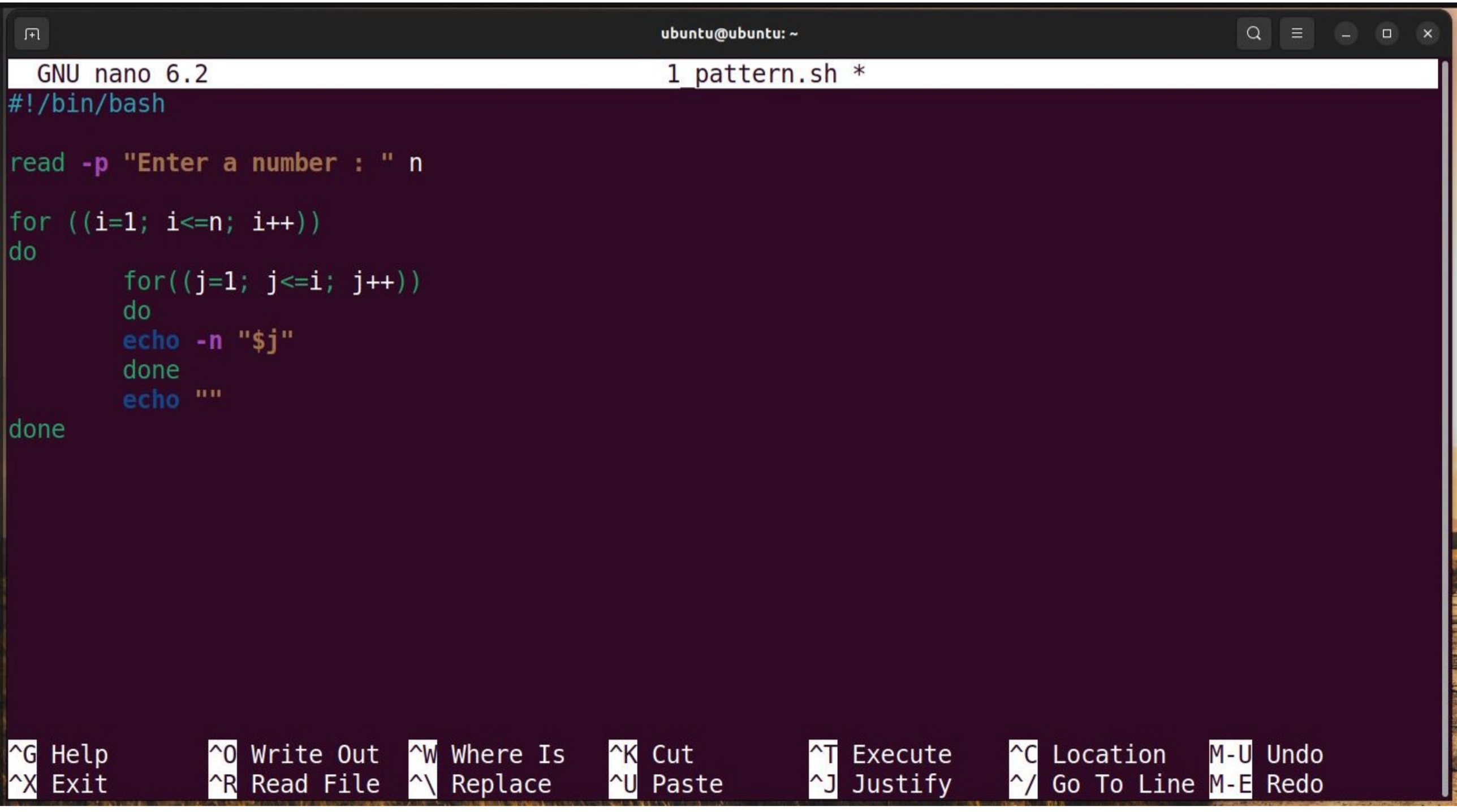
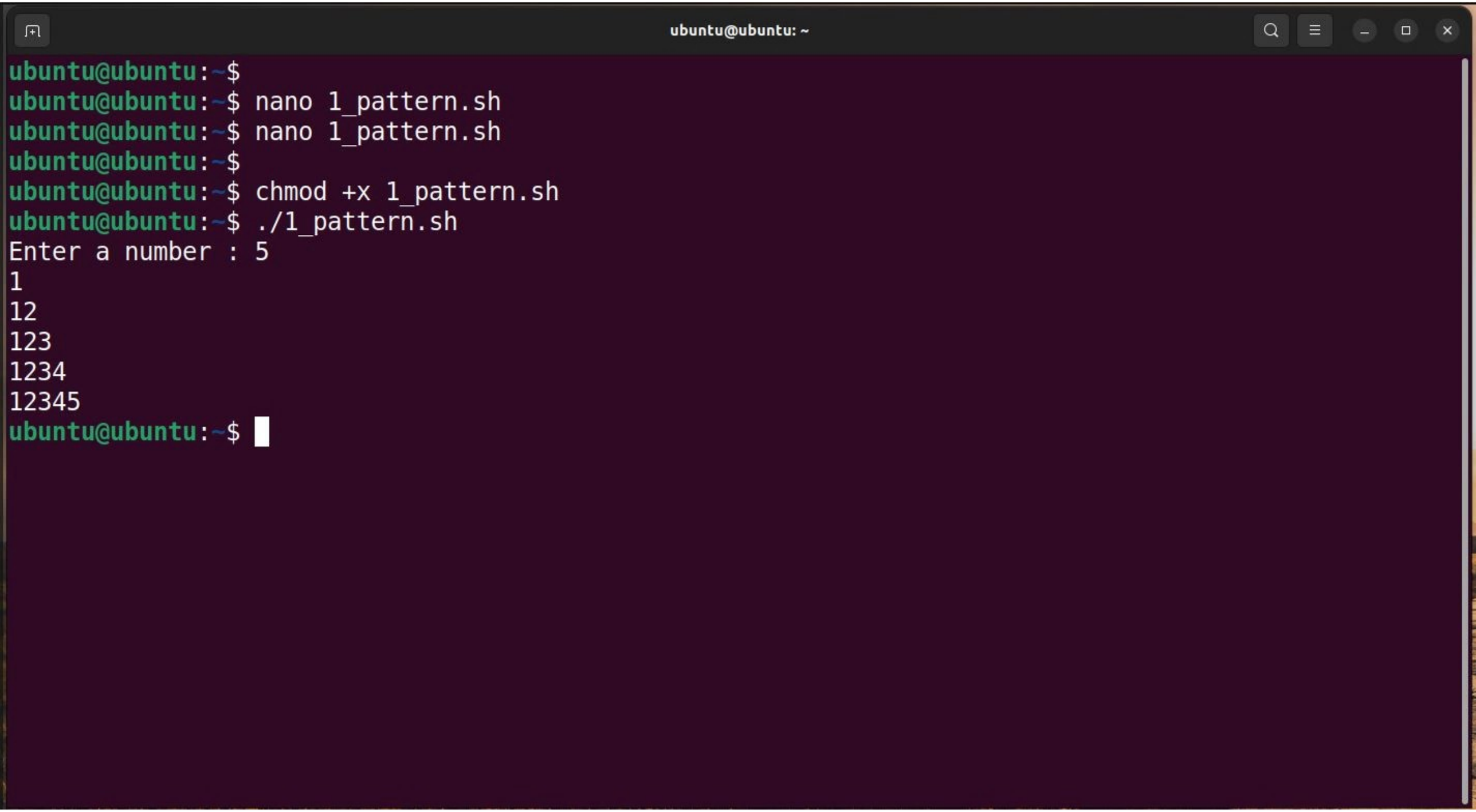

ubuntu@ubuntu: ~
GNU nano 6.2 1_pattern.sh *
#!/bin/bash
read -p "Enter a number : " n
for ((i=1; i<=n; i++))
do
for((j=1; j<=i; j++))
do
echo -n "$j"
done
echo ""
done
^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo

