ALRIGHT!

LINUX TUTORIAL

50 SHELL SCRIPTING QUESTIONS

Ques: 1

What is a shell?

Ques: 1

What is a shell?

A shell is a interface/command line for user
A shell provide an environment to a user to execute commands and interact with kernel

Ques: 2

What is shell scripting?

Ques: 2

What is shell scripting?

- Shell script consist of set of commands to perform a task.
- All the commands execute sequentially.
- Some task like file manipulation, program execution, user interaction, automation of task etc can be done

Ques: 3

How to tell which shell you are in or running?

Ques: 3

How to tell which shell you are in or running?

We can check it using $echo $0

Ques: 4

What are the different types of commonly used shells on a Linux system?

Ques: 4

What are the different types of commonly used shells on a Linux system?

Bash, or the Bourne-Again Shell, is the most widely used choice and it comes installed as the default shell in the most popular Linux distro.

Some other type os shells are - ZSH, KSH, TcSH, FiSH etc

Ques: 5

How to run/execute a script?

Ques: 5

How to run/execute a script?

```
./script.sh
/path/script.sh

sh script.sh
```

Ques: 6

After executing a shell script, how to terminate it?

Ques: 6

After executing a shell script, how to terminate it?

Ctrl + c for terminate
Ctrl + z to stop

Ques: 7

What is the default login shell? How to change it?

Ques: 7

What is the default login shell? How to change it?

We can change it using 'CHSH'

Ques: 8

What is the purpose of shebang line? (#!/bin/bash)

Ques: 8

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To tell the Linux OS which interpreter to use to parse the rest of the file.

Ques: 9

How to write comments in shell script?

Ques: 9

How to write comments in shell script?

Using '#'

```
#This is a comment
```

Ques: 10

How to use multi-line comments in shell scripting?

Ques: 10

How to use multi-line comments in shell scripting?

```
<<comment
...
your comment here
...
comment
```

Ques: 11

In a Bash shell script, if you want to restart the loop at the next iteration before the loop completes, use the _____ statement.

- **continue**
- **break**
- **bust**
- **cancel**

Ques: 11

In a Bash shell script, if you want to restart the loop at the next iteration before the loop completes, use the _____ statement.

- continue
- break
- bust
- cancel

Ques: 12

Which commands are used to print output in bash?

Ques: 12

Which commands are used to print output in bash?

echo

Ques: 13

In a Bash script, which of the following tests if the value stored in the variable "MON" is equal to the string of "June"?

1. **$(${MON} -eq "June")**
2. **[[${MON} = "June"]]**
3. **[MON = "June"]**
4. **(${MON} == "June")**

Ques: 13

In a Bash script, which of the following tests if the value stored in the variable "MON" is equal to the string of "June"?

1. **$(${MON} -eq "June")**
2. **[[${MON} = "June"]]**
3. **[MON = "June"]**
4. **(${MON} == "June")**

Ques: 14

You are writing a Bash script and want to test if the "/tmp/out.txt" file exists and can be read by the user running the script. Which of the following conditionals would you use?

1. **[-r /tmp/out.txt]**
2. **[-e /tmp/out.txt]**
3. **[-f /tmp/out.txt]**
4. **[-d /tmp/out.txt]**

Ques: 14

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2. **[-e /tmp/out.txt]**
3. **[-f /tmp/out.txt]**
4. **[-d /tmp/out.txt]**

Ques: 15

Which exit status indicates a successful execution for a bash script?

- 1
- 0
- 2
- SUCCESS

Ques: 15

Which exit status indicates a successful execution for a bash script?

- 1
- **0**
- 2
- SUCCESS

Ques: 16

How to make any variable unchangeable or readonly?

Ques: 16

How to make any variable unchangeable or readonly?

using 'readonly'

```
readonly variable_name=value
```

Ques: 17

How to find out how many arguments passed to a script?

Ques: 17

How to find out how many arguments passed to a script?

using $#

Ques: 18

In a Bash shell script, which of the following operators is used to test if two strings are equal?

- **=**
- **-eq**
- **!=**
- **-ne**

Ques: 18

In a Bash shell script, which of the following operators is used to test if two strings are equal?

- =
- -eq
- !=
- -ne

Ques: 19

Which of the following will take the output of the "hostname" command and store it in the variable named "HOST"?

- **HOST=$hostname**
- **HOST={hostname}**
- **HOST='hostname'**
- **HOST=$(hostname)**

Ques: 19

Which of the following will take the output of the "hostname" command and store it in the variable named "HOST"?

- HOST=$hostname
- HOST={hostname}
- HOST='hostname'
- HOST=$(hostname)

Ques: 20

Which of the following are used to end a case statement in a Bash script?

- **exit**
- **done**
- **esac**
- **end**

Ques: 20

Which of the following are used to end a case statement in a Bash script?

- exit
- done
- esac
- end

Ques: 21

Which of the variable is valid to use in shell script?

1. **var@**
2. **var-1**
3. **1var**
4. **VAR**
5. **$VAR**

Ques: 21

Which of the variable is valid to use in shell script?

1. **var@**
2. **var-1**
3. **1var**
4. **VAR**
5. **$VAR**

Ques: 22

Differentiate between $@ and $*.

Ques: 22

Differentiate between $@ and $*.

$* - consider all arguments as single entry
$@ - consider all arguments as separate entry

Example: for i in "$@"

Ques: 23

How to redirect and append both stdout and stderr to a file with Bash?

