

Lab Tasks

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BSCS SEMESTER – 5

RIPHAH INTERNATIONAL UNIVERSITY

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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"
```

Solution:

```
#!/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

Solution:

```
#!/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".

Solution:

```
#!/bin/bash
echo "Please Enter the current month (e.g 1, January, Jan):"
read month
#convert 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
```

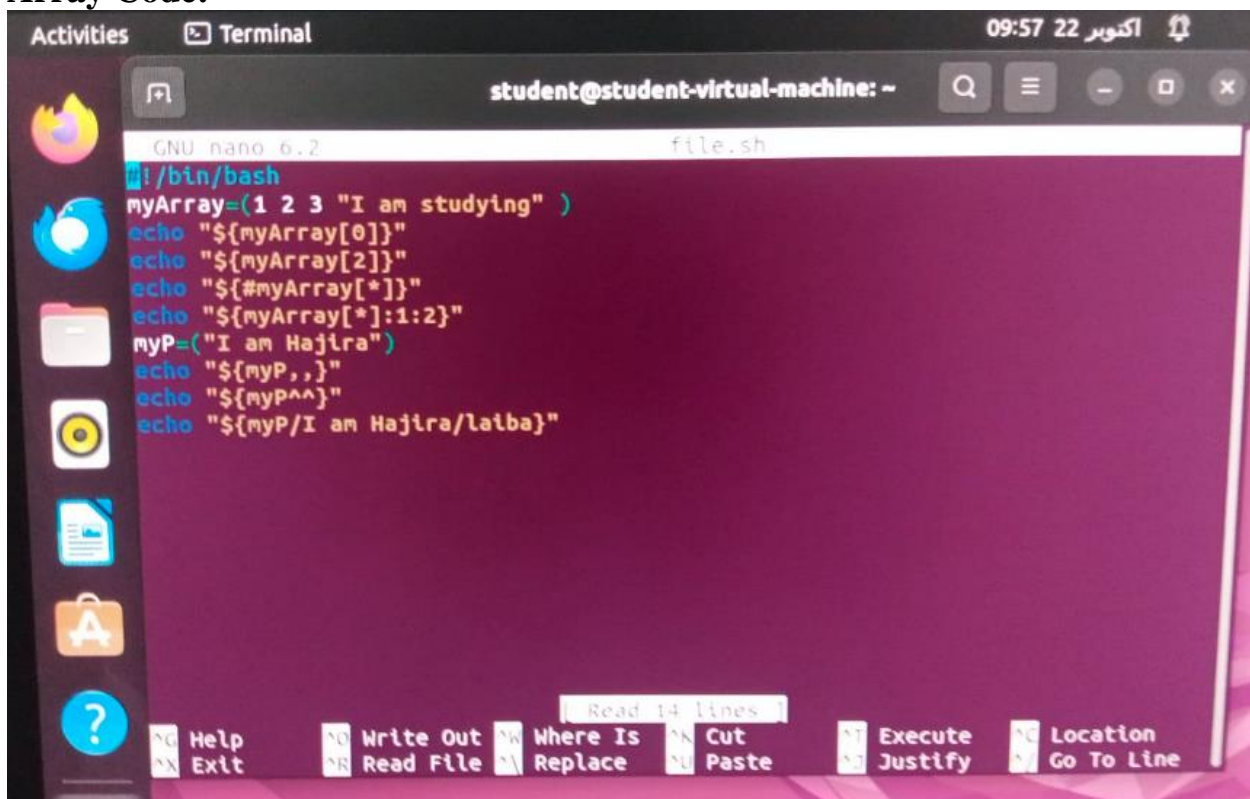
Exercise 4:

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

Hhhh

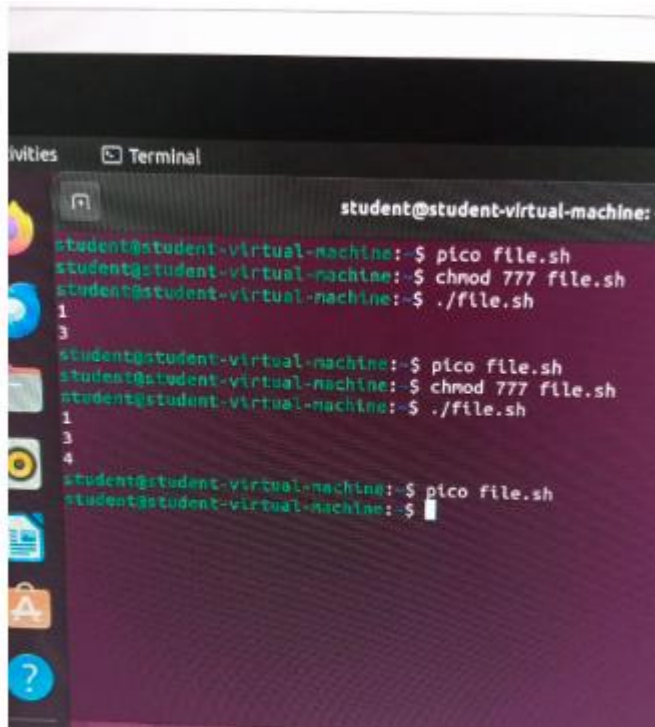
Array Code:



The screenshot shows a terminal window titled "student@student-virtual-machine: ~" with a terminal icon and a search icon. The window contains a nano editor editing a file named "file.sh". The script content is as follows:

