



Lab Report

Only for course Teacher					
	Needs Improvement	Developing	Sufficient	Above Average	Total Mark
Allocate mark & Percentage	25%	50%	75%	100%	5
Clarity	1				
Content Quality	2				
Spelling & Grammar	1				
Organization and Formatting	1				
Total obtained mark					
Comments					

Semester: Spring / Fall .2023..

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Batch: 37 **Section:** D2

Course Code: SE-233 **Course Name:** Operating system & system programme

Course Teacher Name: Ishrat Sultana

Designation: Lecturer

Submission Date: 28.../11.../23...

Course Code: SE233

Course Title: Operating System & System Program

Lab Shell Scripting Problem

Problem 1. Write a script that calculates the sum of numbers from 1 to a user-defined limit using a for loop.

```
#!/bin/bash
```

```
echo -n "Enter the limit that you need: "
```

```
read n
```

```
sum=0
```

```
for ((i=1; i<=n; i++)); # using for loop
```

```
do
```

```
    ((sum+=i))
```

```
done
```

```
echo "The sum is: $sum
```

10

Output

```
Enter the limit that you need: The sum is: 55
```

```
[Execution complete with exit code 0]
```

Comment: Here I use for loop. I input the limited value n=10. As the loop start from i=1. So, sum=1+2+.....+10=55

Problem 2. Write a script that takes an array of numbers as input from the user and calculates the average of those numbers.

```
#!/bin/bash

echo "Enter numbers :"
read -a num
sum=0
for num in "${num[@]}";
do
((sum+=num))
done
avg=$((sum / ${#num[@]}))
echo "The average of those numbers is: $avg"
```

```
1 2 3 4 5
```

Output

```
Enter numbers :
The average of those numbers is: 3
[Execution complete with exit code 0]
```

Comment: I take 5 number (1,2,3,4,5) in arry.Sum=1+2+3+4+5=15

Average =15/5=3

Problem 3. Write a script that takes an array of floating-point numbers as input from the user and calculates the average with precision.

```
#!/bin/bash
```

```
echo "Enter floating-point numbers :"  
read -a f_n # input floating-point numbers referred by f_n  
sum=0  
for float_num in "${f_n[@]}"; do  
    sum=$(echo "$sum + $float_num" | bc -l)  
done  
avg=$(echo "scale=2; $sum / ${#f_n[@]}" | bc -l)  
echo "The average with precision is: $avg"
```

```
7.55 3.40
```

Output

```
Enter floating-point numbers :  
The average with precision is: 5.47
```

```
[Execution complete with exit code 0]
```

Comment: The average of my numbers=5.47. As I use “scale=2” it give 2 precision number from decimal point .If I use “scale=3” it give 3 precision number from decimal point and average=5.475

```
7.55 3.40
```

Output

```
Enter floating-point numbers :  
The average with precision is: 5.475  
[Execution complete with exit code 0]
```

Problem 4. Write a script that takes a positive integer as input from the user and uses a while loop to print all numbers from 1 to that integer, skipping the even numbers.

```
#!/bin/bash
```

```
echo -n "As your choice input a positive number : "
read n
i=1
while [ $i -le $n ];# -le is less than mean i less then my input value n
do
    if [ $((i % 2)) -ne 0 ];
    then
        echo $i
    fi
    ((i++))
done
```

```
5
```

Output

```
As your choice input a positive number : 1
3
5
```

```
[Execution complete with exit code 0]
```

Comment: I take a positive number 5. As I take i=1 so, my code take 1 to 5 .After skippin the even number from 1 to 5 it give the output 1,3,5(skipping 2&4)

Problem 5. Write a script that defines a function to greet the user by printing a personalized message. The script should take the user's name as input and use the function to greet the user.

```
#!/bin/bash

greet_user() {

    echo "Hi, $1! Welcome to my programme!"

}
```

```
echo -n "Input the name: "
read username
greet_user "$username"
```

```
Md Rufsan Jani Shanto
```

Output

```
Input the name: Hi, Md Rufsan Jani Shanto! Welcome to my programme!
[Execution complete with exit code 0]
```

Comment: I make a function → greet user ()

After input my name here call the function **greet user "\$username"** & Give output.