Ques: 23

How to redirect and append both stdout and stderr to a file with Bash?

```
>> file.txt 2>&1
```

Ques: 24

A while loop is a loop that repeats a series of commands for as long as a given condition is _____.

True or false;

Ques: 24

A while loop is a loop that repeats a series of commands for as long as a given condition is _____.

Answer: True

Ques: 25

How to check a directory exists or not using bash?

Ques: 25

How to check a directory exists or not using bash?

[! -d /directory]

Ques: 26

Difference between if-then and case statement?

Ques: 26

Difference between if-then and case statement?

if-then looks for the matching criteria and
case gives you the list of options to choose from

Ques: 27

What will be the output of this script?

```
#!/bin/bash
SHELL="csh"

if [[ "${SHELL}" = "bash" ]]
then
 echo "You seem to like the bash shell."
elif [[ "${SHELL}" = "csh" ]]
then
 echo "You seem to like the csh shell."
else
 echo "You don't seem to like the bash or csh shells."
```

Ques: 27

What will be the output of this script?

```
Answer is: You seem to like the csh shell.
```

Ques: 28

In what ways, shell script get input values from a user or terminal?

Ques: 28

In what ways, shell script get input values from a user or terminal?

a. By reading command: `read -p "Your name" name`

b. By parameters: `./script param1 param2`

Ques: 29

In what ways, shell script can check if the user executing it is a 'root' user or not?

Ques: 29

In what ways, shell script can check if the user executing it is a 'root' user or not?

We can use against the value of UID shell variable
UID of root user is always 0

Ques: 30

How will you automate your script to run/execute at a given time?

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How will you automate your script to run/execute at a given time?

Using crontab or at commands

Ques: 31

How to check whether a link is a hard one or a soft link?

Ques: 31

How to check whether a link is a hard one or a soft link?

We can use -h and -L operators of the test command to check whether a link is hard or soft (symbolic link).

Ques: 32

How will you debug a shell script?

Ques: 32

How will you debug a shell script?

- **By setting -x in the script, we can enable debugging.**

```
set -x
set -v
```

Ques: 33

How will you find total shells available in your system?

Ques: 33

How will you find total shells available in your system?

cat /etc/shells

Ques: 34

What is the use of $$?

Ques: 34

What is the use of $$?

$$ gives you current process ID

Ques: 35

To run a script, what type of permission a script should have? and how will you provide it?

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To run a script, what type of permission a script should have? and how will you provide it?

Executable permission need to be provided to script.
We can use 'chmod' command for this.

Ques: 36

Is it possible to run multiple scripts at a time? if yes then how?

Ques: 36

Is it possible to run multiple scripts at a time? if yes then how?

To run multiple scripts at a time, we can invoke name of the scripts in an another script.

Like script1, script2 can be used in script3

Ques: 37

What are Metacharacters in a shell?

Ques: 37

What are Metacharacters in a shell?

Special character which provide information about other character.

Example: *

Ques: 38

What are loops in shell? what are the types?

Ques: 38

What are loops in shell? what are the types?

Loops are used to repeatedly run a portion of script for a given no, of repetition or until condition is met.

- **for loop**
- **while loop**
- **until loop**

Ques: 39

Which of the following are used to end a if-else statement in a Bash script?

- **done**
- **fi**
- **exit**
- **end**

Ques: 39

Which of the following are used to end a if-else statement in a Bash script?

- done
- fi
- exit
- end

Ques: 40

How to define a infinite loop in a Bash script?

- **while 1**
- **while 0**
- **while true**
- **while false**

Ques: 40

How to define a infinite loop in a Bash script?

- **while 1**
- **while 0**
- **while true**
- **while false**

Ques: 41

How to use expressions in a script?

Ques: 41

How to use expressions in a script?

We can use 'let'

Example: let i++

Ques: 42

How to get name of the current script and print within a script?

Ques: 42

How to get name of the current script and print within a script?

We can use ${0} within our script which will print the name of our current running script

Ques: 44

What are functions in shell scripting?

Ques: 44

What are functions in shell scripting?

- **Block of code which perform some task and run when it is called.**
- **Can be reuse many times in our program which lessen our lines of code.**
- **We can pass arguments to the functions**

Ques: 45

How to make a basic function in shell scripting?

Ques: 45

How to make a basic function in shell scripting?

```
function myfun {
    echo "Hello"
}

myfun() {}
```

Ques: 46

How to print a random integer in a shell scripting?

Ques: 46

How to print a random integer in a shell scripting?

We can use built in bash variable called RANDOM which will print random no. between 0 - 32767

Ques: 47

In a shell script, what will you do if you don't want to print the output of a command on the terminal and also in a file?

Ques: 47

In a shell script, what will you do if you don't want to print the output of a command on the terminal and also in a file?

We can redirect the output to /dev/null

Ques: 48

What can be used to create delay between two executions?

Ques: 48

What can be used to create delay between two executions?

We can use **sleep** command like

sleep 1s

sleep 1m

Ques: 49

How to stop a script in based on a given condition?
which keyword can be used to stop a script.

Ques: 49

How to stop a script in based on a given condition?
which keyword can be used to stop a script.

Using exit command

Ques: 50

What is the use of logger in a shell scripting?

Ques: 50

What is the use of logger in a shell scripting?

It is used to maintain logs for your script.
We can find the logs under /var/logs/messages

Ques

What is the use exit status $? in a shell scripting?

THANKS FOR WATCHING!