

sumukh_g@Sumukh: ~

pgn10.sh

```
GNU nano 6.2
#!/bin/bash

#string length
for string in "$@"
do
    echo "$string : ${#string}"
done
```

Read 10 lines

^G Help

^O Write Out

^W Where Is

^K Cut

^T Execute

^C Location

^_ Go To Line

M-U Undo

M-E Redo

M-A Set Mark

M-6 Copy

M-] To Bracket

^O Where Was

M-Q Previous

M-W Next

^B Back

^F Forward

^_ Prev Word

^_ Next Word

sumukh_g@Sumukh: ~

sumukh_g@Sumukh:~\$ nano pgm10.sh
sumukh_g@Sumukh:~\$ chmod +x pgm10.sh
sumukh_g@Sumukh:~\$./pgm10.sh hello, I am sumukh
hello, : 6
I : 1
am : 2
sumukh : 6
sumukh_g@Sumukh:~\$

sumukh_g@Sumukh: ~

GNU nano 6.2pgn9.sh

```
#!/bin/bash
#fibonacci

echo "Enter limit for fibonacci series:"
read num

a=0
b=1

echo -n "$a "

while [ $b -le $num ]
do
    echo -n "$b "
    c=$((a+b))
    a=$b
    b=$c
done

echo " "
```

Read 21 lines

Help	Write Out	Where Is	Cut	Execute	Location	Undo	Set Mark	To Bracket	Previous	Back
Exit	Read File	Replace	Paste	Justify	Go To Line	Redo	Copy	Where Was	Next	Forward
										Prev Word
										Next Word

sumukh_g@Sumukh: ~

GNU nano 6.2pgn9.sh

```
#!/bin/bash
#fibonacci

echo "Enter limit for fibonacci series:"
read num

a=0
b=1

echo -n "$a "

while [ $b -le $num ]
do
    echo -n "$b "
    c=$((a+b))
    a=$b
    b=$c
done

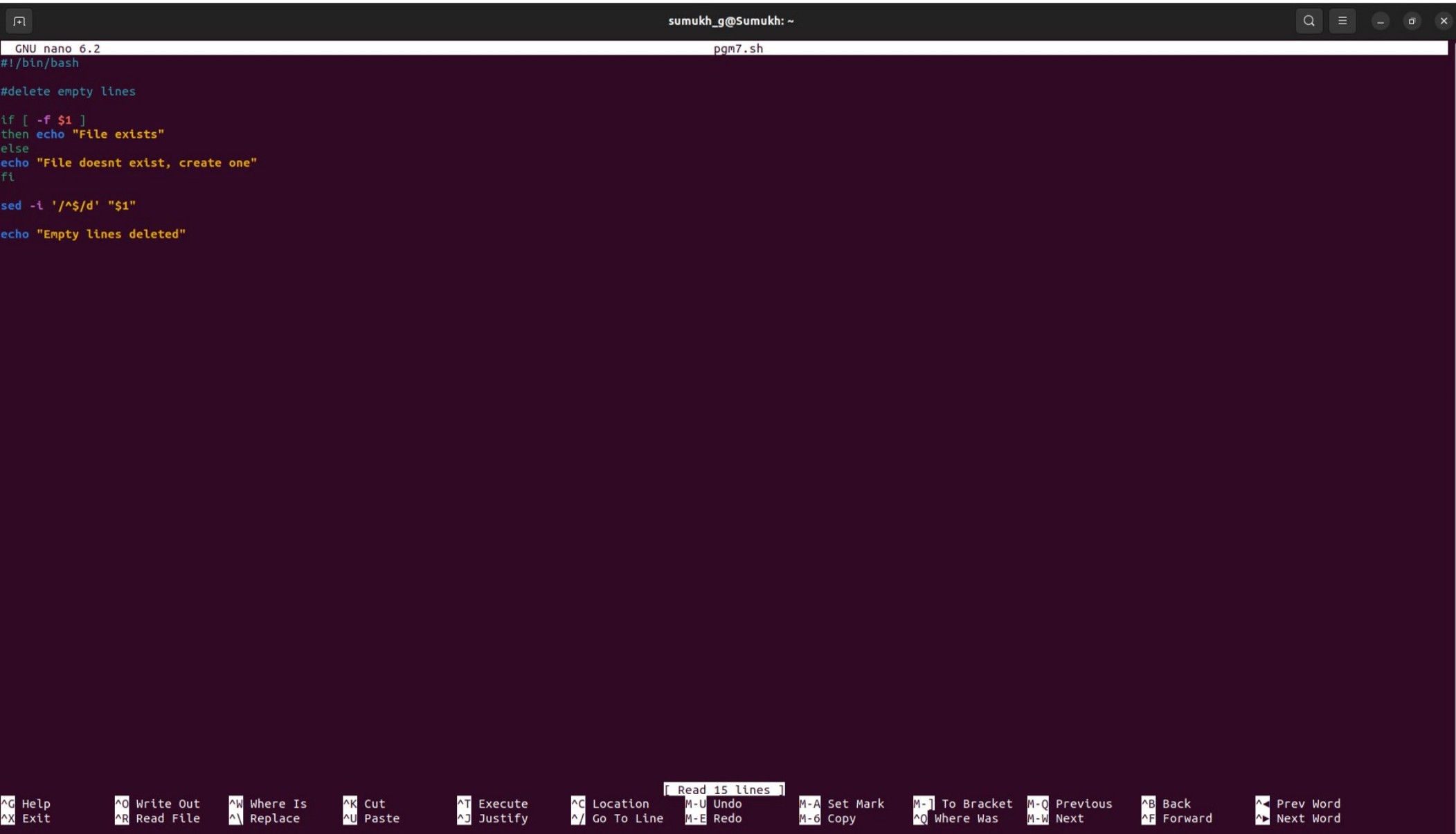
echo " "
```