```
GNU nano 6.2 file.sh
#!/bin/bash
myArray=(1 2 3 "I am studying" )
echo "${myArray[0]}"
echo "${myArray[2]}"
echo "${#myArray[*]}"
echo "${myArray[*]:1:2}"
myP=("I am Hajira")
echo "${myP,,}"
echo "${myP^^}"
echo "${myP/I am Hajira/laiba}"
```

At the bottom of the terminal, there is a status bar with the text "Read 14 lines" and a list of keyboard shortcuts: ^G Help, ^X Write Out, ^W Where Is, ^K Cut, ^T Execute, ^L Location, ^N Exit, ^R Read File, ^_ Replace, ^U Paste, ^J Justify, and ^_ Go To Line.

A screenshot of a terminal window titled "Terminal" with a dark background. The prompt is "student@student-virtual-machine:". The user has entered three sets of commands: 1. "pico file.sh", "chmod 777 file.sh", and "./file.sh", which outputs "1" and "3". 2. "pico file.sh", "chmod 777 file.sh", and "./file.sh", which outputs "1", "3", and "4". 3. "pico file.sh", followed by a blank line, and then a prompt character. The left sidebar shows various application icons.

```
student@student-virtual-machine:~  
student@student-virtual-machine:~$ pico file.sh  
student@student-virtual-machine:~$ chmod 777 file.sh  
student@student-virtual-machine:~$ ./file.sh  
1  
3  
student@student-virtual-machine:~$ pico file.sh  
student@student-virtual-machine:~$ chmod 777 file.sh  
student@student-virtual-machine:~$ ./file.sh  
1  
3  
4  
student@student-virtual-machine:~$ pico file.sh  
student@student-virtual-machine:~$
```

String code:

```
#!/bin/bash  
str1="Hello"  
str2="World"  
if [ "$str1" = "$str2" ];  
then  
echo "Strings are equal"  
else  
echo "Strings are not equal"  
fi
```

```
"string.sh" [New] 9L, 133B written  
[root@localhost ~]# chmod 777 string.sh  
[root@localhost ~]# ./string.sh  
Strings are not equal  
[root@localhost ~]#
```

IF Else Code:

```
#!/bin/bash
str1="Hello"
str2="World"
if [ "$str1" = "$str2" ];
then
echo "Strings are equal"
else
echo "Strings are not equal"
fi
```

```
"string.sh" [New] 9L, 133B written
[root@localhost ~]# chmod 777 string.sh
[root@localhost ~]# ./string.sh
Strings are not equal
[root@localhost ~]#
```

3. Case Related:



```
#!/bin/bash
read choose
echo "choose any option"
echo "a is date"
echo "b is list"
echo "c is path"
read choice
case $choice in
a) date;;
b) ls;;
c) pwd;;
*) echo "enter valid choice"
esac
```

```
student@student-virtual-machine:~$ pico case.sh
student@student-virtual-machine:~$
student@student-virtual-machine:~$ chmod 777 case.sh
student@student-virtual-machine:~$ ./case.sh
choose any option
a is date
b is list
c is path
a
10:16:44 و PKT 2024 اكتوبر 22
student@student-virtual-machine:~$
```