

Name :- Rushikesh Anil Mashidkar

Email Id :- rishikeshmashidkar@gmail.com

Note :- The answer is in bullets (➔)

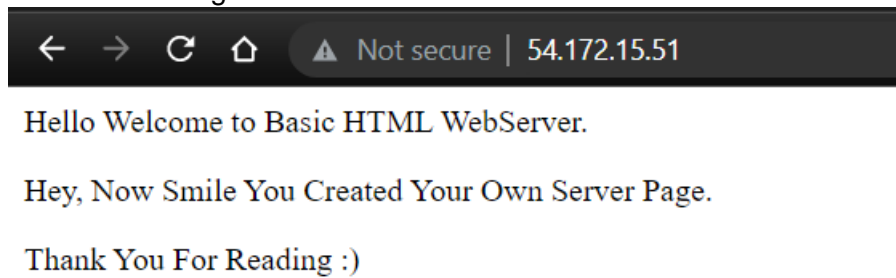
Assignment Question

Assignment 1 :- How to upload HTML web pages on Apache2 web server in EC-2 Instance? Please justify with step by step answers.

➔ First of All you have to Login to AWS Console with root or admin policy user. And from Console Search EC2 Service.

1. To create an EC-2 instance Click on Launch instance tab . Then type Name of your Server (ex-HTML_WebPage).
2. Select Amazon Machine Image (AMI) to Ubuntu or Anything You Want. In this program I will select ubuntu. Select Instance Type You Want And give Key Pair. If you don't have key pair simply Create new one save on your computer.
3. Create Security Group & Allow HTTPS & HTTP Traffic From the internet with Default one . And If you want to increase storage configure it . And jump hit on Launch Instance.
4. Then Go to instance And Select the Instance which we created now and Connect via EC2 Instance Connect click on Connect. Now You have Successfully Created EC2 instance with Basic Configuration.
5. Then You have New Tab open as a Terminal[CLI] In Browser login with username by default. So you have to Switch To Root for that type `sudo -s` and hit Enter. Now You are root so you have to Update and upgrade your instance by using `apt update` && `apt upgrade` command. And update it.
6. When your machine is upgraded you have to install a apache2 server. *Apache is a popular open-source, cross-platform web server that is, by the numbers, the most popular web server in existence.* For Installing apache 2 just type `apt install apache2` and hit enter and then it prompt you to install yes or no. Just you have to type Y and enter.
7. Now we have Default server so you have edit the HTTP servers index file. The file is stored in `/var/www/html/` so you have go to that directory by using `cd` command. And then check the index file is there or not by using `ls -a` command.
8. For welcome landing page we edit the index.html file by nano command i.e nano index.html and then edit your welcome landing page (ex - `<HTML>Hey Welcome to My New Web Server! 🌟 </HTML>`). And save it.

9. For checking your landing page type ip of server you created and paste on google and see the magic we created.



Assignment 2 : Create `readfile.sh` in which you can read the information of PWD like size, permission, date time etc.

A screenshot of a terminal window. The prompt is `[rishikesh@www shell]$`. The user has entered `./readfile.sh`. The output shows the details of files in the current directory, including permissions, owner, group, size, date, and filename. The output is as follows:

```
total 32
-rw-r--r--. 1 root      root      0 Nov 13 11:30 100
-rwxr-xr-x. 1 root      root      48 Nov 13 13:01 for.sh
-rwxr-xr-x. 1 root      root     362 Nov 13 12:26 ifelse.sh
-rwxr-xr-x. 1 root      root     236 Nov 13 12:03 if.sh
-rwxrwxr-x. 1 rishikesh rishikesh 89 Nov 12 19:04 input.sh
-rwxr-xr-x. 1 root      root      70 Nov 19 13:15 readfile.sh
-rwxr-xr-x. 1 root      root     100 Nov  6 18:40 shell.sh
-rwxr-xr-x. 1 root      root      51 Nov  6 19:15 vaar.sh
-rwxr-xr-x. 1 root      root      80 Nov  6 18:57 var.sh

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[rishikesh@www shell]$
```



```
29 sudo -root
30 sudo root
31 su root
32 history
[rishikesh@localhost ~]$ touch input.sh
[rishikesh@localhost ~]$ chmod +x input.sh
[rishikesh@localhost ~]$ vim input.sh
[rishikesh@localhost ~]$ ./input.sh
Please Enter Your Name
rishi
Hello, rishi Have a Great Day!
[rishikesh@localhost ~]$ ./input.sh
Please Enter Your Name
Ineuron
Hello, Ineuron Have a Great Day!
[rishikesh@localhost ~]$
```

Assignment 4 : Let's take a scenario of fintech app program in which we want to have three separate

outputs for 3 different situations:

- ☐ The balance is less than zero
- ☐ The balance is zero
- ☐ The balance is above zero

For instance, in the following program, use the if, elif, else statements to display different outputs in

different scenarios:

Use "if" condition to check if the balance is less than zero. If this condition evaluates to true, display

the message using the echo command: "Balance is less than zero, Please add more funds else you

will be charged penalty".

