



# **NOTRE DAME UNIVERSITY**

## **BANGLADESH**

### **CSE-3206 Lab Report-03**

**Course Title: Operating System Lab**

**Course Code: CSE-3206**

**Submitted by:**

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**Batch: CSE-20**

**Submission Date: 27-02-25**

**Lab Task Topic : Solve Shell Programming problems.**

**Submitted to:**

**Khorshed Alam**

**Lecturer, NDUB**

## **Problem No. 01:**

**By using *if-else* find the largest number among 3 numbers.**

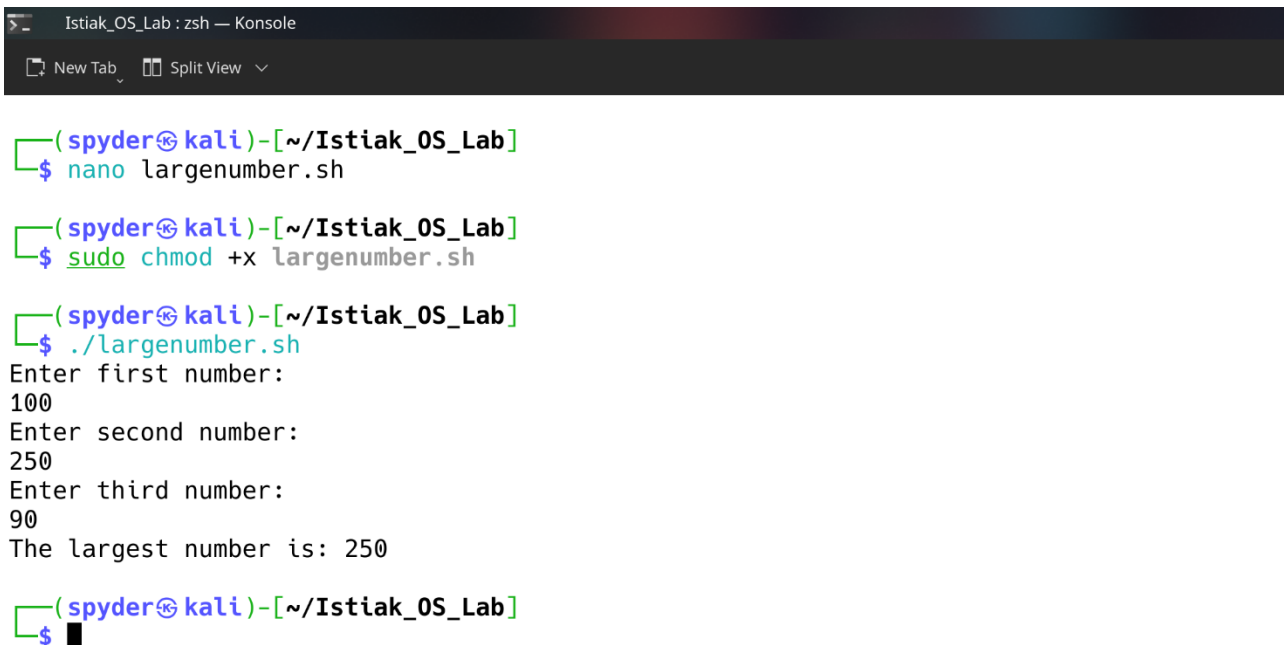
### **Code :**

```
#!/bin/bash

echo "Enter first number: "
read num1
echo "Enter second number: "
read num2
echo "Enter third number: "
read num3

if [ $num1 -ge $num2 ] && [ $num1 -ge $num3 ]; then
    echo "The largest number is: $num1"
elif [ $num2 -ge $num1 ] && [ $num2 -ge $num3 ]; then
    echo "The largest number is: $num2"
else
    echo "The largest number is: $num3"
fi
```

### **Input / Output :**



```
Istiak_OS_Lab : zsh — Konsole
New Tab Split View

(spyder@kali)-[~/Istiak_OS_Lab]
$ nano largenumber.sh

(spyder@kali)-[~/Istiak_OS_Lab]
$ sudo chmod +x largenumber.sh

(spyder@kali)-[~/Istiak_OS_Lab]
$ ./largenumber.sh
Enter first number:
100
Enter second number:
250
Enter third number:
90
The largest number is: 250

(spyder@kali)-[~/Istiak_OS_Lab]
$
```

