



## **Lab 10 Tasks**

### **Operating System**

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**Batch:** BSCS-5<sup>th</sup> semester

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## Lab Tasks:

### Exercise 1:

Put this code in a file and executes with two arguments.

```
echo "The following is the output of $0 script:"  
echo "The total number of command line argument:$#"   
echo "The first parameter:$1"  
echo "The second parameter:$2"
```

```
#!/bin/bash  
echo "The following is the output of $0 script:"  
echo "The total number of command line argument:$#"   
echo "The first parameter is:$1"  
echo "The Second parameter is:$2"
```

```
"Task.sh" [New] 6L, 181B written  
[root@localhost ~]# chmod 777 Task.sh
```

```
[root@localhost ~]# ./Task.sh argument1 argument2  
The following is the output of ./Task.sh script:  
The total number of command line argument:2  
The first parameter is:argument1  
The Second parameter is:argument2  
[root@localhost ~]#
```

### Exercise 2:

Write a program to take value from user between 1 to 5.and display result like this:

1. ...you pressed 1
  2. ...you pressed 2
- Above 5....invalid

```
#!/bin/bash
echo "Please enter a number between 1and 5:"
read number
case $number in
1) echo "...you pressed 1";;
2) echo "...you pressed 2";;
3) echo "...you pressed 3";;
4) echo "...you pressed 4";;
5) echo "...you pressed 5";;
*) echo "Above 5... invalid";;
esac
```

```
"Task2.sh" [New] 11L, 266B written
[root@localhost ~]# chmod 777 Task2.sh
[root@localhost ~]# ./Task2.sh
Please enter a number between 1and 5:
6
Above 5... invalid
```

### Exercise 3:

There are three semesters in an academic year i.e. Fall (Aug-Jan), Spring (Feb-May) and Summer (Jun-July). Write a script which read current month from the user and determine running semester. For example if user enters current month either 1 or January or Jan the script should display "Fall Semester".

```
#!/bin/bash
echo "Please Enter the current month (e.g 1, January, Jan):"
read month
#conver input to lowercase for easy matching
month=$(echo "$month" | tr '[:upper:]' '[:lower:]')
case $month in
1|jan|january|8|aug|august|9|sep|september|10|oct|october|11|nov|november|12|dec|december)
echo "Fall Semester";;
2|feb|february|3|mar|march|4|apr|april|5|may)
echo "Spring Semester";;
6|jun|june|7|jul|july)
echo "Summer Semester";;
*) echo "Invalid Output. Please Enter a Valid month";;
esac
```

```

"semester.sh" [New] 14L, 490B written
[root@localhost ~]# chmod 777 semester.sh
[root@localhost ~]# ./semester.sh
Please Enter the current month (e.g 1, January, Jan):
oct
Fall Semester

```

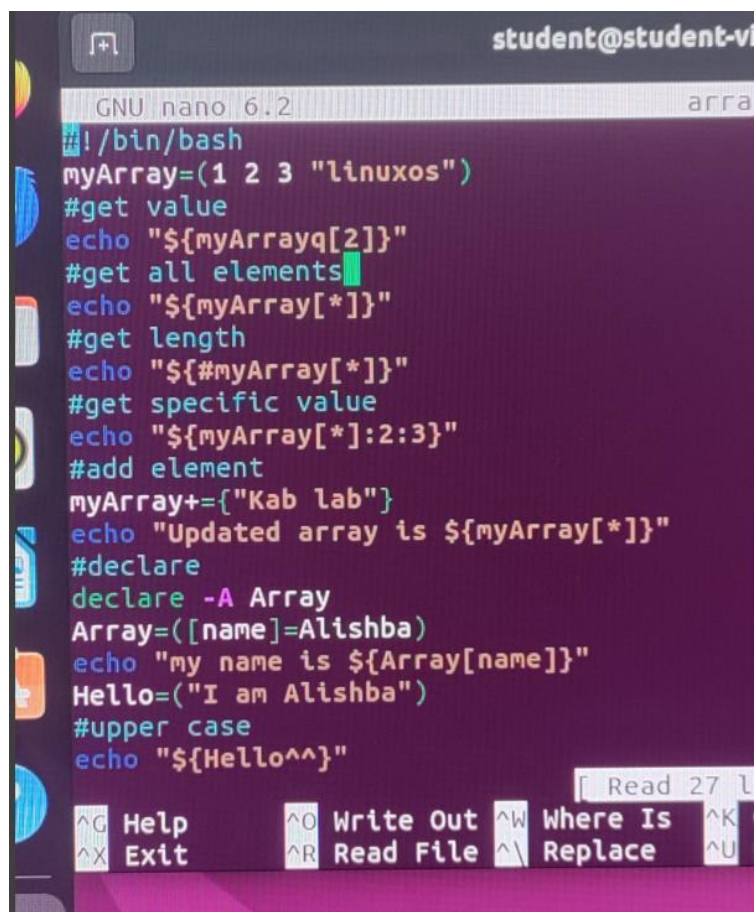
#### Exercise 4:

