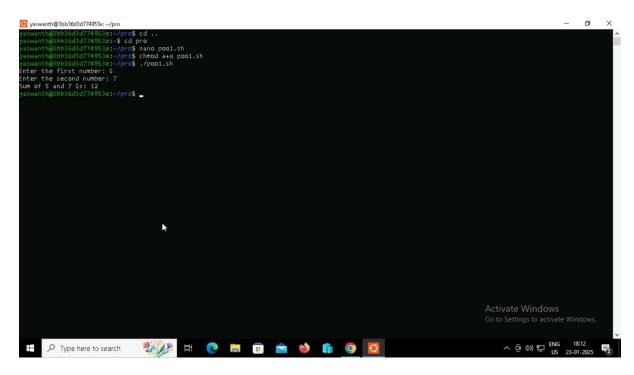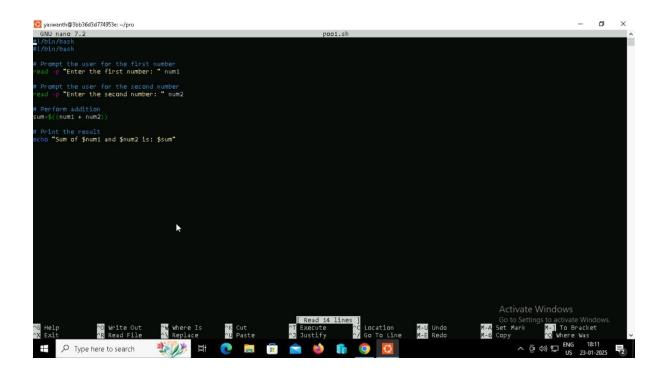# PROGRAMS FOR SHELL AND BASHSCRIPTING

1.PROGRAM FOR SUM OF NUMBERS(arithmetic operation):
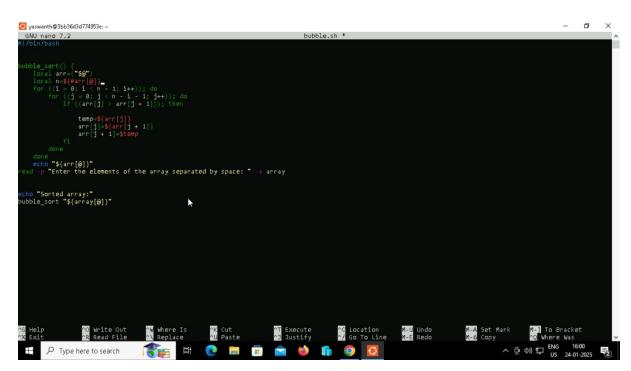

NANO EDITOR TO EDIT AND MANAGE CODE OF SUM OF NUMBERS:
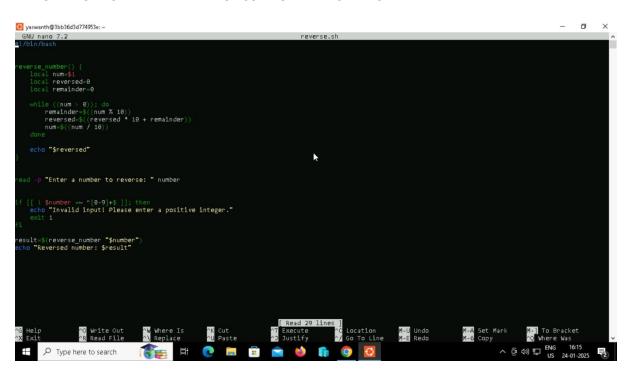
2. PROGRAM FOR BUBBLE SORTING :


```
-rw-r--r-- 1 yaswanth yaswanth 113 Jan 22 06:17 file2.txt
-rw-r--r-- 1 yaswanth yaswanth  16 Jan 22 06:32 file3.txt
-rwxrwxrwx 1 root     yaswanth  16 Jan 22 06:33 file4.txt
---xrwxrwx 1 root     yaswanth  16 Jan 22 06:34 file5.txt
-rwxr-xr-x 1 yaswanth yaswanth  51 Jan 23 09:37 for.sh
-rwxr-xr-x 1 yaswanth yaswanth  57 Jan 23 10:14 function.sh
-rw-r--r-- 1 yaswanth yaswanth  37 Jan 23 10:06 'function.sh\'
drwxr-xr-x 3 yaswanth yaswanth 4096 Jan 22 04:37 linux
-rw-r--r-- 1 yaswanth yaswanth 346 Jan 23 04:34 new.zip
-rwxrwxrwx 1 yaswanth yaswanth 142 Jan 22 06:39 newall.txt
drwxr-xr-x 2 yaswanth yaswanth 4096 Jan 23 12:24 pro
-rwxr-xr-x 1 yaswanth yaswanth 208 Jan 22 09:39 project.txt
-rw-r--r-- 1 yaswanth yaswanth  13 Jan 22 06:19 text.txt
-rwxr-xr-x 1 yaswanth yaswanth 123 Jan 23 09:59 while.sh
-rw-r--r-- 1 yaswanth yaswanth  63 Jan 23 09:44 while.shu
yaswanth@3bb36d3d774953e:~$ nano bubble.sh
yaswanth@3bb36d3d774953e:~$ chmod a+x bubble.sh
yaswanth@3bb36d3d774953e:~$ ./bubble.sh
Enter the elements of the array separated by space: 7 9 3 14 5 0
Sorted array:
0 3 5 7 9 14
yaswanth@3bb36d3d774953e:~$
```