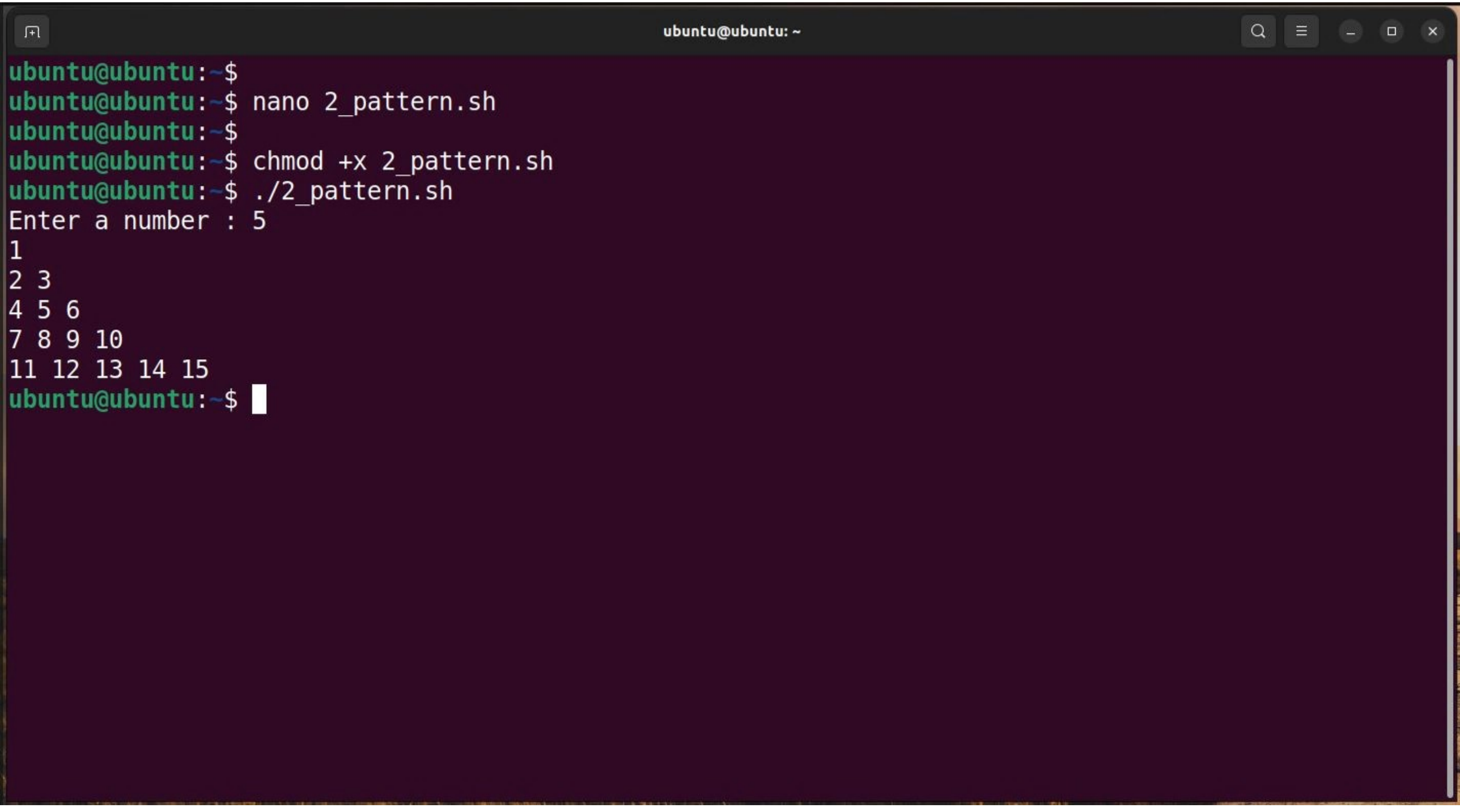

ubuntu@ubuntu: ~
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ nano 1_pattern.sh
ubuntu@ubuntu:~$ nano 1_pattern.sh
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ chmod +x 1_pattern.sh
ubuntu@ubuntu:~$ ./1_pattern.sh
Enter a number : 5
1
12
123
1234
12345
ubuntu@ubuntu:~$

ubuntu@ubuntu: ~

GNU nano 6.2 2_pattern.sh *

```
#!/bin/bash

read -p "Enter a number : " n

count=1
for ((i=1; i<=n; i++))
do
        for ((j=1; j<=i; j++))
        do
        echo -n "$count"
        count=$((count+1))
        done
        echo ""
done
```

