

Name: Maimoona Khilji

Program: BS-Data Science

Operating System – Lab 12 & Lab 13

1. Write bash command for “for loop”.

```
for students in Maimooona Mashhood Khurram Laiba Sana
Ghuffera Ali Hassan Uzair Owais Mujtaba Mustafa Jawad
do

    printf "%-10s %s\n" "$students" " is present"

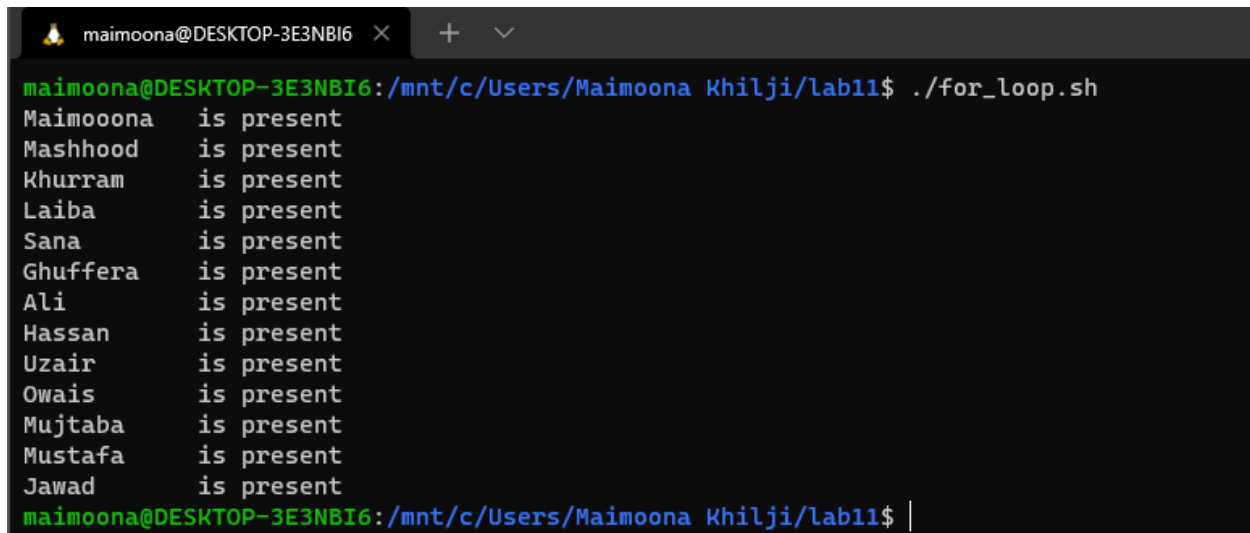
done
```



A terminal window titled 'maimoona@DESKTOP-3E3NBI6' with a dark background. It shows the following code being entered:

```
for students in Maimooona Mashhood Khurram Laiba Sana Ghuffera Ali Hassan Uzair Owais Mujtaba Mustafa Jawad
do
    printf "%-10s %s\n" "$students" " is present"
done
```

 At the bottom, it says '"for_loop.sh" 4L, 163C written' and '4,4' in the bottom right corner.



A terminal window titled 'maimoona@DESKTOP-3E3NBI6' with a dark background. It shows the command

```
maimoona@DESKTOP-3E3NBI6:/mnt/c/Users/Maimoona Khilji/lab11$ ./for_loop.sh
```

 being executed. The output is a list of names followed by 'is present':

```
Maimooona is present
Mashhood is present
Khurram is present
Laiba is present
Sana is present
Ghuffera is present
Ali is present
Hassan is present
Uzair is present
Owais is present
Mujtaba is present
Mustafa is present
Jawad is present
```

