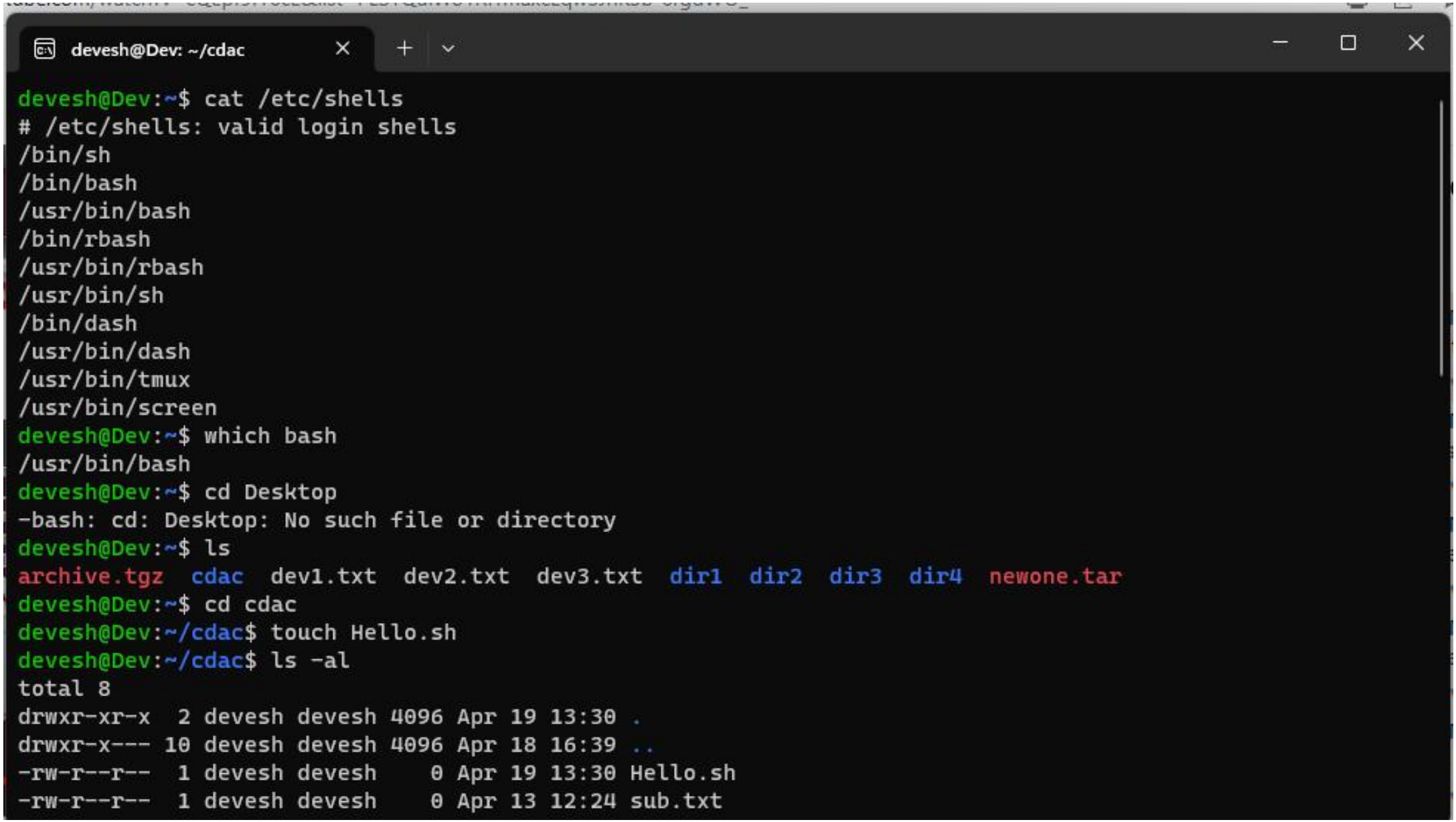
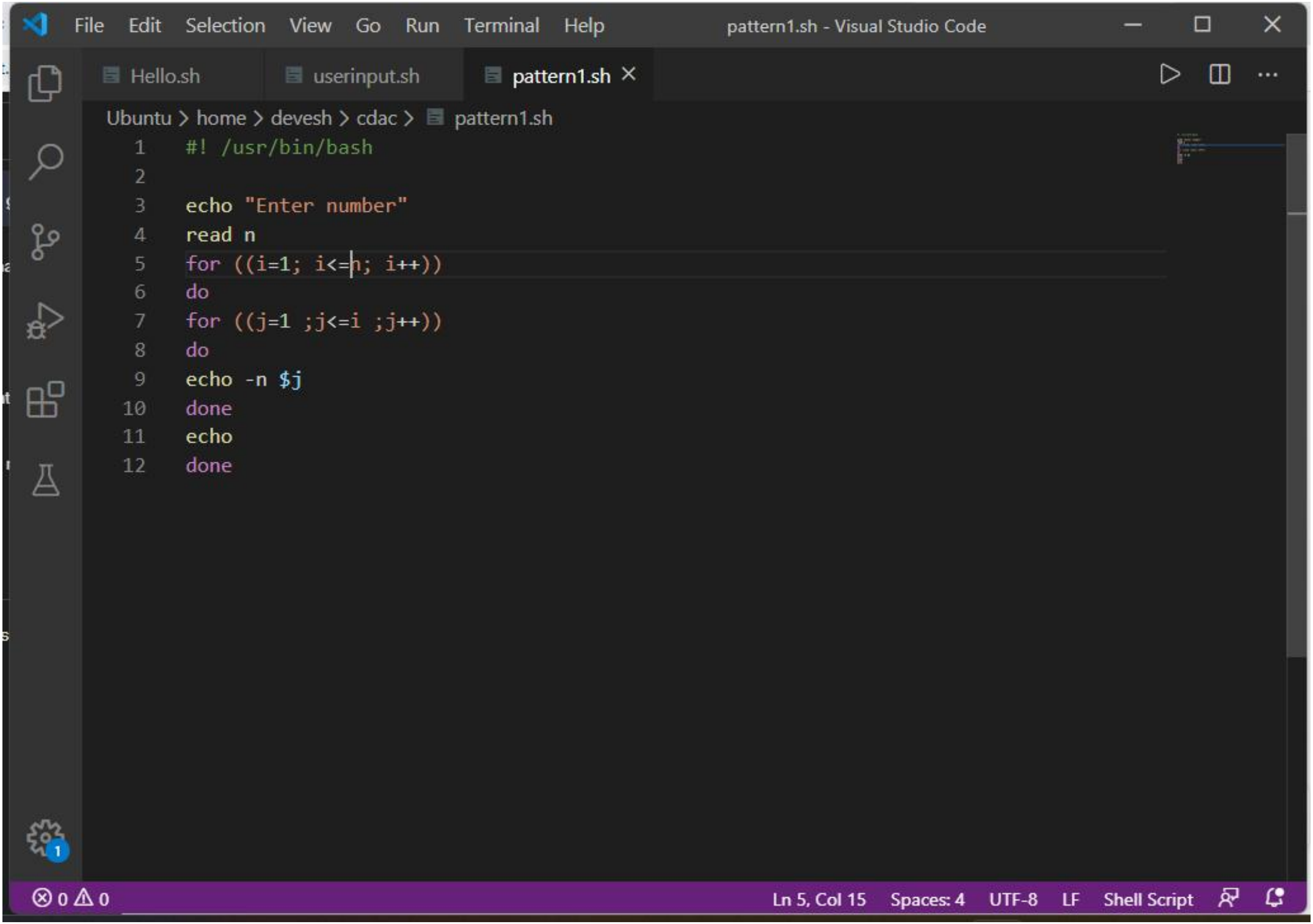
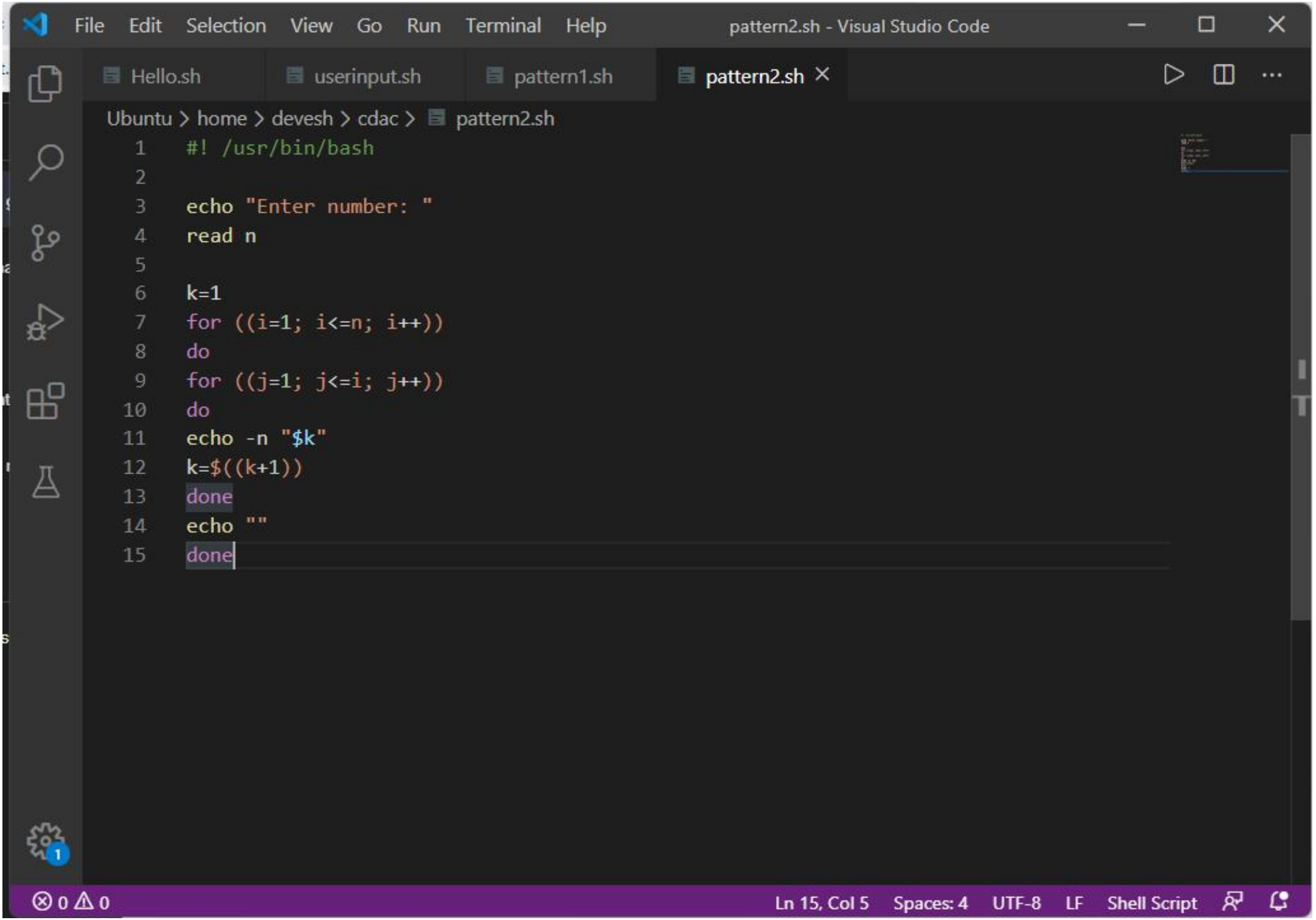
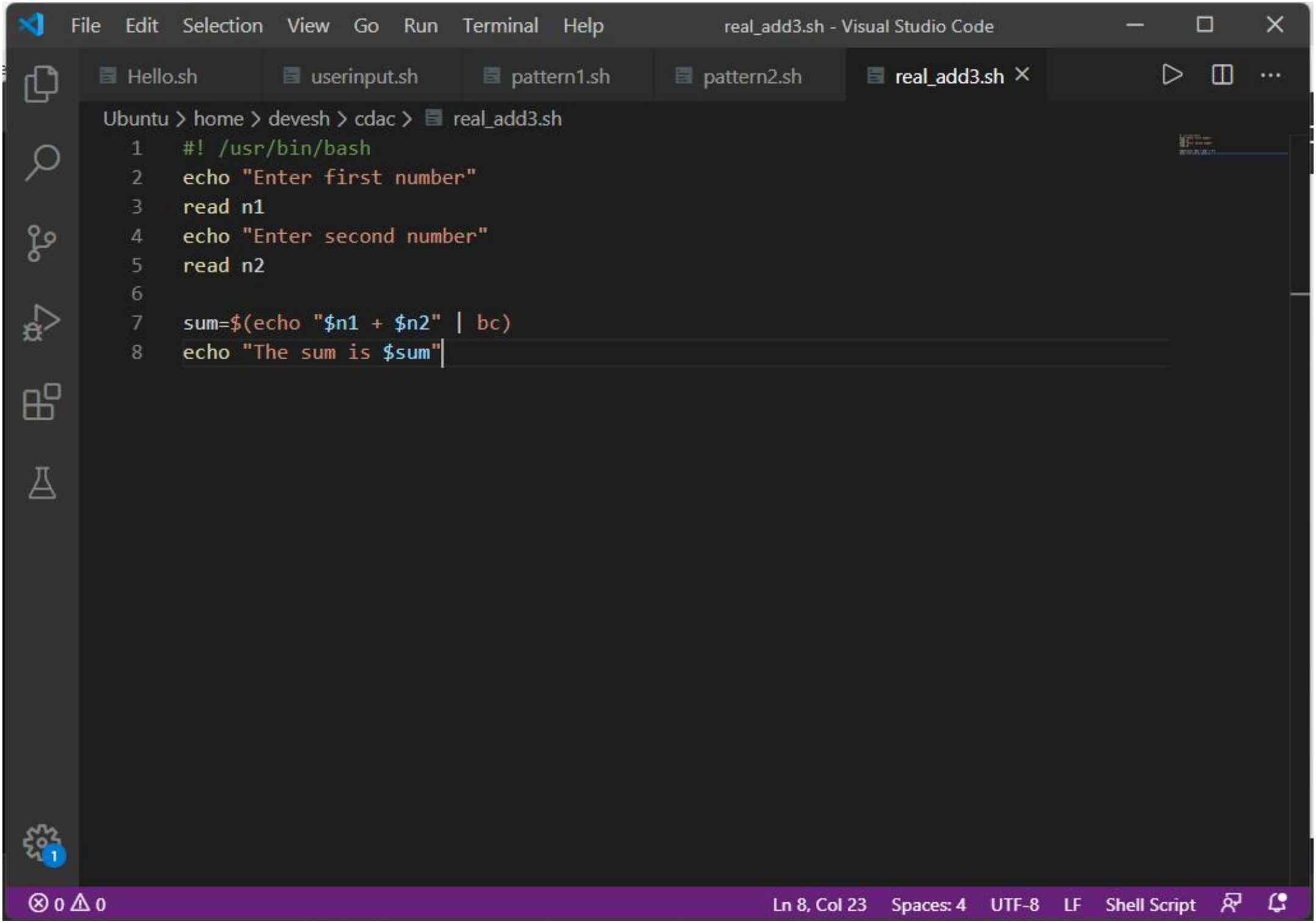

devesh@Dev: ~/cdac
devesh@Dev:~$ cat /etc/shells
/etc/shells: valid login shells
/bin/sh
/bin/bash
/usr/bin/bash
/bin/rbash