If the above condition does not match, then use "elif" condition to check if the balance is equal to

zero. If it evaluates to true, display the message: Balance is zero, please add funds

If none of the above condition matches, use the "else" condition to display the: Your balance is above zero.



```
aws Services Search [Alt+S]
GNU nano 6.2 ass.sh
#!/bin/sh

read -p "Enter Your Bank Balance : " balance
if [ $balance -lt 0 ]
then
echo "Your Balance Is less than Zero, Please Add More Funds else You Will Charge Penalty.";
elif [ $balance -eq 0 ]
then
echo "Your Balance Is Zero. Please Add More Funds.";
else
echo "Your Balance is Above Zero."
fi

[ Read 12 lines ]
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location
^X Exit      ^R Read File  ^_ Replace    ^U Paste      ^J Justify    ^/_ Go To Line
```

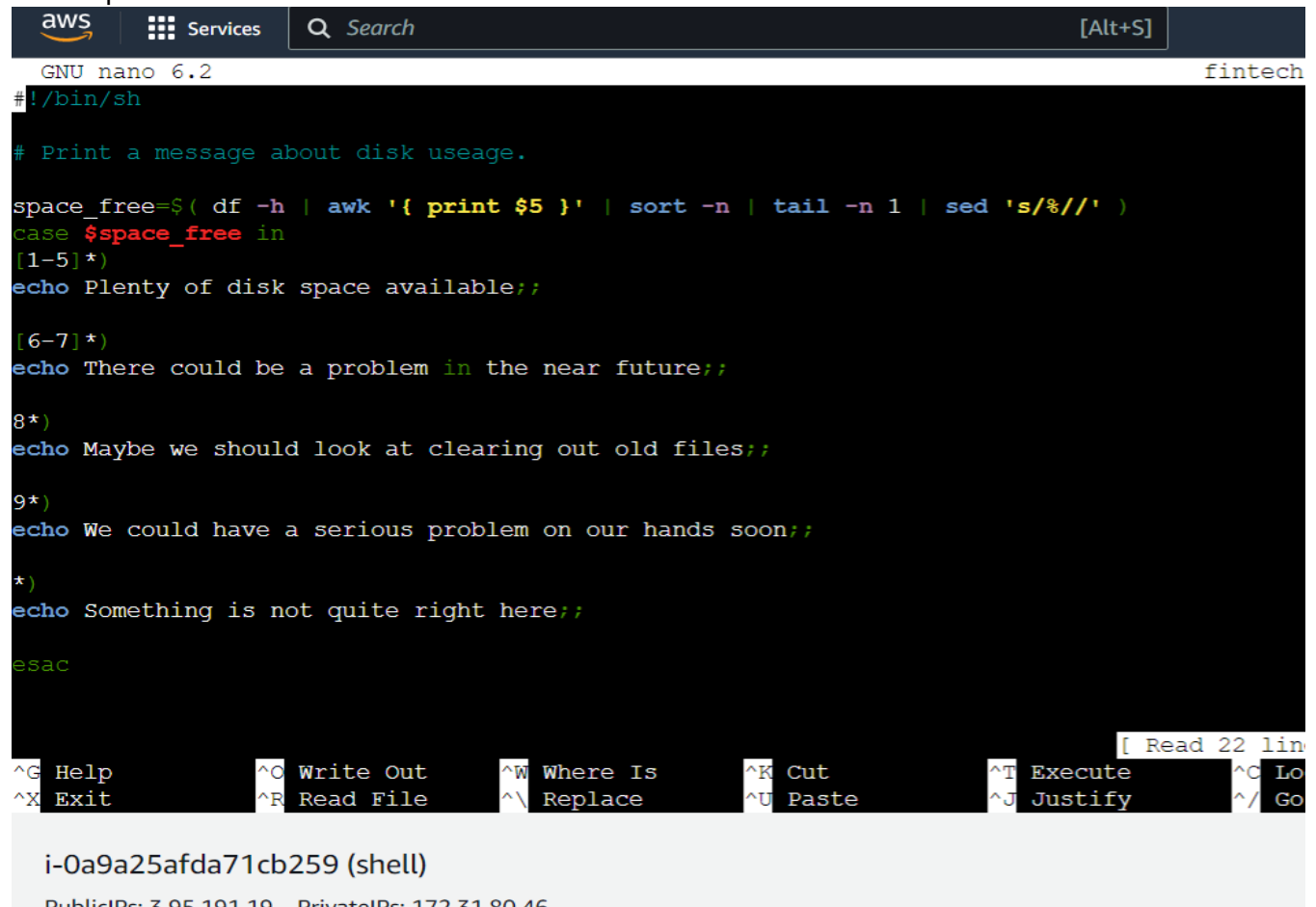
```
aws Services Search [Alt+S]
See "man sudo_root" for details.

ubuntu@ip-172-31-83-21:~$ mkdir shell
ubuntu@ip-172-31-83-21:~$ cd shell
ubuntu@ip-172-31-83-21:~/shell$ touch ass.sh
ubuntu@ip-172-31-83-21:~/shell$ chmod +x ass.sh
ubuntu@ip-172-31-83-21:~/shell$ nano ass.sh
ubuntu@ip-172-31-83-21:~/shell$ ./ass.sh
Enter Your Bank Balance0
Your Balance Is Zero. Please Add More Funds
ubuntu@ip-172-31-83-21:~/shell$ nano ass.sh
ubuntu@ip-172-31-83-21:~/shell$ ./ass.sh
Enter Your Bank Balance : -15
Your Balance Is less than Zero, Please Add More Funds else You Will Charge Penalty
ubuntu@ip-172-31-83-21:~/shell$ nano ass.sh
ubuntu@ip-172-31-83-21:~/shell$ ./ass.sh
Enter Your Bank Balance : -14
Your Balance Is less than Zero, Please Add More Funds else You Will Charge Penalty.
ubuntu@ip-172-31-83-21:~/shell$ ./ass.sh
Enter Your Bank Balance : 0
Your Balance Is Zero. Please Add More Funds.
ubuntu@ip-172-31-83-21:~/shell$ ./ass.sh
Enter Your Bank Balance : 45
Your Balance is Above Zero.
ubuntu@ip-172-31-83-21:~/shell$
```