Read 21 lines

Help	Write Out	Where Is	Cut	Execute	Location	Undo	Set Mark	To Bracket	Previous	Back
Exit	Read File	Replace	Paste	Justify	Go To Line	Redo	Copy	Where Was	Next	Forward
										Prev Word
										Next Word

sumukh_g@Sumukh: ~

```
sumukh_g@Sumukh:~$ nano pgm9.sh
sumukh_g@Sumukh:~$ ./pgm9.sh
Enter limit for fibonacci series:
13
0 1 1 2 3 5 8 13
sumukh_g@Sumukh:~$
```



sumukh_g@Sumukh: ~

GNU nano 6.2pgn7.sh

```
#!/bin/bash

#delete empty lines

if [ -f $1 ]
then echo "File exists"
else
echo "File doesnt exist, create one"
fi

sed -i '/^$/d' "$1"

echo "Empty lines deleted"
```

Read 15 lines

^G Help	^O Write Out	^W Where Is	^K Cut	^T Execute	^C Location	M-U Undo	M-A Set Mark	M-T To Bracket	M-Q Previous	^B Back	^L Prev Word
^X Exit	^R Read File	^J Replace	^U Paste	^J Justify	^/_ Go To Line	M-E Redo	M-6 Copy	^Q Where Was	M-W Next	^F Forward	^P Next Word

```
sumukh_g@Sumukh: ~  
sumukh_g@Sumukh:~$ cat file.txt  
Hello, I am Sumukh  
  
I am from Bengaluru  
  
I studied BE in civil  
sumukh_g@Sumukh:~$ nano pgm7.sh  
sumukh_g@Sumukh:~$ chmod +X pgm7.sh  
sumukh_g@Sumukh:~$ ./pgm7.sh file.txt  
bash: ./pgm7.sh: Permission denied  
sumukh_g@Sumukh:~$ chmod +x pgm7.sh  
sumukh_g@Sumukh:~$ ./pgm7.sh file.txt  
File exists  
Empty lines deleted  
sumukh_g@Sumukh:~$ cat file.txt  
Hello, I am Sumukh  
I am from Bengaluru  
I studied BE in civil  
sumukh_g@Sumukh:~$
```


sumukh_g@Sumukh: ~

GNU nano 6.2pgn6.sh

#! /bin/bash

#reverse pgm

num=\$1
rev=""

while [\$num -gt 0]
do
 rem=\$((\$num % 10))
 rev="\$rev\$rem"
 num=\$((\$num / 10))
done

echo "The reversed number of entered number is \$rev"