^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo

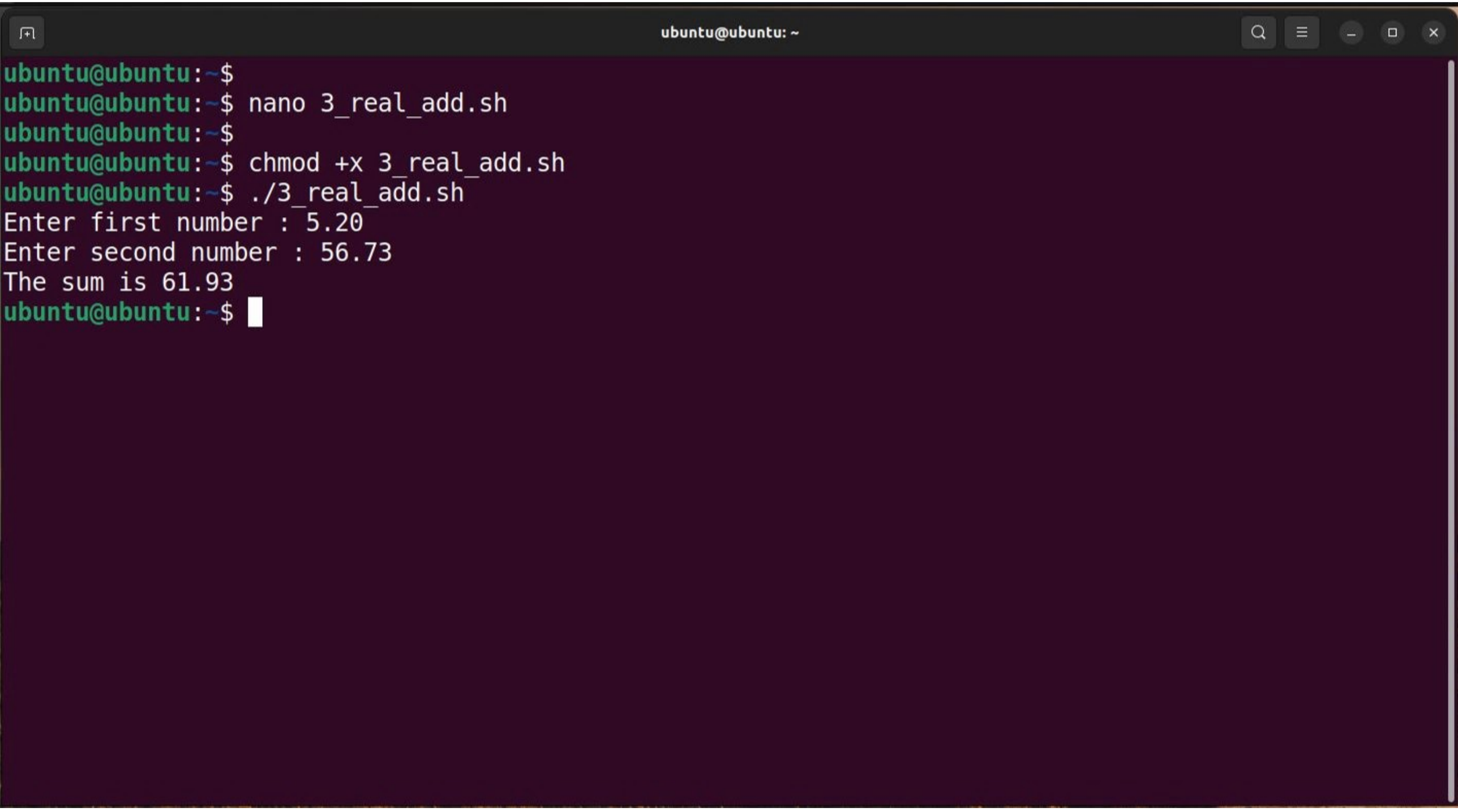

ubuntu@ubuntu: ~
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ nano 2_pattern.sh
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ chmod +x 2_pattern.sh
ubuntu@ubuntu:~$ ./2_pattern.sh
Enter a number : 5
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
ubuntu@ubuntu:~$

