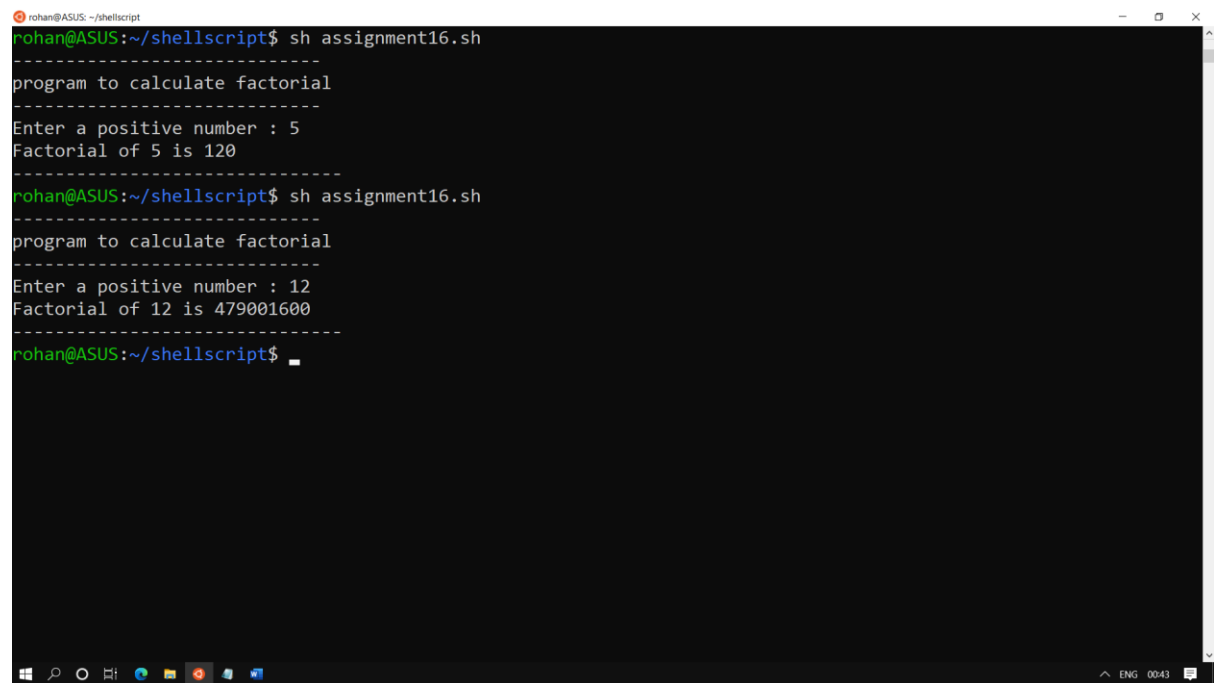
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Ques – Write a shell script to calculate the factorial of a given number

A screenshot of a terminal window with a dark background. The terminal shows a shell script for calculating the factorial of a number. The script uses echo for headers, read for input, and a while loop for the calculation. The output shows the factorial of the input number. The terminal window has a title bar with the text 'rohan@ASUS: ~/shellicript'. The Windows taskbar is visible at the bottom.

```
rohan@ASUS: ~/shellicript
echo "-----"
echo "program to calculate factorial"
echo "-----"
#read the number from the input
read -p "Enter a positive number : " number
original=$number
fact=1
#while loop to print the table
while [ $number -gt 1 ]
do
    fact=$(( $fact * $number ))
    number=$(( $number - 1 ))
done
echo "Factorial of $original is $fact"
echo "-----"
~
~
~
```

The output:--



```
rohan@ASUS: ~/shellscrip
rohan@ASUS:~/shellscrip$ sh assignment16.sh
-----
program to calculate factorial
-----
Enter a positive number : 5
Factorial of 5 is 120
-----
rohan@ASUS:~/shellscrip$ sh assignment16.sh
-----
program to calculate factorial
-----
Enter a positive number : 12
Factorial of 12 is 479001600
-----
rohan@ASUS:~/shellscrip$
```

The image shows a terminal window titled "rohan@ASUS: ~/shellscrip". The user runs the command "sh assignment16.sh". The program outputs a header "program to calculate factorial" and prompts for a positive number. In the first run, the user enters 5, and the program outputs "Factorial of 5 is 120". In the second run, the user enters 12, and the program outputs "Factorial of 12 is 479001600". The terminal window has a standard Windows taskbar at the bottom with icons for search, file explorer, and other applications. The system tray shows "ENG 00:43".