NANO EDITOR TO EDIT AND MANAGE CODE OF BUBBLE SORT:


```
  GNU nano 7.2                                      bubble.sh *
#!/bin/bash

bubble_sort() {
    local arr=("$@")
    local n=${#arr[@]}
    for ((i = 0; i < n - 1; i++)); do
        for ((j = 0; j < n - i - 1; j++)); do
            if ((arr[j] > arr[j + 1])); then

                temp=${arr[j]}
                arr[j]=${arr[j + 1]}
                arr[j + 1]=$temp
            fi
        done
    done
    echo "${arr[@]}"
}
read -p "Enter the elements of the array separated by space: " -a array

echo "Sorted array:"
bubble_sort "${array[@]}"
```

3.PROGRAM FOR REVERSE A NUMBER:

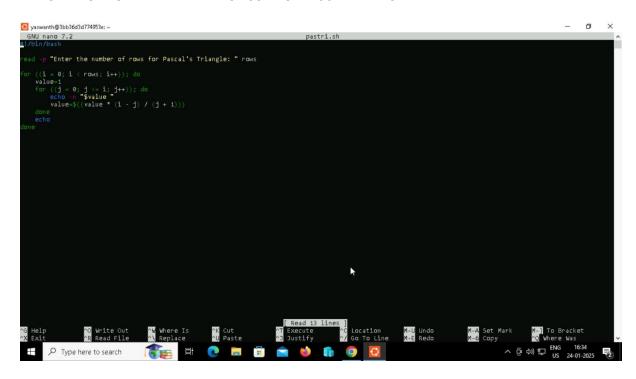### NANO EDITOR TO EDIT AND MANAGE CODE OF REVERSE A NUMBER:

4.PROGRAM FOR SUM OF ARRAYS:

NANO EDITOR TO EDIT AND MANAGE CODE OF SUM OF ARRAYS:
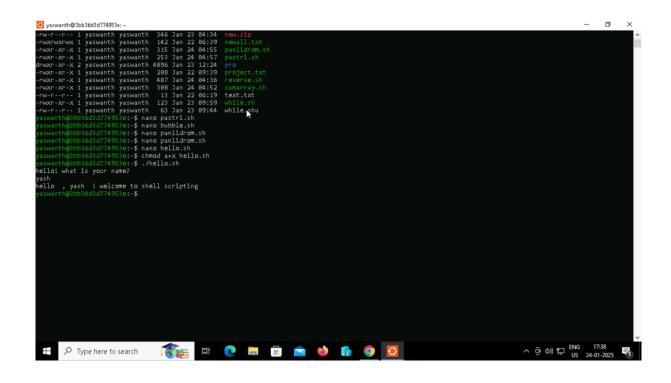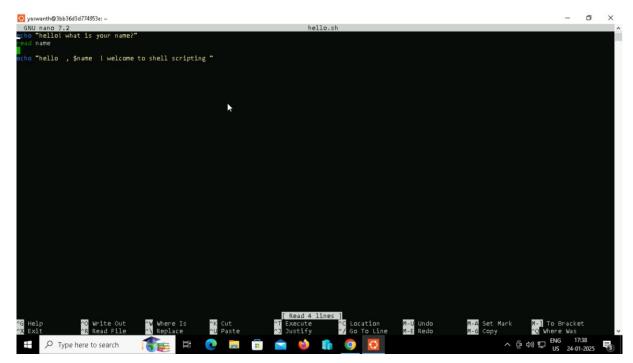
5. PROGRAM FOR PASCAL TRIANGLE :

NANO EDITOR TO EDIT AND MANAGE CODE OF PASCAL TRIANGLE:

6.SIMPLE SHELL SCRIPTING PROGRAM :

7.PROGRAM FOR PANLIDROME :

NANO EDITOR TO EDIT AND MANAGE CODE OF PANLIDROME


```bash
#!/bin/bash

read -p "Enter a number: " num
original=$num
reversed=0

while ((num > 0)); do
    remainder=$((num % 10))
    reversed=$((reversed * 10 + remainder))
    num=$((num / 10))
done

if ((original == reversed)); then
    echo "$original is a palindrome."
else
    echo "$original is not a palindrome."
fi
```