Figure-1 largest number using if-else

## **Problem No. 02:**

**By using *if-else* find the smallest number among 3 numbers.**

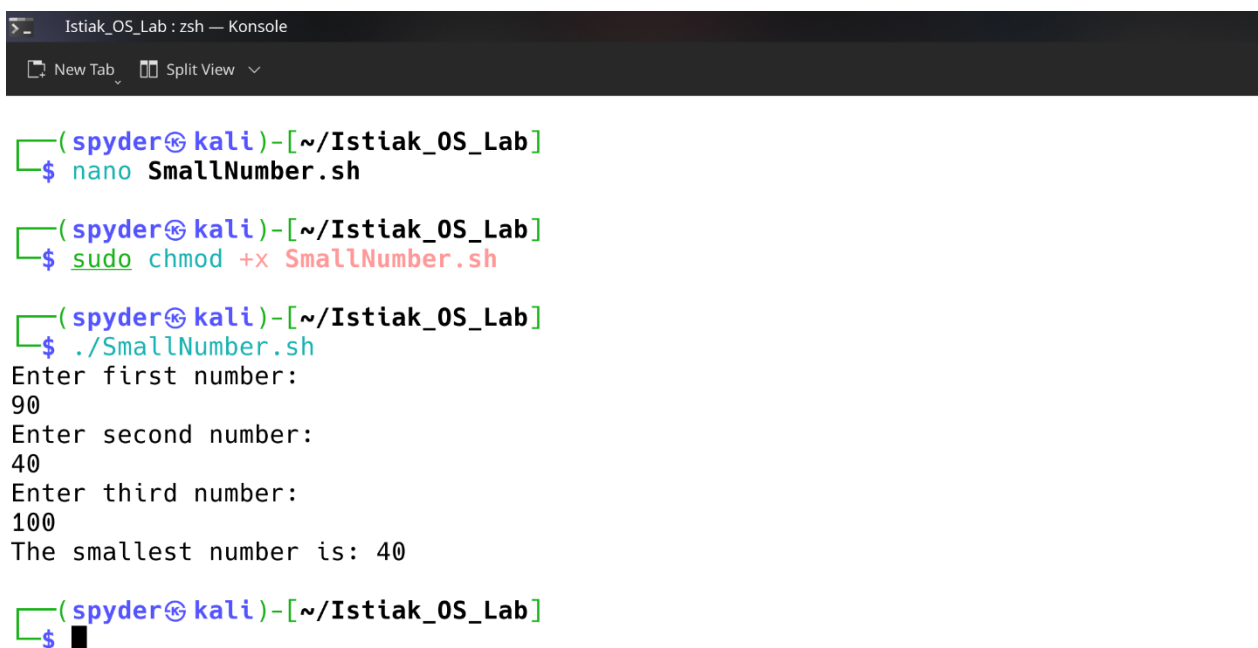
### **Code :**

```
#!/bin/bash

echo "Enter first number: "
read num1
echo "Enter second number: "
read num2
echo "Enter third number: "
read num3

if [ $num1 -le $num2 ] && [ $num1 -le $num3 ]; then
    echo "The smallest number is: $num1"
elif [ $num2 -le $num1 ] && [ $num2 -le $num3 ]; then
    echo "The smallest number is: $num2"
else
    echo "The smallest number is: $num3"
fi
```

### **Input / Output :**



```
Istiak_OS_Lab : zsh — Konsole
New Tab Split View

(spyder@kali)-[~/Istiak_OS_Lab]
$ nano SmallNumber.sh

(spyder@kali)-[~/Istiak_OS_Lab]
$ sudo chmod +x SmallNumber.sh

(spyder@kali)-[~/Istiak_OS_Lab]
$ ./SmallNumber.sh
Enter first number:
90
Enter second number:
40
Enter third number:
100
The smallest number is: 40

(spyder@kali)-[~/Istiak_OS_Lab]
$
```

