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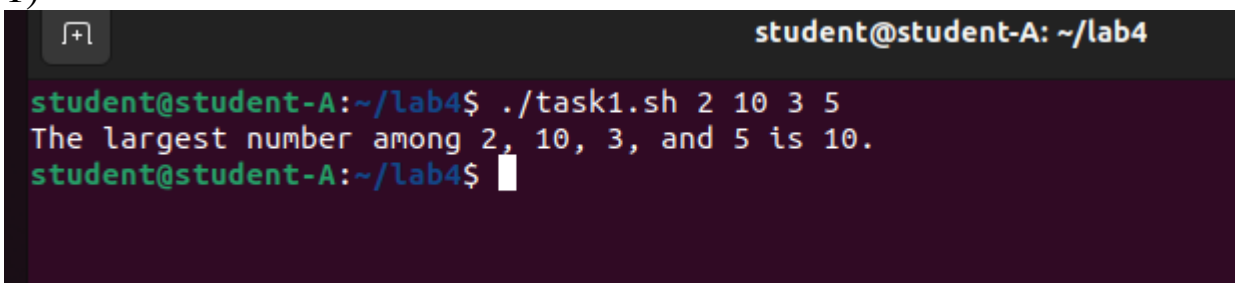
OS Lab Task 4

1)




```
#!/bin/bash

num1=$1
num2=$2
num3=$3
num4=$4
max=$num1

printmax() {
   printf "The largest number among $num1, $num2, $num3, and $num4 is $max.\n"
}

if [[ $num1 -gt $num2 ]]; then
   if [[ $num1 -gt $num3 ]]; then
      if [[ $num1 -gt $num4 ]]; then
         max=$num1
      else
         max=$num4
      fi
   else
      max=$num3
   fi
else
   if [[ $num2 -gt $num3 ]]; then
      if [[ $num2 -gt $num4 ]]; then
         max=$num2
      else
         max=$num4
      fi
   else
      max=$num3
   fi
fi

printmax
```

2)

```
student@student-A:~/lab4$ touch file.txt
student@student-A:~/lab4$ printf "Hello, this is a dummy file.\nThis has a couple of lines in it." >
file.txt
student@student-A:~/lab4$ ./task2.sh file.txt
File exists!
Lines: 1
Characters: 62
student@student-A:~/lab4$
```

```
#!/bin/bash

fname=$1

if [[ -e "$fname" ]]; then
    printf "File exists!\n"
    printf "Lines: "
    wc -l < "$fname"
    printf "Characters: "
    wc -m < "$fname"
else
    printf "The file is missing or cannot be read!\n"
fi
```

3)

```
student@student-A:~/lab4$ ./task3.sh .
Dir exists!
'./a folder/'
Number of sub-dirs: 1
student@student-A:~/lab4$ ls -1
'a folder'
file.txt
'report_09:25:48 و PKT 2026 فروری 13 تtxt'
task1.sh
task2.sh
task3.sh
task4.sh
task5.sh
student@student-A:~/lab4$
```

```
#!/bin/bash

dname=$1

if [[ -d "$dname" ]]; then
    printf "Dir exists!\n"
    ls -1d $dname/*/
    printf "Number of sub-dirs: "
    ls -1d $dname/*/ | wc -l
else
    printf "Directory doesn't exist!\n"
fi
```

4)

```
student@student-A:~/lab4$ ./task4.sh
Enter a number: 0
The number 0 is zero.
student@student-A:~/lab4$ ./task4.sh
Enter a number: 10
The number 10 is positive.
student@student-A:~/lab4$ ./task4.sh
Enter a number: -23
The number -23 is negative.
student@student-A:~/lab4$
```

```
#!/bin/bash

printf "Enter a number: "
read num

if [[ $num -gt 0 ]]; then
    printf "The number $num is positive.\n"
elif [[ $num -lt 0 ]]; then
        printf "The number $num is negative.\n"
elif [[ $num -eq 0 ]]; then
    printf "The number $num is zero.\n"
else
    printf "Invalid value entered!"
fi
```

5)

```
student@student-A:~/lab4$ ./task5.sh
Enter a dir path: .
Number of files/dirs in '.': 8
'a folder'
file.txt
'report_09:25:48 و PKT 2026 فروری 13 تtxt'
task1.sh
task2.sh
task3.sh
task4.sh
task5.sh
Report Generated! Contents:
.
09:43:20 و PKT 2026 فروری 13 ت
8
student@student-A:~/lab4$
```

```
#!/bin/bash

printf "Enter a dir path: "
read dname

if [ -d "$dname" ]; then
    printf "Number of files/dirs in '$dname': "
    ls -1 "$dname/" | wc -l
    num=$(ls -1 "$dname/" | wc -l)
    ls -1 "$dname/"

    d=$(date)
    echo $dname > "report_$d.txt"
```

```
    echo $d >> "report_$d.txt"
    echo $num >> "report_$d.txt"
    printf "Report Generated! Contents: "
    printf "\n"
    cat "report_$d.txt"
else
    printf "Directory '$dname' does not exist.\n"
fi
```