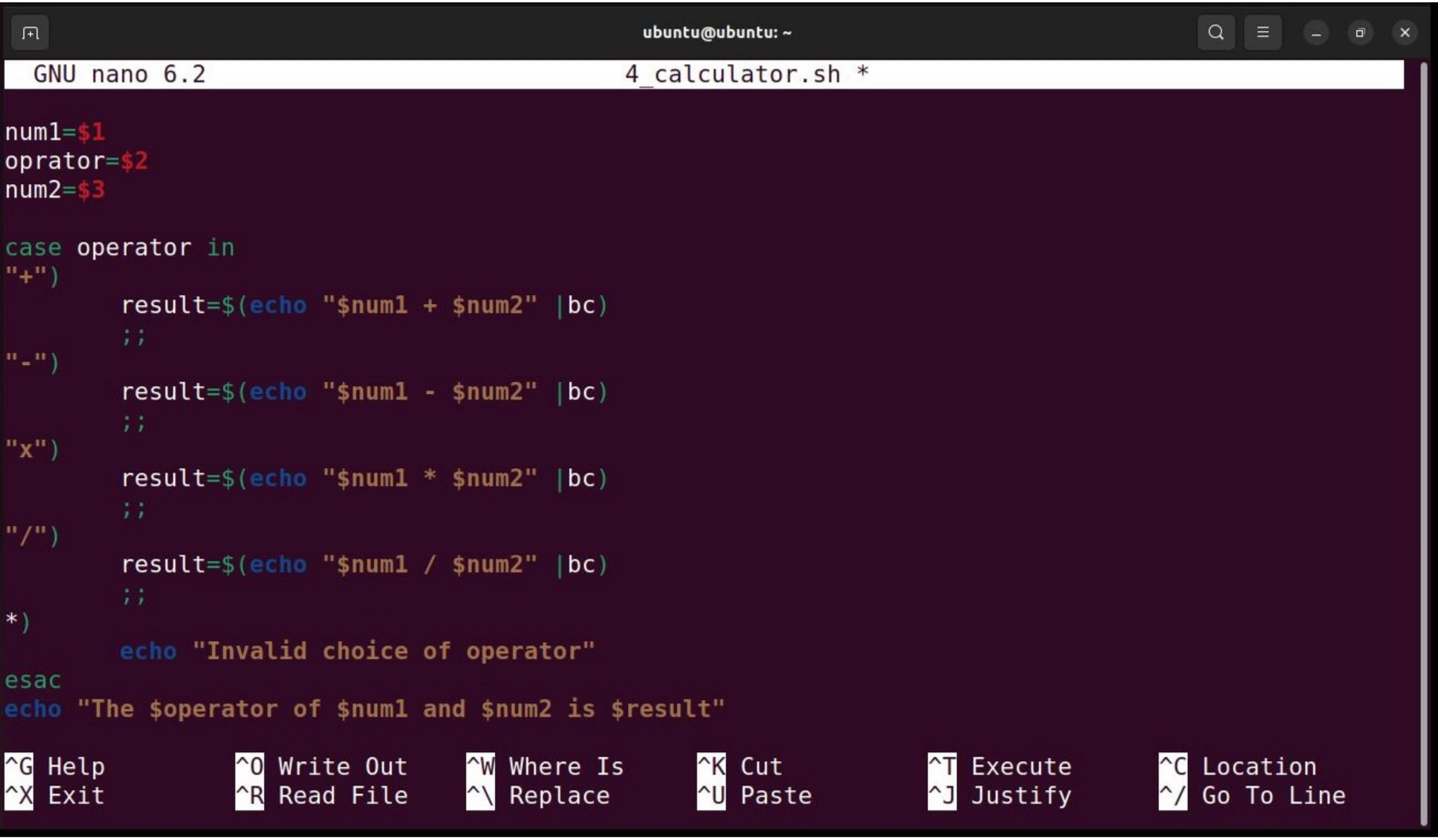
ubuntu@ubuntu: ~

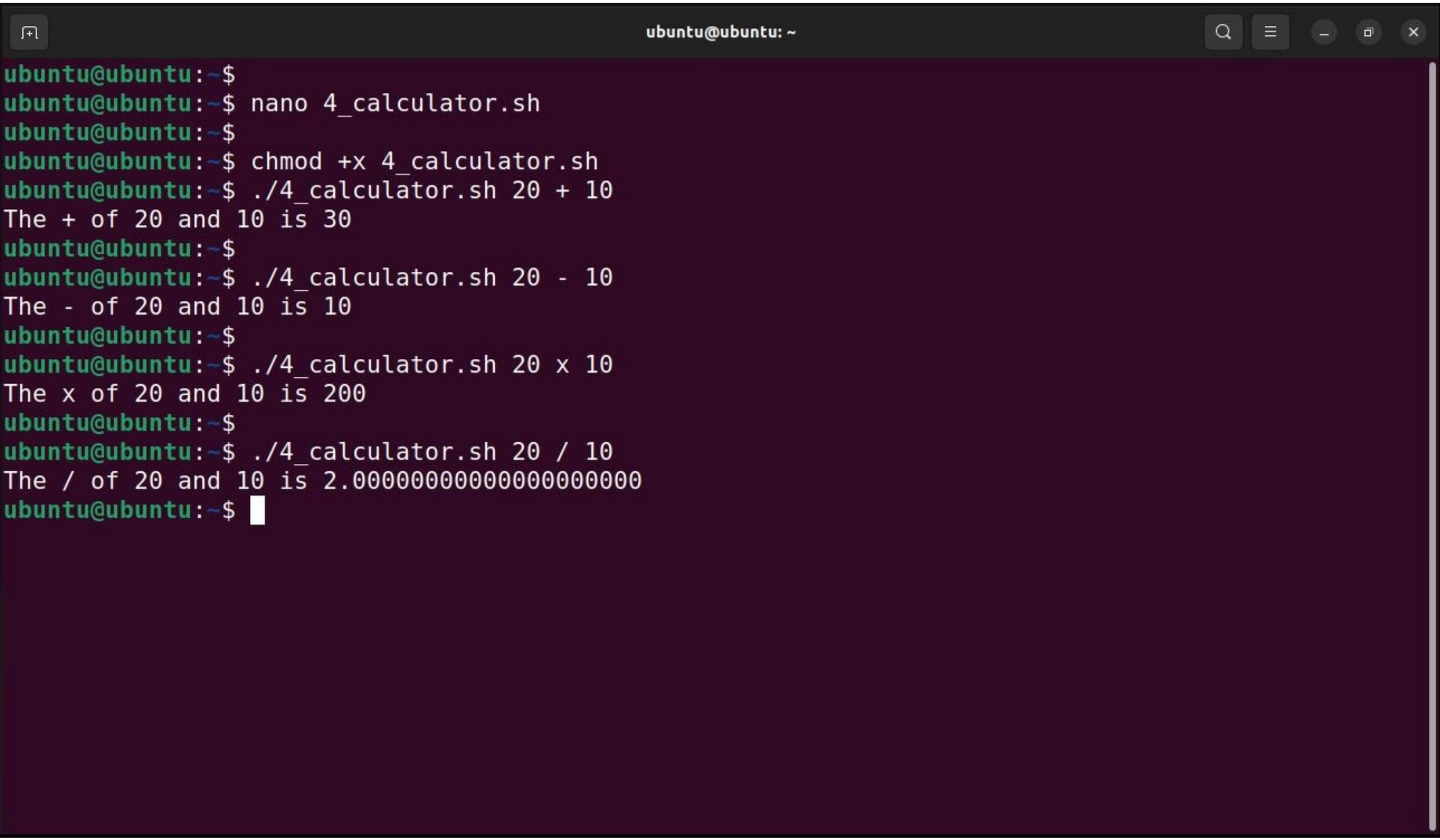
```
  GNU nano 6.2                                    3_real_add.sh
#!/bin/bash

read -p "Enter first number : " num1
read -p "Enter second number : " num2

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

echo "The sum is $sum"
```

[Read 10 lines]

^G Help	^O Write Out	^W Where Is	^K Cut	^T Execute	^C Location	M-U Undo
^X Exit	^R Read File	^\ Replace	^U Paste	^J Justify	^/ Go To Line	M-E Redo


ubuntu@ubuntu: ~
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ nano 3_real_add.sh
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ chmod +x 3_real_add.sh
ubuntu@ubuntu:~$ ./3_real_add.sh
Enter first number : 5.20
Enter second number : 56.73
The sum is 61.93
ubuntu@ubuntu:~$


ubuntu@ubuntu: ~
GNU nano 6.2 4_calculator.sh *
num1=$1
oprator=$2
num2=$3
case operator in
"+")
result=$(echo "$num1 + $num2" |bc)
;;
"-")
result=$(echo "$num1 - $num2" |bc)
;;
"x")
result=$(echo "$num1 * $num2" |bc)
;;
"/")
result=$(echo "$num1 / $num2" |bc)
;;
*)
echo "Invalid choice of operator"
esac
echo "The $operator of $num1 and $num2 is $result"
^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

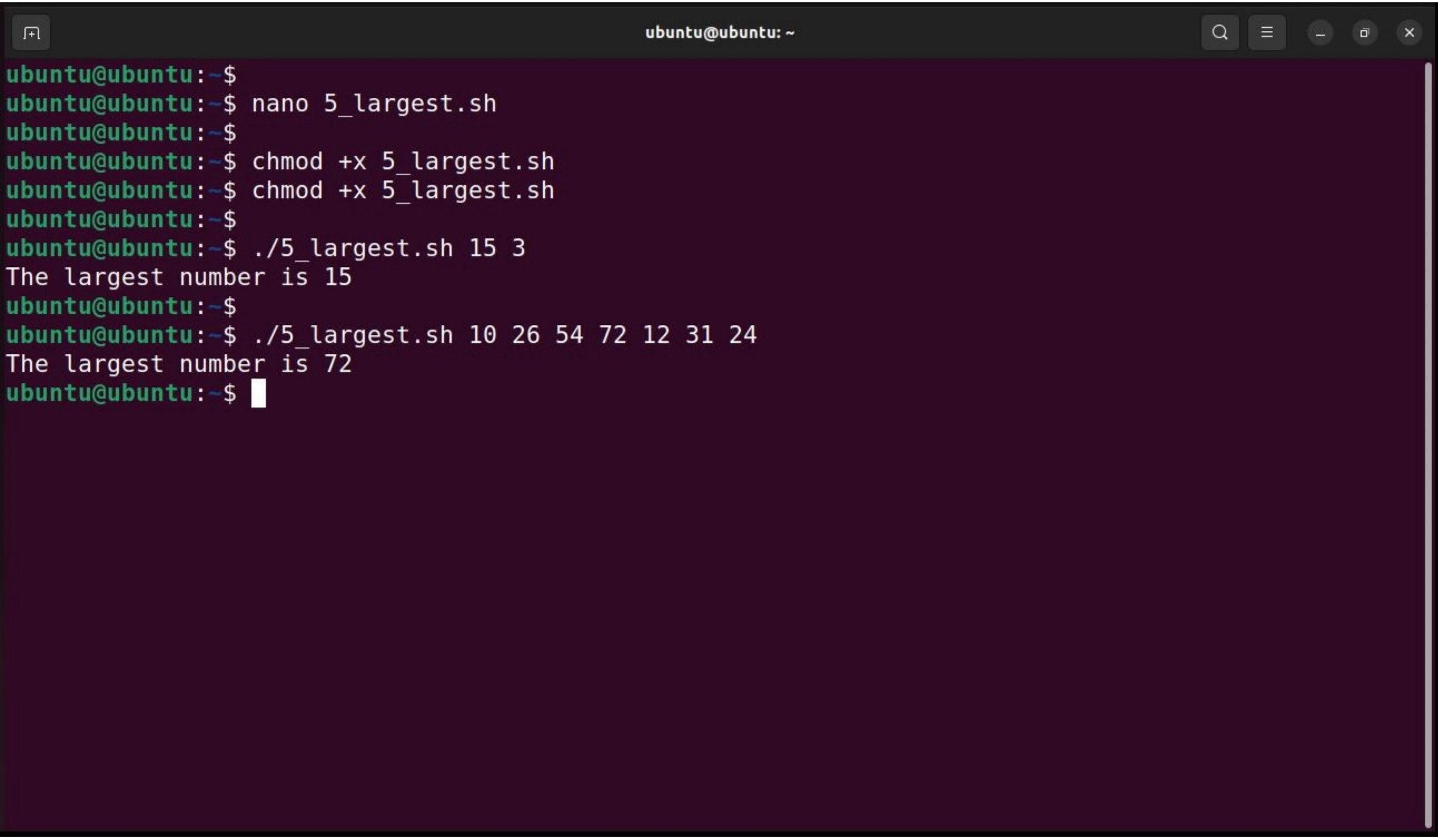

ubuntu@ubuntu: ~
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ nano 4_calculator.sh
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ chmod +x 4_calculator.sh
ubuntu@ubuntu:~$ ./4_calculator.sh 20 + 10
The + of 20 and 10 is 30
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ ./4_calculator.sh 20 - 10
The - of 20 and 10 is 10
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ ./4_calculator.sh 20 x 10
The x of 20 and 10 is 200
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ ./4_calculator.sh 20 / 10
The / of 20 and 10 is 2.000000000000000000
ubuntu@ubuntu:~$

