BASH CHALLENGES

There are a total of 21 questions. You might face problems with understanding the commands but remember, Google is your best friend.

Plagiarism should be avoided at all costs!

man command is used to display the user manual of a command and it shows detailed information on how to run a command and the multiple options which can be used with the command.

You may need to study the commands mentioned below and learn how to use them for doing the below questions. If you don't know how to use a command, don't hesitate to view the manual page.
Note: Everything must be done on the Command Line Interface

(man, pwd, ls, cd, cat, cp, echo, touch, mv, file, mkdir, rm, rmdir, grep, base64, find, nc, ssh, nmap, telnet, ping, wget, curl)

(Note: Questions 1 to 9 are linked to each other)

1. (a.) Display the path of your current directory
   (b.) List out the contents of your current directory
   (c.) List out the contents of your current directory
        including hidden files

2. (a.) Create a new directory named **a**
   (b.) Move to the newly created directory **a**
   (c.) Create a blank file named "file1"
   (d.) Display the file type of "file1"
   (e.) Add the line "Hello World" to "file1" using the
        command **echo**
   (f.) Display the contents of "file1"
   (g.) Display the file type of "file1" again

3. (a.) Stay in directory **a**. Create a file "file2" and
        add the contents below using the command **cat**

First Line **Second Line** **Third Line**

   (b.) Display the contents of "file2"
   (c.) Display the contents of "file2" with the lines
        reversed

4. (a.) Stay in directory **a**. Concatenate the contents
        of "file1" and "file2" and save them into a new
        file "file3"
   (b.) Display the contents of "file3"

5. (a.) Stay in directory **a**. Create 2 directories **b/c**
        with a single command
   (b.) Create a new directory **d**
   (c.) Copy the directory **d** to directory **c** using a
        single command
   (d.) Delete the directory **d** in the current directory

a

(e.) Copy “file3” to the directory **d** with a single command

6. (a.) Go to directory **d** and rename “file3” to “file0”

(b.) Stay in the same directory and move “file0” to directory **a**

7. (a.) Go to your home directory

(b.) Create a file named “test” in the directory **a/b/c/d**

(c.) Stay in the home directory. **Find** and display the path of “test”

8. (a.) Go to directory **a**. Get the man page of grep and save its contents to a file named “grepman.txt”

(b.) Print the lines containing the word “**FILE**” (Case sensitive) in the file “grepman.txt”

9. (a.) Go to directory **a** and remove the directory **b** with a single command

(b.) Remove the files starting with the word “file” with a single command

10.(a.) Download the compressed file from the drive. https://drive.google.com/drive/folders/1PG3ZlpFu6nQSNjpCNuceoGcNey00bhPP?usp=sharing

(b.) Extract the compressed file using CLI.

(c.) Decode the base64 content and display the content of “Flag.txt”

using CLI.

11. (a.) Go to https://blog.bi0s.in/ and download the **logo.png** image using **wget**
    (b.) Do the same using **curl**

12. (a.) Ping **google.com** and find the lowest time taken to get a response (Stop pinging after getting 5 responses)
    (b.) Ping **google.com** 6 times and find the average time taken to get a response

13. Complete bandit level 0 and get the flag.

https://overthewire.org/wargames/bandit/bandit0.html

14. Connect to your own system using telnet

15. (a.) Learn about nmap and use that scanner to scan your own machine
    (b.) Use nmap to scan **scanme.nmap.org**

16. (a.) Create a chat application using **nc** on your local machine with one terminal as server and other as the client
    (b.) Transfer a file from server to client (save that file with another name) and display the file.

Shell Scripting

1. Write a shell script to run the following operations by reading 2 numbers and 1 choice from the user:

1:Addition
2:Subtraction
3:Multiplication
4:Division
5:Average

It should be a choice based program i.e. if the input is 1 Addition should be performed

2. Write a script to run the following operations by reading an input and a choice from the user:

1:ROT13 Encode
2:ROT13 Decode

It should be a choice based program.
(For doing this question, learn about **ROT13 Encryption**)

3. Write a script to rename all the txt files in your current directory to begin with the current date and month.
For example, if the name of the file is **sample.txt** then the renamed filename should be **DDMM-sample.txt**.

4. Write a shell script to sort an array using bubble sort.

5. Write a shell script to check whether a number is a palindrome or not.