^G Help

^X Exit

^O Write Out

^R Read File

^W Where Is

^_ Replace

^K Cut

^U Paste

^T Execute

^J Justify

^C Location

^_ Go To Line

Read 16 lines

M-U Undo

M-E Redo

M-A Set Mark

M-6 Copy

M-] To Bracket

^O Where Was

M-; Previous

M-~ Next

^B Back

^F Forward

^_ Prev Word

^_ Next Word

sumukh_g@Sumukh: ~

```
sumukh_g@Sumukh:~$ nano pgm6.sh
sumukh_g@Sumukh:~$ ./pgm6.sh 639872
The reversed number of entered number is 278936
sumukh_g@Sumukh:~$
```

sumukh_g@Sumukh: ~

GNU nano 6.2pgn5.sh

```
#!/bin/bash

#compare integers

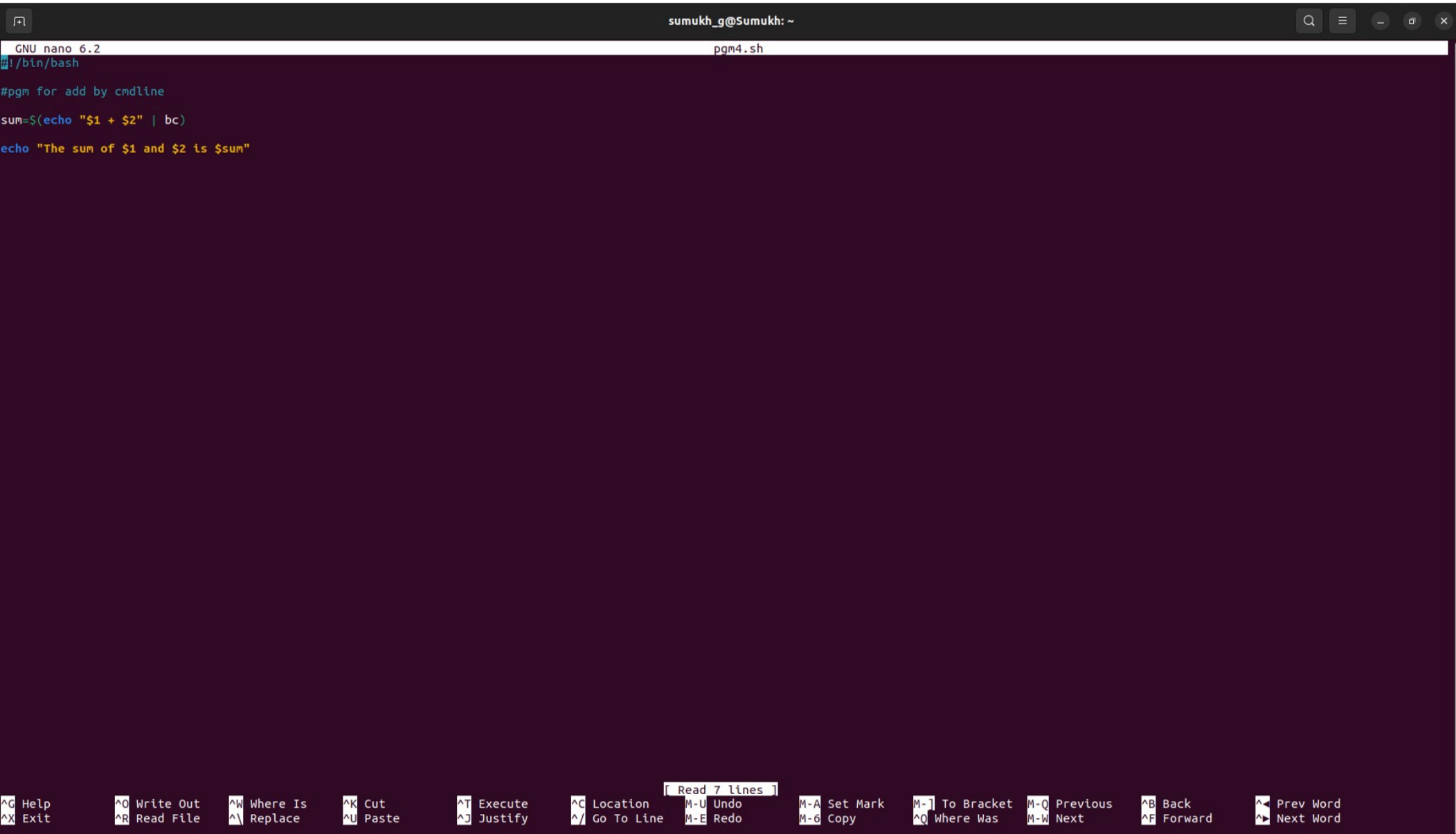
largest=0
arr=("$@")

for((i=0;i<${#};i++))
do
if [ ${arr[i]} -gt $largest ]
then
    largest=${arr[i]}
fi
done
echo "The largest value is $largest"
```