Write a program in shell scripting and attached screenshots with explanations

1. Perform array and string code in shell scripting
2. Perform If Else code in Shell Scripting
3. Perform Case related code in shell scripting

Hhhhh

#### Array Code/ String :



```

student@student-vi
GNU nano 6.2 array
#!/bin/bash
myArray=(1 2 3 "linuxos")
#get value
echo "${myArrayq[2]}"
#get all elements
echo "${myArray[*]}"
#get length
echo "${#myArray[*]}"
#get specific value
echo "${myArray[*]:2:3}"
#add element
myArray+=("Kab lab")
echo "Updated array is ${myArray[*]}"
#declare
declare -A Array
Array=(name=Alishba)
echo "my name is ${Array[name]}"
Hello=("I am Alishba")
#upper case
echo "${Hello^^}"

```

Read 27 L

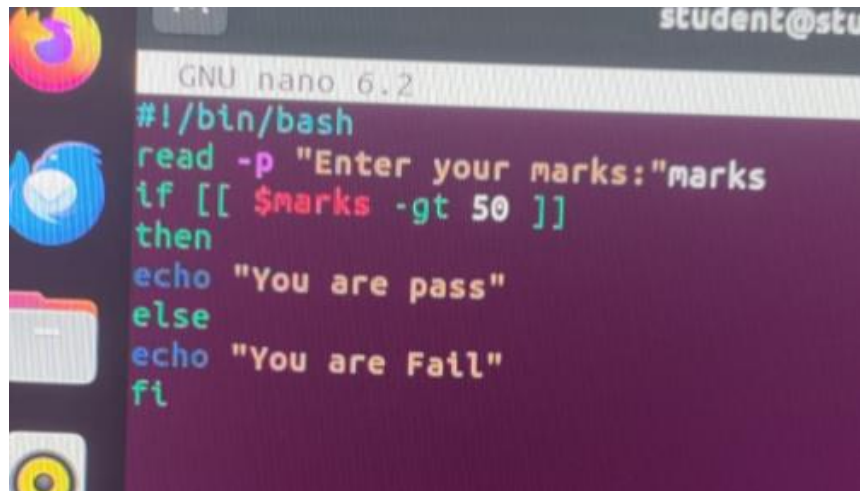
Help Write Out Where Is  
Exit Read File Replace

```
student@student-  
GNU nano 6.2  
#get specific value  
echo "${myArray[*]:2:3}"  
#add element  
myArray+=("Kab lab")  
echo "Updated array is ${myArray[*]}"  
#declare  
declare -A Array  
Array=( [name]=Alishba )  
echo "my name is ${Array[name]}"  
Hello=("I am Alishba")  
#upper case  
echo "${Hello^^}"  
#lower case  
echo "${Hello,,}"  
#replace  
echo "${Hello/Alishba/Laiba}"
```

