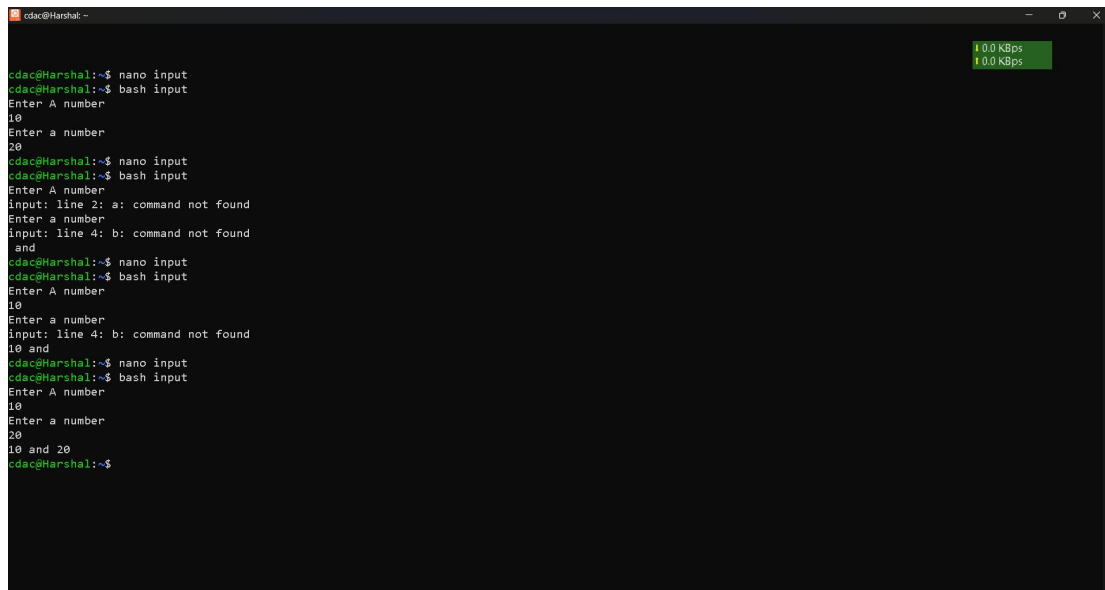# Assirnment 2

Part c

Question 1: Write a shell script that prints "Hello, World!" to the terminal.

```
cdac@Harshal:~$ nano heloworld
cdac@Harshal:~$ bash heloworld
Hellow world
```

Question 2: Declare a variable named "name" and assign the value "CDAC Mumbai" to it. Print the value of the variable.
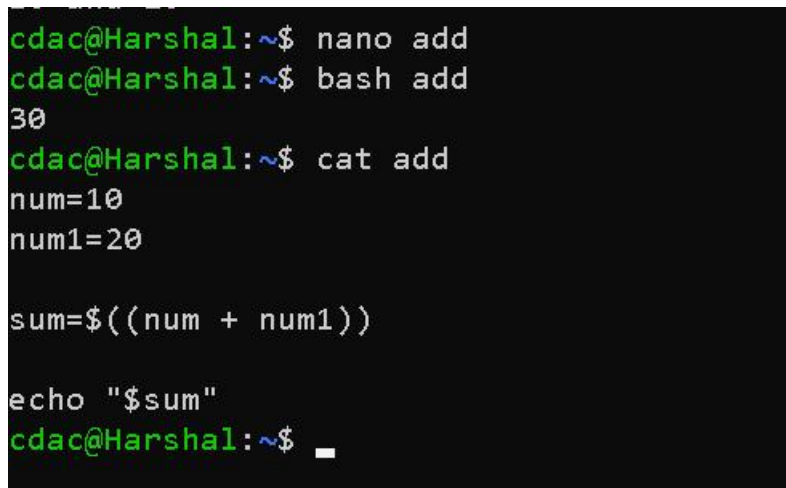
```
cdac@Harshal:~$ nano heloworld
cdac@Harshal:~$ bash heloworld
Hellow world
cdac@Harshal:~$ name = "CDAC Mumbai"
Command 'name' not found, did you mean:
  command 'nvme' from deb nvme-cli (1.16-3ubuntu0.3)
  command 'named' from deb bind9 (1:9.18.28-0ubuntu0.22.04.1)
  command 'uname' from deb coreutils (8.32-4.1ubuntu1.2)
  command 'namei' from deb util-linux (2.37.2-4ubuntu3.4)
  command 'nama' from deb nama (1.216-1)
  command 'lame' from deb lame (3.100-3build2)
  command 'mame' from deb mame (0.242+dfsg.1-1)
  command 'nam' from deb nam (1.15-5.2)
Try: sudo apt install <deb name>
cdac@Harshal:~$ name="CDAC Mumbai"
cdac@Harshal:~$ $name
CDAC: command not found
cdac@Harshal:~$ NAME
NAME: command not found
cdac@Harshal:~$ name
Command 'name' not found, did you mean:
  command 'nama' from deb nama (1.216-1)
  command 'nam' from deb nam (1.15-5.2)
  command 'uname' from deb coreutils (8.32-4.1ubuntu1.2)
  command 'nvme' from deb nvme-cli (1.16-3ubuntu0.3)
  command 'lame' from deb lame (3.100-3build2)
  command 'named' from deb bind9 (1:9.18.28-0ubuntu0.22.04.1)
  command 'mame' from deb mame (0.242+dfsg.1-1)
  command 'namei' from deb util-linux (2.37.2-4ubuntu3.4)
Try: sudo apt install <deb name>
cdac@Harshal:~$ echo "$name"
CDAC Mumbai
cdac@Harshal:~$
```