Read 16 lines

Help	Write Out	Where Is	Cut	Execute	Location	Undo	Set Mark	To Bracket	Previous	Back	Prev Word
Exit	Read File	Replace	Paste	Justify	Go To Line	Redo	Copy	Where Was	Next	Forward	Next Word

```
sumukh_g@Sumukh: ~  
sumukh_g@Sumukh:~$ nano pgm5.sh  
sumukh_g@Sumukh:~$ ./pgm5.sh 1 3 8 6 5 7 9 2  
The largest value is 9  
sumukh_g@Sumukh:~$
```



sumukh_g@Sumukh: ~

sumukh_g@Sumukh:~\$ nano pgm4.sh

sumukh_g@Sumukh:~\$./pgm4.sh 1.2 2.6

The sum of 1.2 and 2.6 is 3.8

sumukh_g@Sumukh:~\$

sumukh_g@Sumukh: ~

GNU nano 6.2pgn3.sh

```
#!/bin/bash

#addition

echo "Enter the numbers to addition: "
read num1
read num2

sum=$(echo "$num1 + $num2" | bc )

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

Read 12 lines

^G Help

^X Exit

^O Write Out

^R Read File

^W Where Is

^M Replace

^K Cut

^U Paste

^T Execute

^J Justify

^C Location

^_ Go To Line

M-U Undo

M-E Redo

M-A Set Mark

M-6 Copy

M-T To Bracket

^Q Where Was

M-Q Previous

M-W Next

^B Back

^F Forward

^_ Prev Word

^_ Next Word

```
sumukh_g@Sumukh: ~  
sumukh_g@Sumukh:~$ nano pgm3.sh  
sumukh_g@Sumukh:~$ chmod +x pgm3.sh  
sumukh_g@Sumukh:~$ ./pgm3.sh  
Enter the numbers to addition:  
4.28  
1.21  
./pgm3.sh: line 9: 4.28 + 1.21: syntax error: invalid arithmetic operator (error token is ".28 + 1.21")  
The sum of 4.28 and 1.21 is  
sumukh_g@Sumukh:~$ nano pgm3.sh  
sumukh_g@Sumukh:~$ ./pgm3.sh  
Enter the numbers to addition:  
4.28  
1.21  
sum: '=': No such file or directory  
sum: 5.49: No such file or directory  
The sum of 4.28 and 1.21 is  
sumukh_g@Sumukh:~$ nano pgm3.sh  
sumukh_g@Sumukh:~$ ./pgm3.sh  
Enter the numbers to addition:  
4.28  
1.21  
The sum of 4.28 and 1.21 is 5.49  
sumukh_g@Sumukh:~$
```


GNU nano 6.2

sumukh_g@Sumukh: ~

pgm2.sh