ubuntu@ubuntu: ~

GNU nano 6.2 5_largest.sh * M

```
#!/bin/bash

max=$1

for num in "$@";

do
if [ "$num" -gt "$max" ]
then
max=$num
fi
done

echo "The largest number is $max"
```

^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

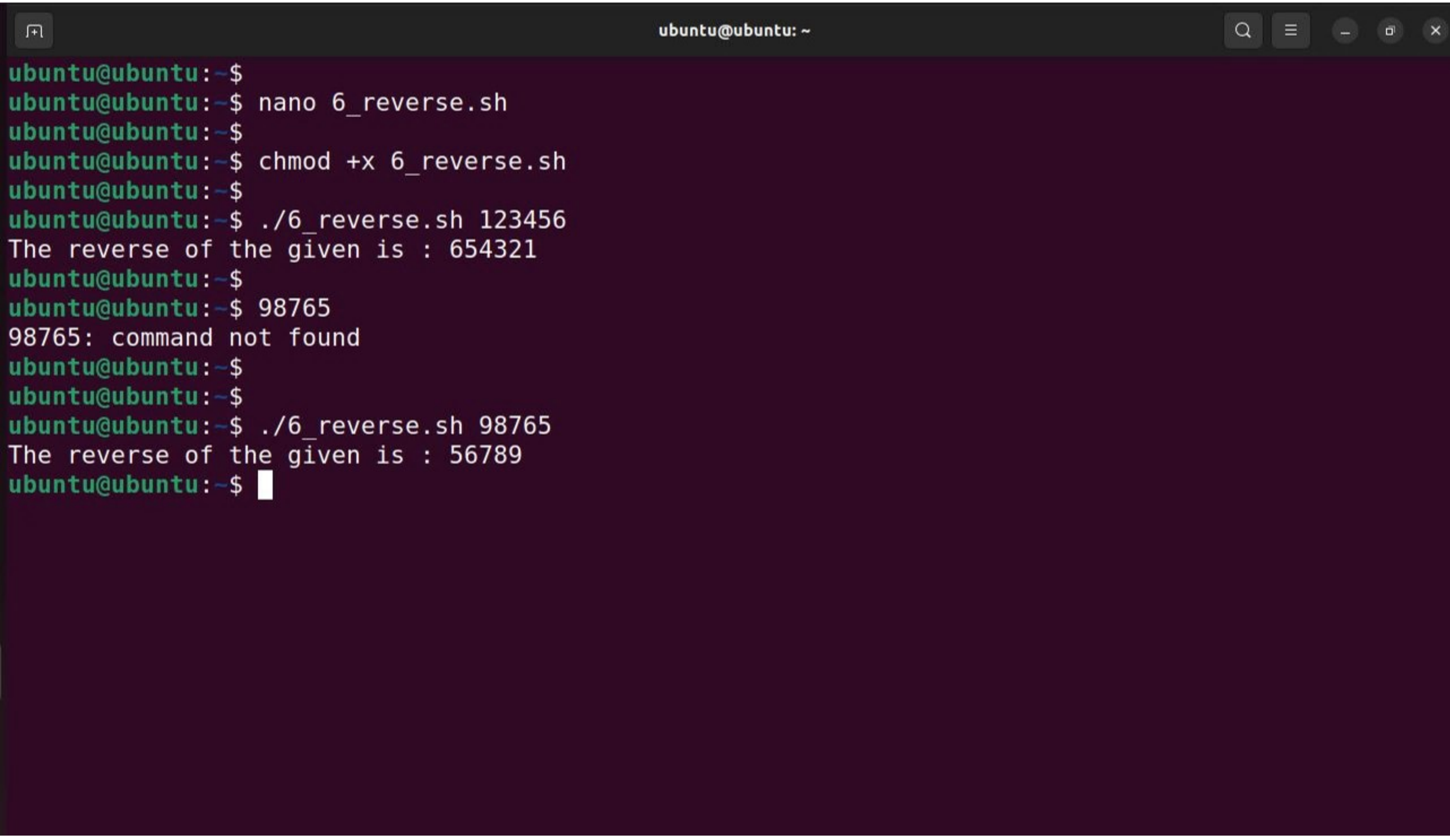

ubuntu@ubuntu: ~
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ nano 5_largest.sh
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ chmod +x 5_largest.sh
ubuntu@ubuntu:~$ chmod +x 5_largest.sh
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ ./5_largest.sh 15 3
The largest number is 15
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ ./5_largest.sh 10 26 54 72 12 31 24
The largest number is 72
ubuntu@ubuntu:~$