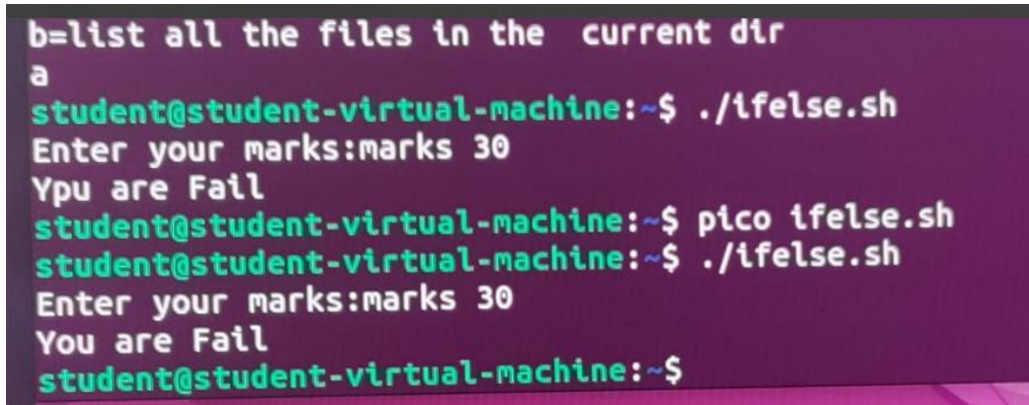
```
student@student-virtual-machine: ~  
student@student-virtual-machine:~$ ./array.sh  
1 2 3 linuxos  
4  
3 linuxos  
Updated array is 1{Kab lab} 2 3 linuxos  
my name is Alishba  
I AM ALISHBA  
i am alishba  
I am Laiba  
student@student-virtual-machine:~$
```

**IF-ELSE-Code**



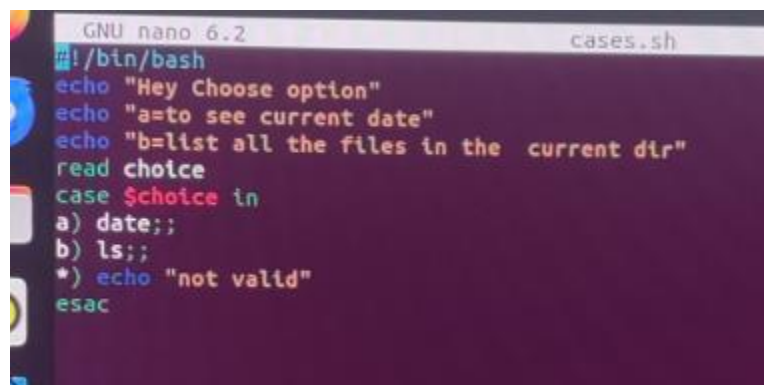
A screenshot of a terminal window with a dark purple background. On the left, there are icons for Firefox, a mail client, a file manager, and a music player. The terminal title bar shows 'GNU nano 6.2' and 'student@stu'. The script content is as follows:

```
#!/bin/bash
read -p "Enter your marks:"marks
if [[ $marks -gt 50 ]]
then
echo "You are pass"
else
echo "You are Fail"
fi
```

A screenshot of a terminal window showing the execution of a script. The prompt is 'student@student-virtual-machine:~\$'. The user enters './ifelse.sh', followed by 'Enter your marks:marks 30', and the output 'Ypu are Fail'. Then, the user enters 'pico ifelse.sh', followed by './ifelse.sh', followed by 'Enter your marks:marks 30', and the output 'You are Fail'. The prompt returns to '~\$'.

```
b=list all the files in the  current dir
a
student@student-virtual-machine:~$ ./ifelse.sh
Enter your marks:marks 30
Ypu are Fail
student@student-virtual-machine:~$ pico ifelse.sh
student@student-virtual-machine:~$ ./ifelse.sh
Enter your marks:marks 30
You are Fail
student@student-virtual-machine:~$
```

## Cases:

A screenshot of a terminal window with a dark purple background. On the left, there are icons for Firefox, a mail client, a file manager, and a music player. The terminal title bar shows 'GNU nano 6.2' and 'cases.sh'. The script content is as follows:

```
#!/bin/bash
echo "Hey Choose option"
echo "a=to see current date"
echo "b=list all the files in the  current dir"
read choice
case $choice in
a) date;;
b) ls;;
*) echo "not valid"
esac
```

```
student@student-virtual-machine:~$ pico cases.sh
student@student-virtual-machine:~$ ./cases.sh
Hey Choose option
a=to see current date
b=list all the files in the current dir
a
10:09:35 و PKT 2024 اكتوبر 22
student@student-virtual-machine:~$
```