```
#!/bin/bash

#pgm to print pattern

echo "Enter tha value of n: "
read num
num2=1
for((i=1;i<=num;i++))
do
for((j=1;j<=i;j++))
do
echo -n "$num2 "
((num2++))
done
echo " "
done
```

Read 16 lines

^G Help

^X Exit

^O Write Out

^R Read File

^W Where Is

^_ Replace

^K Cut

^U Paste

^T Execute

^J Justify

^C Location

^_ Go To Line

^M-U Undo

^M-E Redo

^M-A Set Mark

^M-6 Copy

^M-] To Bracket

^M-[Where Was

^M-Q Previous

^M-W Next

^B Back

^F Forward

^_ Prev Word

^_ Next Word

sumukh_g@Sumukh: ~

```
sumukh_g@Sumukh:~$ nano pgm2.sh
sumukh_g@Sumukh:~$ ./pgm2.sh
Enter tha value of n:
4
1
23
456
78910
sumukh_g@Sumukh:~$ nano pgm2.sh
sumukh_g@Sumukh:~$ ./pgm2.sh
Enter tha value of n:
4
1
2 3
4 5 6
7 8 9 10
sumukh_g@Sumukh:~$
```

sumukh_g@Sumukh: ~

GNU nano 6.2pgn1.sh

#!/bin/bash

#Programme to print pattern

echo "Enter the value of n: "

read num

for((i=1;i<=num;i++))

do

for((j=1;j<=i;j++))

do

echo -n "\$j"

done

echo " "

done

Read 16 lines

^G Help	^O Write Out	^W Where Is	^K Cut	^T Execute	^C Location	M-U Undo	M-A Set Mark	M-T To Bracket	M-Q Previous	^B Back	^L Prev Word
^X Exit	^R Read File	^A Replace	^U Paste	^J Justify	^/_ Go To Line	M-E Redo	M-6 Copy	^Q Where Was	M-W Next	^F Forward	^P Next Word

sumukh_g@Sumukh: ~

```
sumukh_g@Sumukh:~$ nano pgm1.sh
sumukh_g@Sumukh:~$ ./pgm1.sh
Enter the value of n:
5
1
12
123
1234
12345
sumukh_g@Sumukh:~$ ./pgm1.sh
Enter the value of n:
6
1
12
123
1234
12345
123456
sumukh_g@Sumukh:~$
```

sumukh_g@Sumukh: ~

GNU nano 6.2pgn34.sh

#!/bin/bash

#bmi

read -p "Enter your weight in kgs:" weight

read -p "Enter your height in meters:" height

bmi=\$(echo "scale=2; \$weight / (\$height * \$height)" | bc)

echo "Your BMI is : \$bmi"

if ((\$(echo "\$bmi < 18.5" | bc -l)));then

echo "You are underweight"

elif ((\$(echo "\$bmi < 25" | bc -l)));then

echo "You are normal in weight"

elif ((\$(echo "\$bmi < 30" | bc -l)));then

echo "You are overweight"

else

echo "You are obese"

fi

Read 20 lines

^G Help	^O Write Out	^W Where Is	^K Cut	^T Execute	^C Location	M-U Undo	M-A Set Mark	M-T To Bracket	M-Q Previous	^B Back	^P Prev Word
^X Exit	^R Read File	^A Replace	^U Paste	^J Justify	^_ Go To Line	M-E Redo	M-6 Copy	^Q Where Was	M-W Next	^F Forward	^N Next Word

```
sumukh_g@Sumukh: ~  
sumukh_g@Sumukh:~$ nano pgm34.sh  
sumukh_g@Sumukh:~$ ./pgm34.sh  
Enter your weight in kgs:48.2  
Enter your height in meters:1.4  
Your BMI is : 24.59  
You are normal in weight  
sumukh_g@Sumukh:~$ ./pgm34.sh  
Enter your weight in kgs:50  
Enter your height in meters:2  
Your BMI is : 12.50  
You are underweight  
sumukh_g@Sumukh:~$ ./pgm34.sh  
Enter your weight in kgs:76  
Enter your height in meters:1.2  
Your BMI is : 52.77  
You are obese  
sumukh_g@Sumukh:~$
```

A screenshot of a terminal window with a dark background. At the top, a title bar shows the user 'sumukh_g@Sumukh' and the directory '~'. Below the title bar, the terminal displays the output of a 'nano' editor session. The editor is editing a file named 'pgm32.sh'. The content of the file is a shell script that checks if a user is present in the system. The script starts with '#user present', followed by an 'if' statement: 'if id "\$1" &>/dev/null'. Inside the 'if' block, there is a 'then' clause with 'echo "User \$1 is present in the system"' and an 'else' clause with 'echo "User \$1 is not present in the system"'. The script ends with 'fi'. The bottom of the terminal shows the nano editor's status bar, which lists various keyboard shortcuts for navigation and editing. A search bar at the top right of the terminal window shows the text 'Read 10 lines'.

sumukh_g@Sumukh: ~