Figure-2 Smallest number using if-else

## **Problem No. 03:**

**By using *for-loop* find the largest number among 3 numbers.**

### **Code :**

```
#!/bin/bash

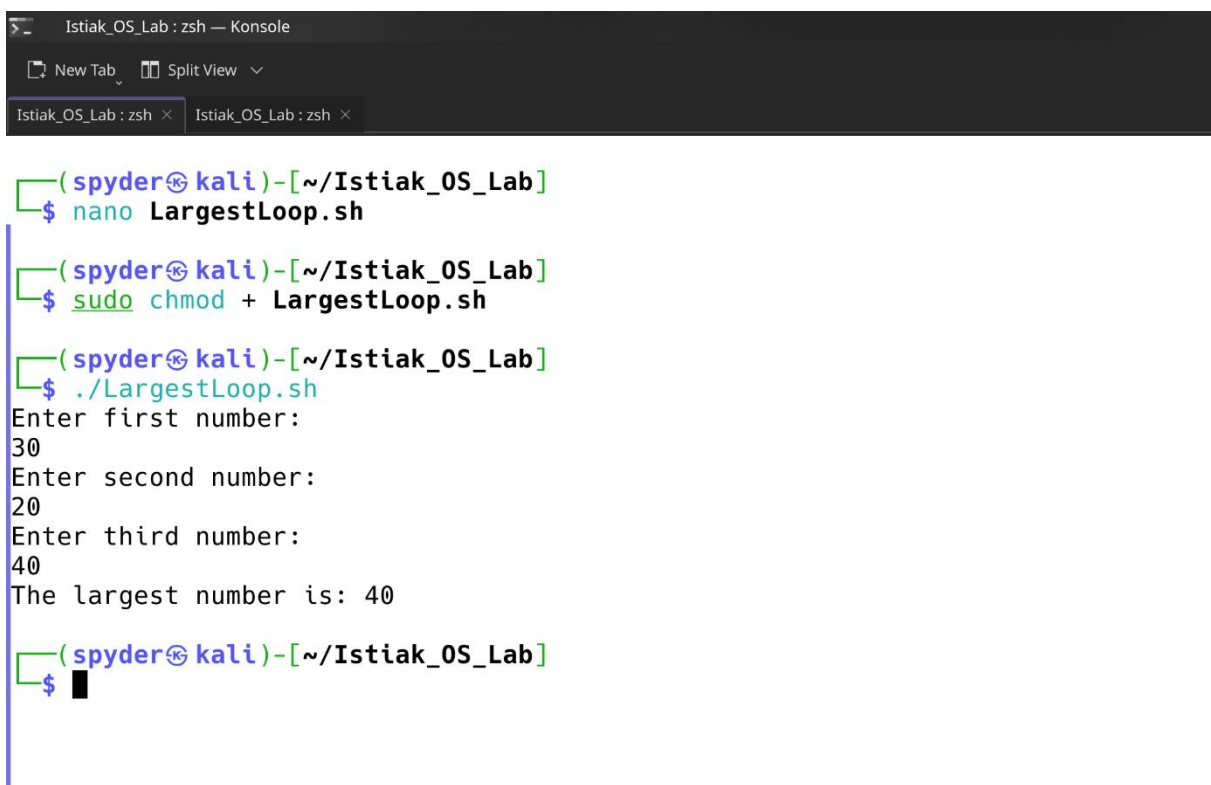
echo "Enter first number:"
read num1
echo "Enter second number:"
read num2
echo "Enter third number:"
read num3

largest=num1

for num in $num2 $num3
do
    if [ "$num" -gt "$largest" ]; then
        largest=$num
    fi
done

echo "The largest number is: $largest"
```

### **Input / Output :**



The screenshot shows a terminal window titled 'Istiak\_OS\_Lab : zsh — Konsole'. It displays the execution of a script named 'LargestLoop.sh'. The user enters three numbers: 30, 20, and 40. The script outputs 'The largest number is: 40'.

```
(spyder@kali)-[~/Istiak_OS_Lab]
$ nano LargestLoop.sh

(spyder@kali)-[~/Istiak_OS_Lab]
$ sudo chmod +x LargestLoop.sh

(spyder@kali)-[~/Istiak_OS_Lab]
$ ./LargestLoop.sh
Enter first number:
30
Enter second number:
20
Enter third number:
40
The largest number is: 40

(spyder@kali)-[~/Istiak_OS_Lab]
$
```