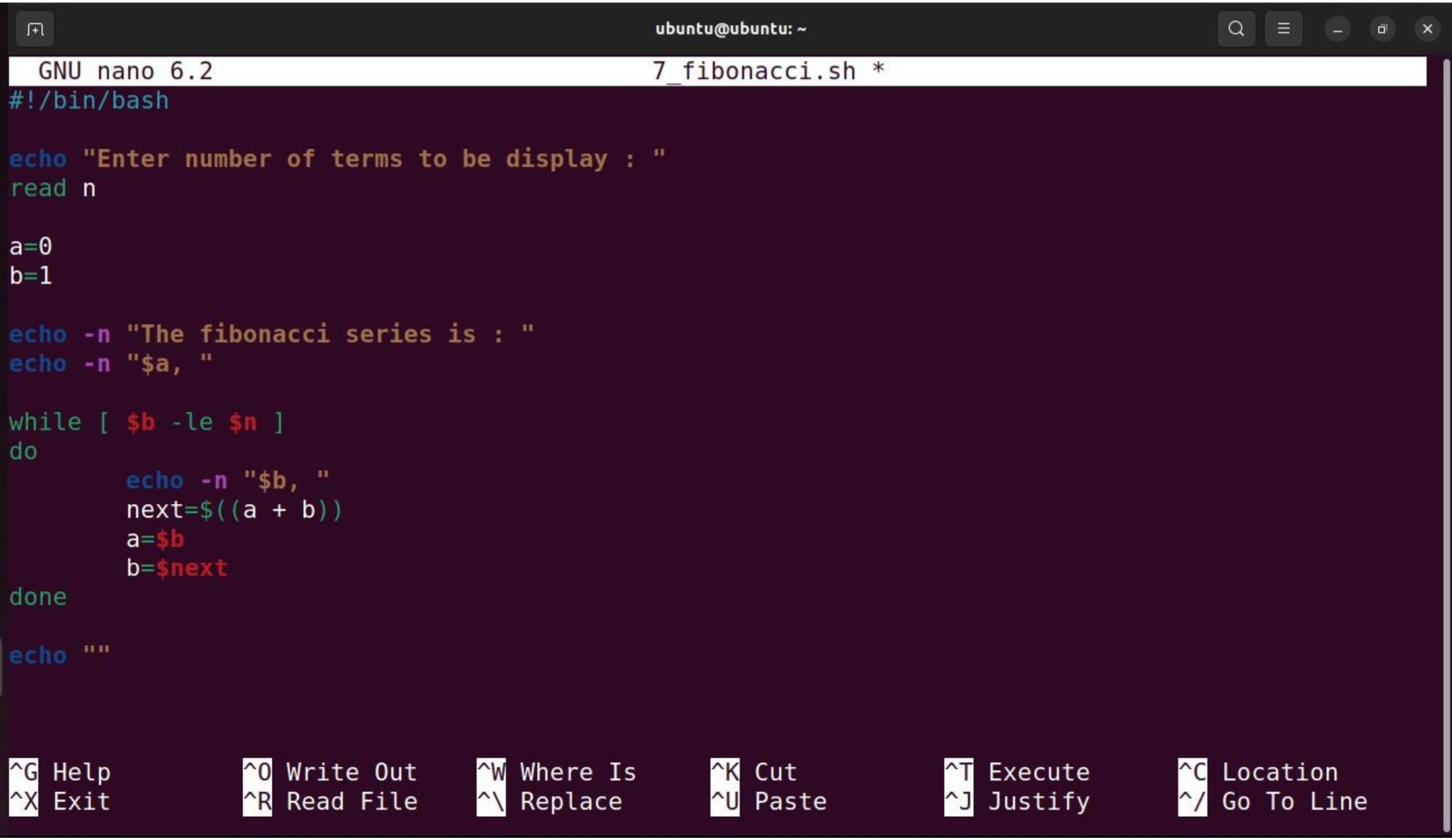
ubuntu@ubuntu: ~

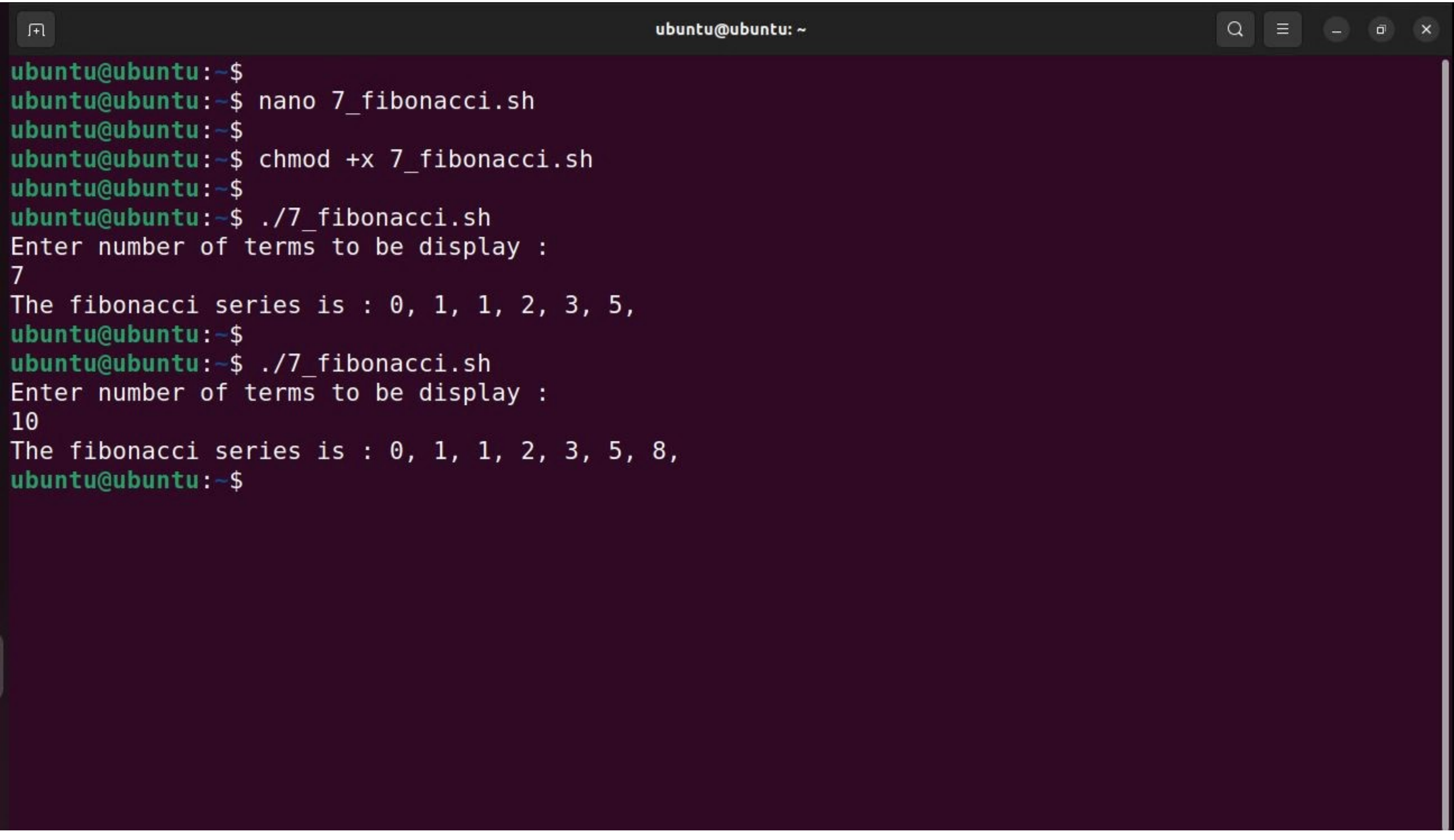
GNU nano 6.2 6_reverse.sh *

```
#!/bin/bash

number="$1"
reverse=""

for (( i=${#number}-1; i>=0; i-- ))
do
        reverse="$reverse${number:$i:1}"
done

echo "The reverse of the given is : $reverse"
```

^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


ubuntu@ubuntu: ~
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ nano 6_reverse.sh
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ chmod +x 6_reverse.sh
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ ./6_reverse.sh 123456
The reverse of the given is : 654321
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ 98765
98765: command not found
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ ./6_reverse.sh 98765
The reverse of the given is : 56789
ubuntu@ubuntu:~$


ubuntu@ubuntu: ~
GNU nano 6.2 7_fibonacci.sh *
#!/bin/bash
echo "Enter number of terms to be display : "
read n
a=0
b=1
echo -n "The fibonacci series is : "
echo -n "$a, "
while [$b -le $n]
do
echo -n "$b, "
next=$((a + b))
a=$b
b=$next
done
echo ""
^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


ubuntu@ubuntu: ~
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ nano 7_fibonacci.sh
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ chmod +x 7_fibonacci.sh
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ ./7_fibonacci.sh
Enter number of terms to be display :
7
The fibonacci series is : 0, 1, 1, 2, 3, 5,
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ ./7_fibonacci.sh
Enter number of terms to be display :
10
The fibonacci series is : 0, 1, 1, 2, 3, 5, 8,
ubuntu@ubuntu:~$