```
sumukh_g@Sumukh:~$ nano pgm32.sh
sumukh_g@Sumukh:~$ chmod +x pgm32.sh
sumukh_g@Sumukh:~$ ./pgm32.sh root
User root is present in the system
sumukh_g@Sumukh:~$ ./pgm32.sh sumukh
User sumukh is not present in the system
sumukh_g@Sumukh:~$ ./pgm32.sh dir1
User dir1 is not present in the system
sumukh_g@Sumukh:~$
```


sumukh_g@Sumukh: ~

GNU nano 6.2pgn25.sh

```
#!/bin/bash

#recursion

print_arguments()
{
    if [ "$1" ]
    then
        echo "$1"
        print_arguments "${@:2}"
    fi
}

print_arguments "$@"
```

Read 15 lines

Help	Write Out	Where Is	Cut	Execute	Location	Undo	Set Mark	To Bracket	Previous	Back
Exit	Read File	Replace	Paste	Justify	Go To Line	Redo	Copy	Where Was	Next	Forward
									Prev Word	Next Word

sumukh_g@Sumukh: ~

GNU nano 6.2pgn25.sh

```
#!/bin/bash

#recursion

print_arguments()
{
    if [ "$1" ]
    then
        echo "$1"
        print_arguments "${@:2}"
    fi
}

print_arguments "$@"
```

Read 15 lines

^G Help	^O Write Out	^W Where Is	^K Cut	^T Execute	^C Location	M-U Undo	M-A Set Mark	M-] To Bracket	M-Q Previous	^B Back	^_ Prev Word
^X Exit	^R Read File	^I Replace	^U Paste	^J Justify	^/_ Go To Line	M-E Redo	M-6 Copy	^O Where Was	M-W Next	^F Forward	^P Next Word

sumukh_g@Sumukh: ~

```
sumukh_g@Sumukh:~$ nano pgm25.sh
sumukh_g@Sumukh:~$ chmod +x pgm25.sh
sumukh_g@Sumukh:~$ ./pgm25.sh 1 2 5 9 4 s jk l 7 5
1
2
5
9
4
s
jk
l
7
5
sumukh_g@Sumukh:~$
```

sumukh_g@Sumukh: ~

GNU nano 6.2pgn20.sh

```
#!/bin/bash

#password

for i in {1..8}
do
password=$(cat /dev/urandom | tr -dc 'a-zA-Z0-9' | fold -w 8 | head -n 1)
echo "Your random password $i : $password"
done
```

Read 13 lines

^G Help	^O Write Out	^W Where Is	^K Cut	^T Execute	^C Location	M-U Undo	M-A Set Mark	M-] To Bracket	M-Q Previous	^B Back	^_ Prev Word
^X Exit	^R Read File	^I Replace	^U Paste	^J Justify	^/_ Go To Line	M-E Redo	M-6 Copy	^O Where Was	M-W Next	^F Forward	^P Next Word

sumukh_g@Sumukh: ~

```
sumukh_g@Sumukh:~$ nano pgm20.sh
sumukh_g@Sumukh:~$ ./pgm20.sh
Your random password 1 : npLnJCQl
Your random password 2 : 8yvtmPvO
Your random password 3 : Zi8csAJA
Your random password 4 : WQooxgEi
Your random password 5 : gNEvnGrn
Your random password 6 : 8hotjJMF
Your random password 7 : et70fcqw
Your random password 8 : ll4smVIY
sumukh_g@Sumukh:~$
```