Figure-3 Largest number using for-loop

## **Problem No. 04:**

**By using *for-loop* find the smallest number among 3 numbers.**

### **Code :**

```
#!/bin/bash

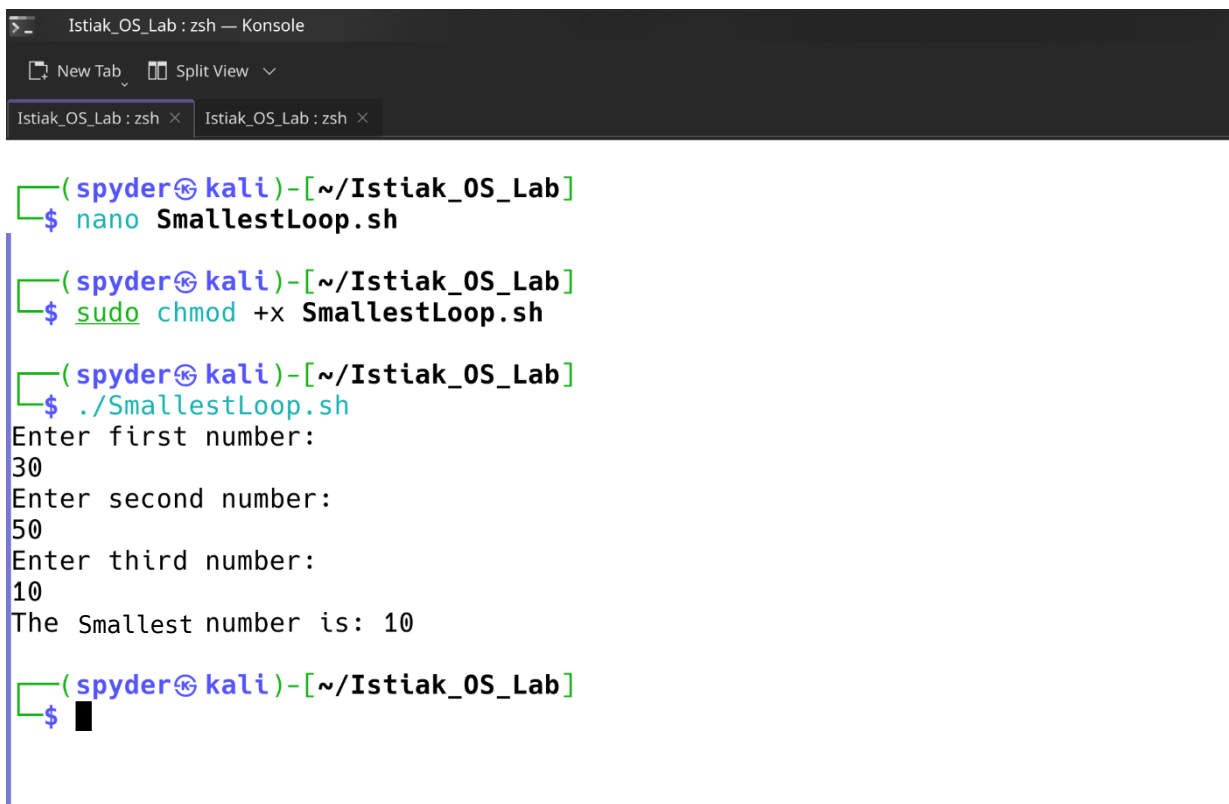
echo "Enter first number:"
read num1
echo "Enter second number:"
read num2
echo "Enter third number:"
read num3

smallest=$num1

for num in $num2 $num3
do
    if [ "$num" -lt "$smallest" ]; then
        smallest=$num
    fi
done

echo "The smallest number is: $smallest"
```

### **Input / Output :**



```
Istiak_OS_Lab : zsh — Konsole
New Tab Split View
Istiak_OS_Lab : zsh × Istiak_OS_Lab : zsh ×

(spyder@kali)-[~/Istiak_OS_Lab]
$ nano SmallestLoop.sh

(spyder@kali)-[~/Istiak_OS_Lab]
$ sudo chmod +x SmallestLoop.sh

(spyder@kali)-[~/Istiak_OS_Lab]
$ ./SmallestLoop.sh
Enter first number:
30
Enter second number:
50
Enter third number:
10
The Smallest number is: 10

(spyder@kali)-[~/Istiak_OS_Lab]
$ █
```

Figure-4 Smallest number using for-loop