S : Debug and define briefly about

➔ In the echo statement there is no double semicolon(;;) at the last. We Have to write double semicolon to the echo to do further condition if the first condition evalute false. Write double semicolon at the last of each echo line and run the file it will give you the output that is disk usage message. I provide the screenshot after debugging and also I run the the file

and output is there.



```
aws Services Search [Alt+S]
GNU nano 6.2 fintech
#!/bin/sh

# Print a message about disk usage.

space_free=$( df -h | awk '{ print $5 }' | sort -n | tail -n 1 | sed 's/%//' )
case $space_free in
[1-5]*)
echo Plenty of disk space available;;

[6-7]*)
echo There could be a problem in the near future;;

8*)
echo Maybe we should look at clearing out old files;;

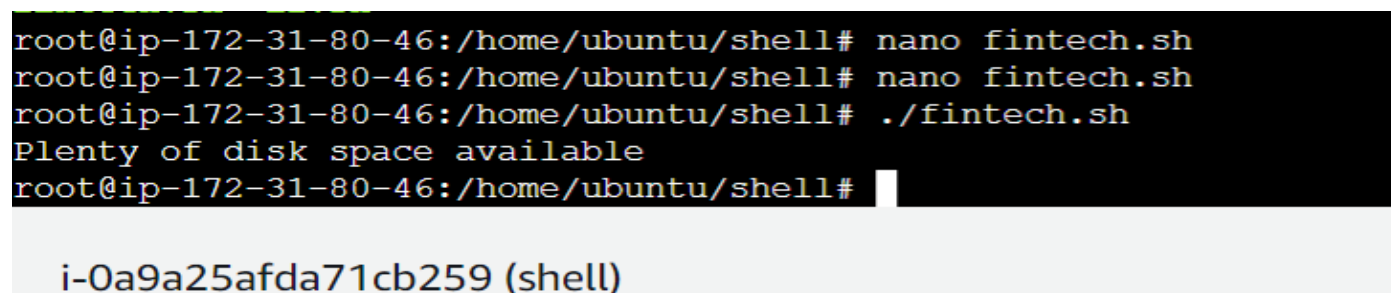
9*)
echo We could have a serious problem on our hands soon;;

*)
echo Something is not quite right here;;
esac

^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Lo
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^J Justify    ^_ Go
[ Read 22 lin

i-0a9a25afda71cb259 (shell)
PublicIP: 3.95.191.19 PrivateIP: 172.31.80.46
```

After Debugging



```
root@ip-172-31-80-46:/home/ubuntu/shell# nano fintech.sh
root@ip-172-31-80-46:/home/ubuntu/shell# nano fintech.sh
root@ip-172-31-80-46:/home/ubuntu/shell# ./fintech.sh
Plenty of disk space available
root@ip-172-31-80-46:/home/ubuntu/shell#

i-0a9a25afda71cb259 (shell)
```

Output

The Awk is a powerful scripting language used for **text scripting**. It searches and replaces the texts and sorts, validates, and indexes the database.