

LAB REPORT - 1

Topic: Shell Programs

Course Name: Sessional Based on CSE 3201 (Operating System)

Course No: CSE 3202

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Problems:

1. Take 2 user input numbers and do the operations: Addition, Subtraction, Multiplication, Division.

Code:

```
erabaka@DESKTOP-P020L95: /mnt/y/os2
GNU nano 4.8
#!/bin/bash
read -p "Enter a: " a
read -p "Enter b: " b
echo "Addition:" $((a+b))
echo "Subtraction:" $((a-b))
echo "Multiplication:" $((a*b))
echo "Division:" $((a/b))
echo "Mod:" $((a%b))
```

Output:

```
erabaka@DESKTOP-P020L95: /mnt/y/os2
erabaka@DESKTOP-P020L95:/mnt/y/os2$ ./p1.sh
Enter a: 2
Enter b: 4
Addition: 6
Subtraction: -2
Multiplication: 8
Division: 0
Mod: 2
erabaka@DESKTOP-P020L95:/mnt/y/os2$
```

2. Take a user input number and check if it is odd or even.

Code:

```
erabaka@DESKTOP-P020L95: /mnt/y/os2
GNU nano 4.8
#!/bin/bash

read -p "Enter Number: " a
check=$((a%2))
if [ $check -eq 0 ]
then
    echo $a is even
else
    echo $a is odd
fi
```

Output:

```
erabaka@DESKTOP-P020L95: /mnt/y/os2
erabaka@DESKTOP-P020L95:/mnt/y/os2$ ./p2.sh
Enter Number: 7
7 is odd
erabaka@DESKTOP-P020L95:/mnt/y/os2$ ./p2.sh
Enter Number: 4
4 is even
erabaka@DESKTOP-P020L95:/mnt/y/os2$
```

3. Take an array and store the primes from 1-100

Code:

```
erabaka@DESKTOP-P020L95: /mnt/y/os2
GNU nano 4.8 p3.sh
#!/bin/bash
y=1
count=0

for ((y=2;y<=100;y++))
do
    flag=0
    for ((i=2;i<=y-1;i++))
    do
        if [ $((y%i)) -eq 0 ]
        then
            flag=1
            break
        fi
    done
    if [ $flag -eq 0 ]
    then
        x=0
        arr[x]=$y
        ((x++))
        echo $y is prime
        ((count++))
    fi
done
echo Total prime numbers from 1 - 100 is $count
echo ${arr[@]}
```

Output:

```
erabaka@DESKTOP-P020L95: /mnt/y/os2
erabaka@DESKTOP-P020L95: /mnt/y/os2$ ./p3.sh
2 is prime
3 is prime
5 is prime
7 is prime
11 is prime
13 is prime
17 is prime
19 is prime
23 is prime
29 is prime
31 is prime
37 is prime
41 is prime
43 is prime
47 is prime
53 is prime
59 is prime
61 is prime
67 is prime
71 is prime
73 is prime
79 is prime
83 is prime
89 is prime
97 is prime
Total prime numbers from 1 - 100 is 25
```

Discussion: The solve was done as per dictated. Also, the results were accurate