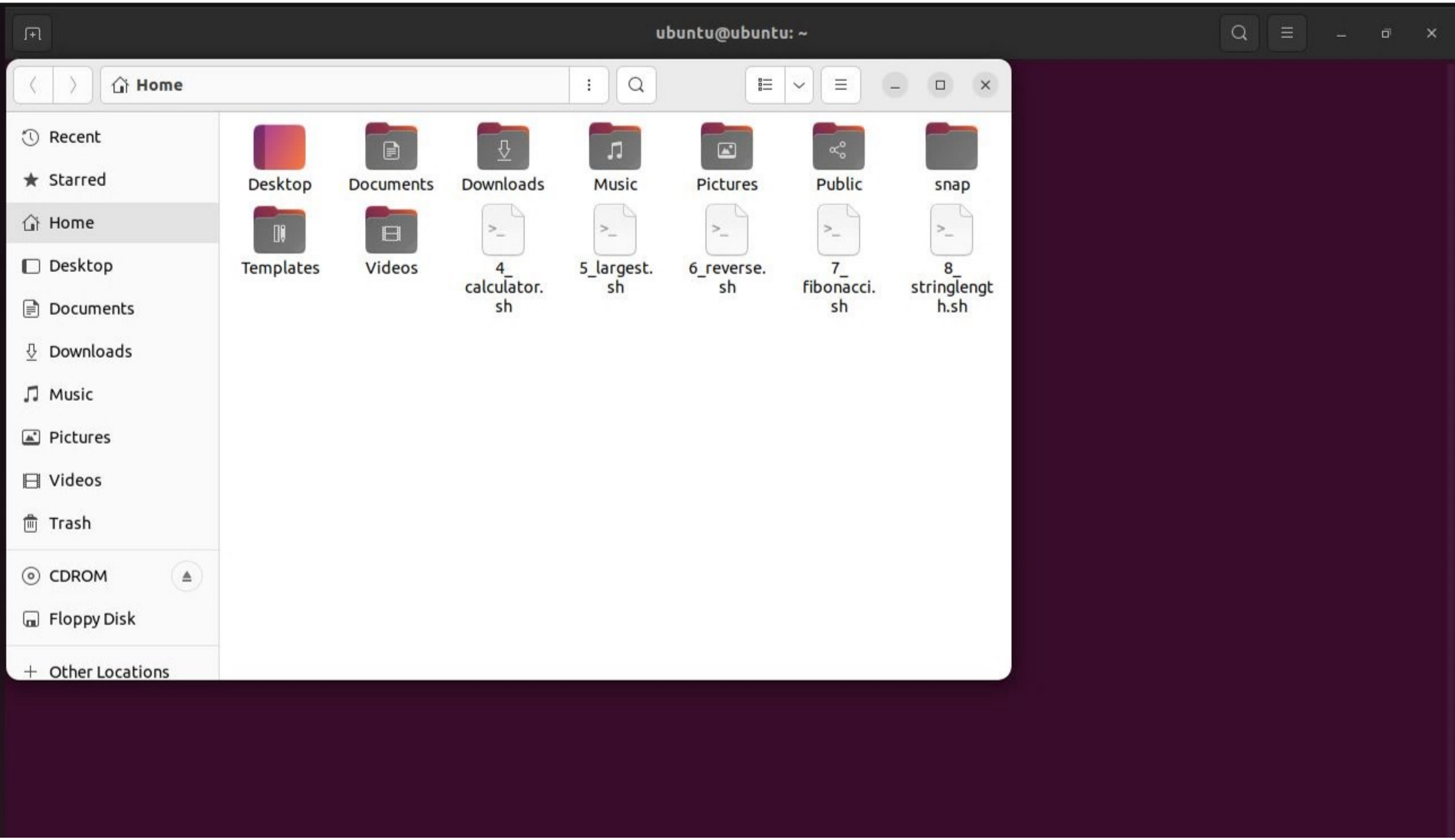
ubuntu@ubuntu: ~

GNU nano 6.2 8_stringlength.sh *

```
#!/bin/bash

input=("$@")

echo "The length f strings are : "

for (( i=0; i<${#input[@]}; i++ ));
do
        echo "Length of string(${input[$i]}) - ${#input[i]}"
done
```

^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


ubuntu@ubuntu: ~
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ nano 8_stringlength.sh
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ chmod +x 8_stringlength.sh
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ ./8_stringlength.sh
The length f strings are :
ubuntu@ubuntu:~$ ./8_stringlength.sh this is nikhil
The length f strings are :
Length of string(this) - 4
Length of string(is) - 2
Length of string(nikhil) - 6
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ ./8_stringlength.sh hello how are you ?
The length f strings are :
Length of string(hello) - 5
Length of string(how) - 3
Length of string(are) - 3
Length of string(you) - 3
Length of string(?) - 1
ubuntu@ubuntu:~$

