```
 18:06:20 up  1:13,  1 user,  load average: 0.00, 0.00, 0.00
rajdeep123@DESKTOP-JPQ9V9D:~$ echo "User: $(whoami), Hostname: $(hostname)" && history
User: rajdeep123, Hostname: DESKTOP-JPQ9V9D
    1  clear
    2  pwd
    3  mkdir rajdeep_webknot_linux
    4  ls -l
    5  gedit file1.txt
    6  cat file1.txt
    7  mv file1.txt rajdeep_webknot_linux/
    8  cd rajdeep_webknot_linux
    9  ls
   10  more file.txt
   11  more file1.txt
   12  less file1.txt
   13  gedit file2.txt
   14  cp file2.txt file1.txt
   15  cat file1.txt
   16  ps
   17  top
   18  kill 144
   19  bg
   20  fg
   21  jobs
   22  htop
   23  nice -n 10 command
   24  df
   25  cd ..
   26  du -sh rajdeep_webknot_linux
   27  free
   28  uptime
   29  whoami
   30  dmesg
   31  vmstat
   32  iostat
   33  sudo apt install sysstat
   34  iostat
```

```
   35  vmstat
   36  uname -a
   37  ping google.com
   38  ifconfig
   39  netstat
   40  curl https://www.pesuacademy.com/Academy/
   41  nslookup google.com
   42  sudo apt install bind9-dnsutils
   43  nslookup google.com
   44  ssh user@host
   45  cd rajdeep_jat_webknot
   46  rajdeep_webknot_linux
   47  cd rajdeep_webknot_linux
   48  mv -i file1.txt file2.txt
   49  cd..
   50  cd ..
   51  ls -la
   52  mkdir -m=rwx new_directory
   53  mkdir -p naya_directory/rajdeep_webknot_linux
   54  ls
   55  history
   56  echo "User: $(whoami), Hostname: $(hostname)" && history
   57  df -h
```

Q SWAP THE TWO NUMBERS

```
#!/bin/sh
echo "Enter first number:"
read a
echo "Enter second number:"
read b
a=$((a+b))
a=$((b-a))
b=$((b-a))
echo "The swapped numbers are:"
echo $a
echo $b
```

```
-1
rajdeep123@DESKTOP-JPQ9V9D:~$ nano swap.sh
rajdeep123@DESKTOP-JPQ9V9D:~$ ./swap.sh
Enter first number:
3
Enter second number:
4
The swapped numbers are:
4
3
rajdeep123@DESKTOP-JPQ9V9D:~$
```

Q Find the sum of first 'N' numbers in Fibonacci Series

```bash
#!/bin/bash
a=1
b=1
d=0
sum=$((a+b))
echo "Enter range:"
read n
echo "The Fibonacci series is:"
echo "$a"
echo "$b"
for((c=2;c<n;c++))
do
    d=$((a+b))
    echo "$d"
    sum=$((sum+d))
    a=$b
    b=$d
done
echo "sum of first $n numbers in the Fibonacci series is $sum"
```

```
rajdeep123@DESKTOP-JPQ9V9D:~$ nano  Fibonacci.sh
rajdeep123@DESKTOP-JPQ9V9D:~$ chmod +x Fibonacci.sh
rajdeep123@DESKTOP-JPQ9V9D:~$ ./swap.sh
Enter first number:
^C
rajdeep123@DESKTOP-JPQ9V9D:~$ ./Fibonacci.sh
Enter range:
5
The Fibonacci series is:
1
1
2
3
5
sum of first 5 numbers in the Fibonacci series is 12
rajdeep123@DESKTOP-JPQ9V9D:~$
```

Assignment 2: Running a simple C program on linux

```
rajdeep123@DESKTOP-JPQ9V9D:~$ nano hello.c
rajdeep123@DESKTOP-JPQ9V9D:~$
rajdeep123@DESKTOP-JPQ9V9D:~$ gcc hello.c -o hello
rajdeep123@DESKTOP-JPQ9V9D:~$ ./hello
Hello, WSL!
rajdeep123@DESKTOP-JPQ9V9D:~$ |
```

```
  GNU nano 7.2
#include <stdio.h>

int main() {
    printf("Hello, WSL!\n");
    return 0;
}
```

Question : Script to Print All .txt and .c Files

```
txt_files=(*.txt)
c_files=(*.c)


if [[ ${txt_files[0]} == "*.txt" && ${c_files[0]} == "*.c" ]]; then
    echo "No .txt or .c files found. Creating dummy files..."
    touch dummy1.txt dummy2.txt dummy1.c dummy2.c
    echo "Dummy files created: dummy1.txt, dummy2.txt, dummy1.c, dummy2.c"
else
    echo "Listing .txt and .c files in the current directory:"
    ls *.txt 2>/dev/null
    ls *.c 2>/dev/null
fi
```

```
rajdeep123@DESKTOP-JPQ9V9D:~$ chmod +x list_files.sh
rajdeep123@DESKTOP-JPQ9V9D:~$ ./list_files.sh
Listing .txt and .c files in the current directory:
hello.c
```

Question : Script to Add Two Numbers

```
rajdeep123@DESKTOP-JPQ9V9D:~$ nano list_files.sh
rajdeep123@DESKTOP-JPQ9V9D:~$ nano add_numbers.sh
rajdeep123@DESKTOP-JPQ9V9D:~$ chmod +x add_numbers.sh
rajdeep123@DESKTOP-JPQ9V9D:~$ ./add_numbers.sh
Enter the first number:
5
Enter the second number:
3
The sum of 5 and 3 is 8
```

```bash
echo "Enter the first number:"
read num1


echo "Enter the second number:"
read num2


result=$((num1 + num2))


echo "The sum of $num1 and $num2 is $result"
```

Q Installing Docker Using a Shell Script

```
rajdeep123@DESKTOP-JPQ9V9D:~$ nano install_docker.sh
rajdeep123@DESKTOP-JPQ9V9D:~$ chmod +x install_docker.sh
rajdeep123@DESKTOP-JPQ9V9D:~$ ./install_docker.sh
Updating package list...
[sudo] password for rajdeep123:
E: Invalid operation upate
Installing dependencies...
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
ca-certificates is already the newest version (20240203).
ca-certificates set to manually installed
```

Script:-

```
echo "Updating package list..."
sudo apt upate -y

echo "Installing dependencies..."
sudo apt install -y apt-transport-https ca-certificates curl software-properties-common

echo "Adding Docker's GPG key..."
curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmor -o /usr/share/keyrings/docker-archive-keyring.gpg

echo "Setting up Docker repository..."
echo "deb [arch=$(dpkg --print-architecture) signed-by=/usr/share/keyrings/docker-archive-keyring.gpg] https://download.docker.com/linux/ubuntu $(lsb_release -cs) stable

echo "Updating package list again..."
sudo apt update -y

echo "Installing Docker..."
sudo apt install -y docker-ce docker-ce-cli containerd.io

echo "Verifying Docker installation..."
docker --version && echo "Docker installed successfully!" || echo "Docker installation failed."
```

Q:- INSTALLING MY SQL USING SHELL SCRIPT

SCRIPT:-

```bash
echo "Updating package list..."
sudo apt update -y
echo "Installing MySQL Server..."
sudo apt install -y mysql-server

echo "Starting MySQL Service..."
sudo systemctl start mysql


echo "Enabling MySQL to start on boot..."
sudo systemctl enable mysql


echo "Checking MySQL Server status..."
sudo systemctl status mysql --no-pager


echo "Verifying MySQL installation..."
mysql --version && echo "MySQL installed successfully!" || echo "MySQL installation failed."
```