Question 3: Write a shell script that takes a number as input from the user and prints it.

```
cdac@Harshal:~$ nano input
cdac@Harshal:~$ bash input
Enter A number
10
Enter a number
20
cdac@Harshal:~$ nano input
cdac@Harshal:~$ bash input
Enter A number
input: line 2: a: command not found
Enter a number
input: line 4: b: command not found
 and
cdac@Harshal:~$ nano input
cdac@Harshal:~$ bash input
Enter A number
10
Enter a number
input: line 4: b: command not found
10 and
cdac@Harshal:~$ nano input
cdac@Harshal:~$ bash input
Enter A number
10
Enter a number
20
10 and 20
cdac@Harshal:~$
```

Question 4: Write a shell script that performs addition of two numbers (e.g., 5 and 3) and prints the result.

```
cdac@Harshal:~$ nano add
cdac@Harshal:~$ bash add
30
cdac@Harshal:~$ cat add
num=10
num1=20

sum=$((num + num1))

echo "$sum"
cdac@Harshal:~$
```

Question 5: Write a shell script that takes a number as input and prints "Even" if it is even, otherwise prints "Odd".

```
4 is Even number
cdac@Harshal:~$ nano eveOdd
cdac@Harshal:~$ bash eveOdd
Enter a number
4
4 is even
cdac@Harshal:~$ cat eveOdd
echo "Enter a number"
read n
 a=`expr $n % 2`
 if [ $a -eq 0 ]
then
echo "$n is even"
else
echo "$n is odd"
 fi
cdac@Harshal:~$
```

Question 6: Write a shell script that uses a for loop to print numbers from 1 to 5

```
cdac@Harshal:~$ nano forloop
cdac@Harshal:~$ bash forloop
range
1
2
3
4
5
cdac@Harshal:~$ cat forloop
a=0
for a in range {1..5}
do
echo "$a"
done
cdac@Harshal:~$ _
```

```
cdac@Harshal:~$ nano forloop
cdac@Harshal:~$ bash forloop
0
1
2
3
4
5
cdac@Harshal:~$ cat forloop
for ((a=0;a<=5;a++))
do
echo "$a"
done
cdac@Harshal:~$ _
```

Question 7: Write a shell script that uses a while loop to print numbers from 1 to 5.

```
cdac@Harshal:~$ nano whileloop
cdac@Harshal:~$ bash whileloop
1
2
3
4
5
cdac@Harshal:~$ cat whileloop
a=1
while [ $a -lt 6 ]
do
echo "$a"
a=`expr $a + 1`
done
cdac@Harshal:~$
```

Question 8: Write a shell script that checks if a file named "file.txt" exists in the current directory. If it does, print "File exists", otherwise, print "File does not exist".

```
cdac@Harshal: ~
cdac@Harshal:~$ nano findfile
cdac@Harshal:~$ bash findfile
file not found
cdac@Harshal:~$ touch file.txt
cdac@Harshal:~$ bash findfile
file found
cdac@Harshal:~$ cat findfile
if [ -f "file.txt" ]
then
echo "file found"
else
echo "file not found"
fi
cdac@Harshal:~$ _
```

Question 9: Write a shell script that uses the if statement to check if a number is greater than 10 and prints a message accordingly

```
cdac@Harshal: ~
cdac@Harshal:~$ nano graternum
cdac@Harshal:~$ bash graternum
Enter a number
20
20 is greater
cdac@Harshal:~$ bash graternum
Enter a number
4
4 is smaller
cdac@Harshal:~$ cat graternum
echo "Enter a number"
read a
if [ $a -gt 10 ]
then
echo "$a is greater"
else
echo "$a is smaller"
fi
cdac@Harshal:~$ _
```

Question 10: Write a shell script that uses nested for loops to print a multiplication table for numbers from 1 to 5. The output should be formatted nicely, with each row representing a number and each column representing the multiplication result for that number.

```
cdac@Harshal:~$ nano table
cdac@Harshal:~$ bash table
1    2    3    4    5
2    4    6    8    10
3    6    9    12   15
4    8    12   16   20
5    10   15   20   25
cdac@Harshal:~$ cat table
for i in {1..5}
do
        for j in {1..5}
        do
                printf "%-4d" $((i * j))
        done
        echo ""
done
cdac@Harshal:~$
```

Question 11: Write a shell script that uses a while loop to read numbers from the user until the user enters a negative number. For each positive number entered, print its square. Use the break statement to exit the loop when a negative number is entered.

```
cdac@Harshal: ~
cdac@Harshal:~$ nano power
cdac@Harshal:~$ bash power
4
power of 4 is 16
2
power of 2 is 4
3
power of 3 is 9
6
power of 6 is 36
-5
cdac@Harshal:~$ cat power
while true
do
        read a
        if [ $a -lt 0 ]
        then
                break
        fi
        power=$((a * a))
        echo "power of $a is $power"
done
cdac@Harshal:~$
```