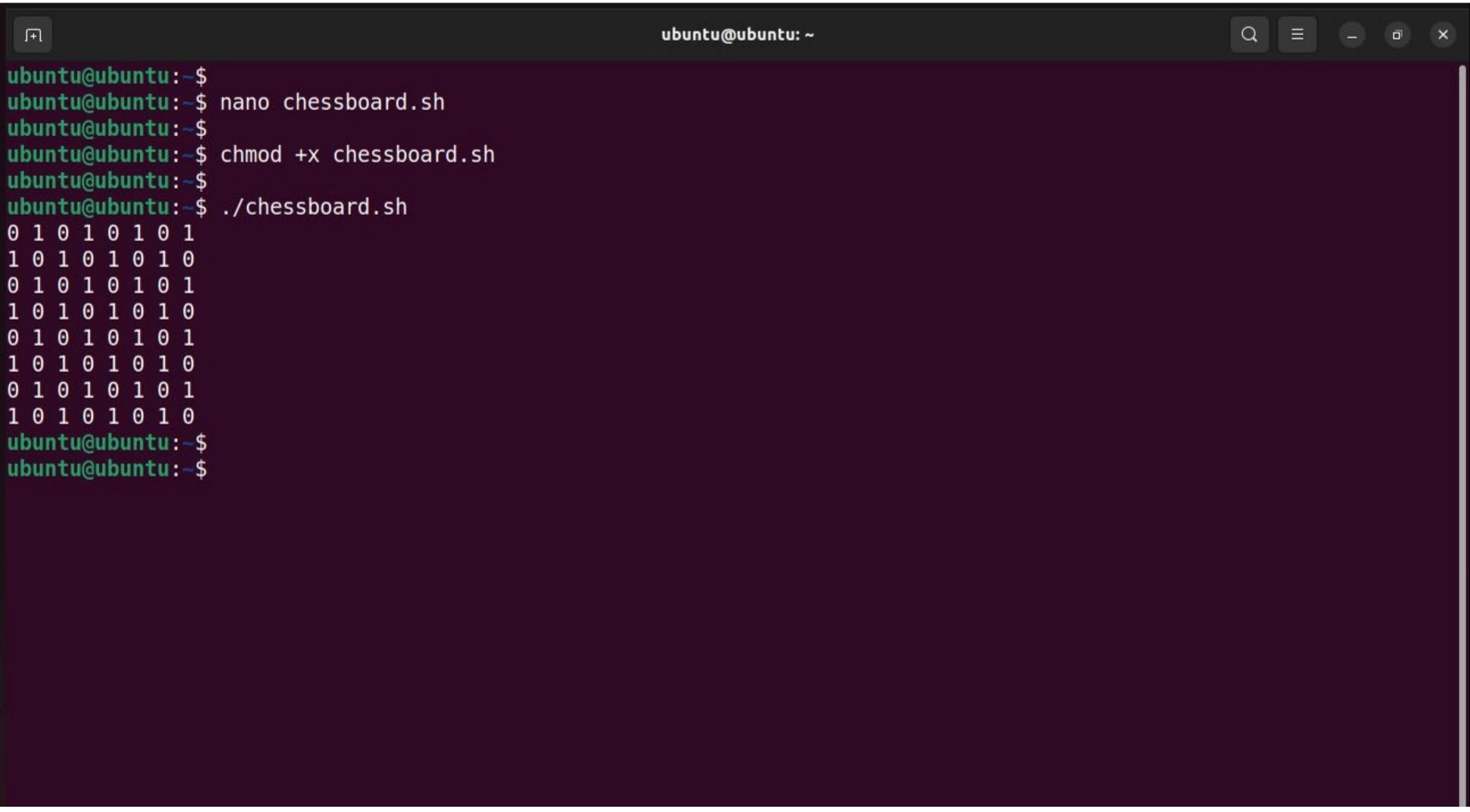

ubuntu@ubuntu: ~
Home
Recent
Starred
Home
Desktop
Documents
Downloads
Music
Pictures
Videos
Trash
CDROM
Floppy Disk
Other Locations
Desktop
Documents
Downloads
Music
Pictures
Public
snap
Templates
Videos
4_ calculator. sh
5_largest. sh
6_reverse. sh
7_ fibonacci. sh
8_ stringlengt h.sh

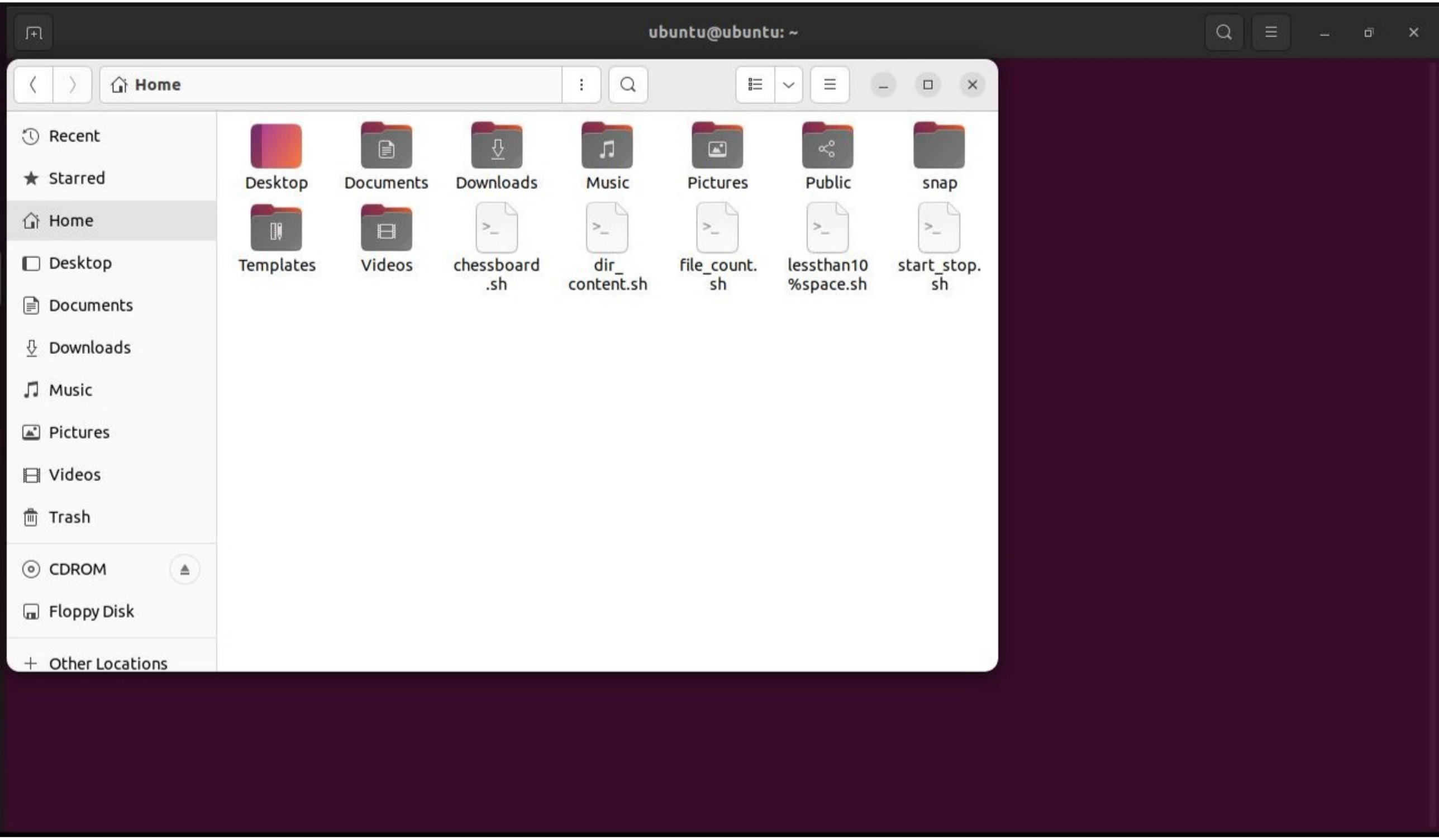
ubuntu@ubuntu: ~

GNU nano 6.2 chessboard.sh

```
#!/bin/bash

row=8
col=8

for ((i=1; i<=row; i++ ))
do
        for ((j=1; j<=col; j++ ))
        do
        sum=$(($i+$j))
        if [ $((sum % 2)) -eq 0 ]
        then
        echo -n "0 "
        else
        echo -n "1 "
        fi
        done
        echo " "
done
```

^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo


ubuntu@ubuntu: ~
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ nano chessboard.sh
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ chmod +x chessboard.sh
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ ./chessboard.sh
0 1 0 1 0 1 0 1
1 0 1 0 1 0 1 0
0 1 0 1 0 1 0 1
1 0 1 0 1 0 1 0
0 1 0 1 0 1 0 1
1 0 1 0 1 0 1 0
0 1 0 1 0 1 0 1
1 0 1 0 1 0 1 0
ubuntu@ubuntu:~$
ubuntu@ubuntu:~$


ubuntu@ubuntu: ~
Home
Recent
Starred
Home
Desktop
Documents
Downloads
Music
Pictures
Videos
Trash
CDROM
Floppy Disk
Other Locations
Desktop
Documents
Downloads
Music
Pictures
Public
snap
Templates
Videos
chessboard .sh
dir_ content.sh
file_count. sh
lessthan10 %space.sh
start_stop. sh