 The prompt at the bottom is

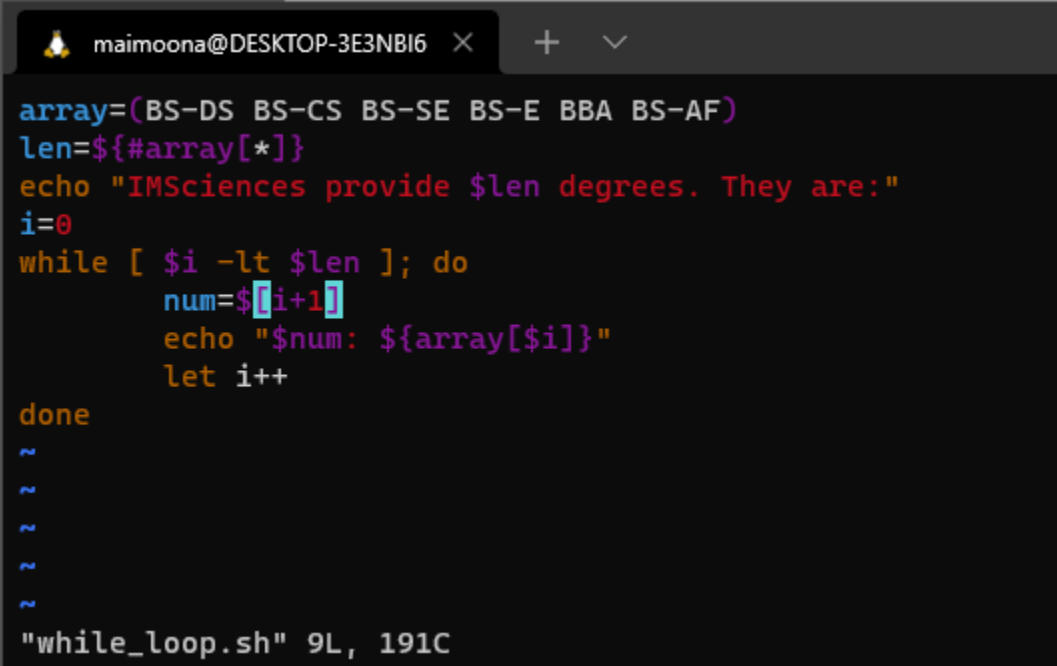
```
maimoona@DESKTOP-3E3NBI6:/mnt/c/Users/Maimoona Khilji/lab11$ |
```

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2. Write bash command for “While loop”.

```
array=(BS-DS BS-CS BS-SE BS-E BBA BS-AF)
len=${#array[*]}
echo "IMSciences provide $len degrees. They are:"
i=0
while [ $i -lt $len ];
do
    num=$((i+1))
    echo "$num: ${array[$i]}"
    let i++
done
```

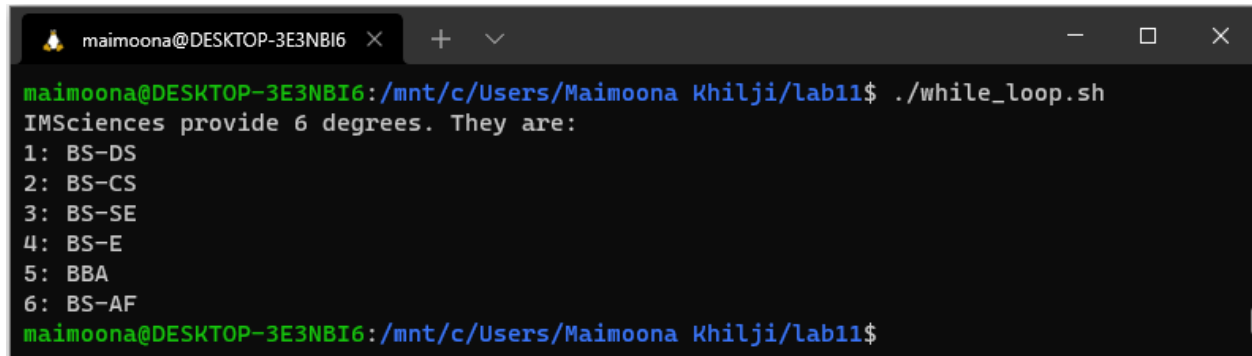


The screenshot shows a terminal window with a dark background. The title bar at the top reads "maimoona@DESKTOP-3E3NBI6" with standard window controls. The terminal displays the same bash script as the previous block, with syntax highlighting. The script defines an array of degree programs, calculates its length, and prints a message. It then enters a while loop that iterates over each element of the array, printing its index (starting from 1) and the corresponding program name. The loop terminates after five iterations, as indicated by five tilde (~) characters on separate lines. The bottom of the terminal shows the file path and line/character count: "while_loop.sh" 9L, 191C.

```
maimoona@DESKTOP-3E3NBI6 × + ▾
array=(BS-DS BS-CS BS-SE BS-E BBA BS-AF)
len=${#array[*]}
echo "IMSciences provide $len degrees. They are:"
i=0
while [ $i -lt $len ]; do
    num=$((i+1))
    echo "$num: ${array[$i]}"
    let i++
done
~
~
~
~
~
"while_loop.sh" 9L, 191C
```

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A terminal window with a dark background and light-colored text. The window title bar shows 'maimoona@DESKTOP-3E3NBI6' and standard window controls. The terminal content shows a user prompt, a command to run a script, the script's output listing six degrees, and the next user prompt.

```
maimoona@DESKTOP-3E3NBI6 /mnt/c/Users/Maimoona Khilji/lab11$ ./while_loop.sh
IMSciences provide 6 degrees. They are:
1: BS-DS
2: BS-CS
3: BS-SE
4: BS-E
5: BBA
6: BS-AF
maimoona@DESKTOP-3E3NBI6 /mnt/c/Users/Maimoona Khilji/lab11$
```
