

Linux Plus 7

Linux Plus 7 takeaways

Training Clarusway

Pear Deck - April 16, 2020 at 6:41PM

Part 1 - Summary

Use this space to summarize your thoughts on the lesson

Part 2 - Responses

Slide 1



Linux Plus for AWS
and DevOps - 7



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Your Cloud Journey Starts Here

Use this space to take notes:

Slide 2



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Link(s) on this slide:

- <https://create.kahoot.it/details/linux-plus-11-bash-shell-scripting/dcea4b5a-315f-4a62-99da-fd03c0a55ec8>

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► Console input" »

```
read [variable]  
read -p "Prompt" [variable]
```

```
#!/bin/bash  
echo "Enter your name: "  
read name  
echo Hello $name
```

```
[ec2-user@ip-172-31-36-108 ~]$ ./run.sh  
Enter your name:  
Raymond  
Hello Raymond  
[ec2-user@ip-172-31-36-108 ~]$
```

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► Arithmetic Expressions »

```
let [expression]
```

```
#!/bin/bash  
number1=8  
number2=2  
let total=number1+number2  
let diff=number1-number2  
let mult=number1*number2  
let div=number1/number2  
  
echo "Total = $total"  
echo "Difference = $diff"  
echo "Multiplication = $mult"  
echo "Division = $div"
```

```
[ec2-user@ip-172-31-91-206 ~]$ ./run.sh  
Total = 10  
Difference = 6  
Multiplication = 16  
Division = 4  
[ec2-user@ip-172-31-91-206 ~]$
```

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► Arithmetic Expressions

`$((Expression))`

`((Expression))`

```
#!/bin/bash
number1=8
number2=2

echo "Total = $((number1+number2))"

((total=number1+number2))
echo "Total = $total"
```

```
[ec2-user@ip-172-31-91-206 ~]$ ./run.sh
Total = 10
Total = 10
[ec2-user@ip-172-31-91-206 ~]$
```

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► "num++" "++num" "num--" "--num"

```
#!/bin/bash
number=10
let new_number=number++
echo "Number = $number"
echo "New number = $new_number"

number=10
let new_number=--number
echo "Number = $number"
echo "New number = $new_number"
```

```
[ec2-user@ip-172-31-91-206 ~]$ ./run.sh
Number = 11
New number = 10
Number = 9
New number = 9
[ec2-user@ip-172-31-91-206 ~]$
```

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Your Response

Answer 1:

```
#!/bin/bash read -p "enter number1 : "
number1 read -p "enter number2 : "
number2 echo total=$((number1+number2))
```

► Exercise 1

1. Ask user to enter two numbers to variables **num1** and **num2**.
2. Calculate the total of 2 numbers.
3. Print the **total** number and increase it by 1.
4. Print the new value of the **total** number.
5. Subtract **num1** from the **total** number and print result.



SWAY
Presentations, write your responses!

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```
echo $((total++)) echo $total echo  
$((total-num1))
```

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► Relational Operators

Command	Operation
-lt	<
-gt	>
-le	<=
-ge	>=
-eq	==
-ne	!=

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► Conditions



```
#!/bin/bash
read -p "How old are you? " age
if [ $age -ge 16 ]
then
    echo "You can drive"
elif [ $age -eq 15 ]
then
    echo "You can drive next year"
else
    echo "You can't drive."
fi
```

Output:

```
clarus-linux@professor:~$ vim ifelse.sh
clarus-linux@professor:~$ ./ifelse.sh
How old are you? 25
You can drive
clarus-linux@professor:~$ ./ifelse.sh
How old are you? 15
You can drive next year
clarus-linux@professor:~$ ./ifelse.sh
How old are you? 12
You can't drive.
clarus-linux@professor:~$
```

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► Conditions



```
#!/bin/bash
a=5
b=3
if [ $a -lt $b ];
then
    echo "$a is less than $b"
else
    echo "$a is not less than $b"
fi
```

Output:

```
[ec2-user@ip-172-31-91-206 ~]$ ./run.sh
5 is not less than 3
[ec2-user@ip-172-31-91-206 ~]$
```

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► Conditions

```
#/bin/bash
read -p "Enter a number : " num
if ((num==10)); then
    echo "Your number equals to 10"
fi
if((num > 10)); then
    echo "It is greater than 10"
else
    echo "It is less than 10"
fi
if (( (num%2) == 0 )); then
    echo "It is even"
fi
```

Output:

```
clarus-linux@professor:~$ ./ifelse2.sh
Enter a number : 12
It is greater than 10
It is even
clarus-linux@professor:~$
```

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► Logical Operators

```
read -p "Enter a number : " num
if (( (num > 0) && (num < 11) )); then
    echo "$num is between 1 and 10"
elif (( (num == 20) | (num > 20) )); then
    echo "$num is equal or greater than 20"
fi
```

```
clarus-linux@professor:~$ ./logic.sh
Enter a number : 6
6 is between 1 and 10
```

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► Logical Operators

```
#!/bin/bash
a=8
b=5
c=3

if [ $b -lt $a -a $b -gt $c ];
then
    echo "$b is between $a and $c"
elif [ $b -eq $c -o $b -eq $a ];
then
    echo "$b is on the edge"
else
    echo "$b is out of range"
fi
```

```
[ec2-user@ip-172-31-91-206 ~]$ ./run.sh
5 is between 8 and 3
[ec2-user@ip-172-31-91-206 ~]$
```

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► Exercise 2

1. Ask user to enter his/her **name**.
2. Ask user to enter his/her **age**.
3. Print user name with one of these messages regarding his/her **age**:
 - a. age<18 : "Student"
 - b. 18<=age<65 : "Worker"
 - c. age>=65 : "Retired"



Students, write your response!

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Your Response

Answer 1:

```
#!/bin/bash read -p "Please enter your
name : " name read -p "Please enter your
age : " age if (( age < 18 )) then echo "Hi
$name you are a student" elif (( ( age >= 18
)) && ( age < 65 )) )) then echo "Hi $name
you are a worker" elif (( age >= 65 )) then
echo "Hi $name you are retired" fi
```

Use this space to take notes:

Slide 16

► Here Document/Script

```
#!/bin/bash  
  
cat<< END  
This text  
prints on  
many lines  
END
```

```
clarus-linux@professor:~$ vim here.sh  
clarus-linux@professor:~$ chmod +x here.sh  
clarus-linux@professor:~$ ./here.sh  
This text  
prints on  
many lines
```

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► Python Commands

Single Command:

```
#!/bin/bash  
  
#For single command:  
num1=2.2  
num2=1.1  
make=$(python3 -c "print ($num1+$num2)")
```

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Multiple Commands:

```
8 #For multiple commands:  
9 END_VALUE=10  
10  
11 PYTHON_CODE=$(cat <<END  
12 #python code starts here  
13  
14 import math  
15  
16 for i in range($END_VALUE):  
17     print(i,math.sqrt(i))  
18  
19 #Python code ends here  
20 END  
21 )  
22  
23 #Use the  
24 res=$(python3 -c "$PYTHON_CODE")  
25  
26 #Now you can continue with bash code  
27 echo "$res"
```

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THANKS!

Any questions?



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