/usr/bin/rbash
/usr/bin/sh
/bin/dash
/usr/bin/dash
/usr/bin/tmux
/usr/bin/screen
devesh@Dev:~$ which bash
/usr/bin/bash
devesh@Dev:~$ cd Desktop
-bash: cd: Desktop: No such file or directory
devesh@Dev:~$ ls
archive.tgz cdac dev1.txt dev2.txt dev3.txt dir1 dir2 dir3 dir4 newone.tar
devesh@Dev:~$ cd cdac
devesh@Dev:~/cdac$ touch Hello.sh
devesh@Dev:~/cdac$ ls -al
total 8
drwxr-xr-x 2 devesh devesh 4096 Apr 19 13:30 .
drwxr-x--- 10 devesh devesh 4096 Apr 18 16:39 ..
-rw-r--r-- 1 devesh devesh 0 Apr 19 13:30 Hello.sh
-rw-r--r-- 1 devesh devesh 0 Apr 13 12:24 sub.txt


File Edit Selection View Go Run Terminal Help
pattern1.sh - Visual Studio Code
Hello.sh
userinput.sh
pattern1.sh
Ubuntu > home > devesh > cdac > pattern1.sh
#! /usr/bin/bash
echo "Enter number"
read n
for ((i=1; i<=n; i++))
do
for ((j=1 ;j<=i ;j++))
do
echo -n $j
done
echo
done
Ln 5, Col 15
Spaces: 4
UTF-8
LF
Shell Script

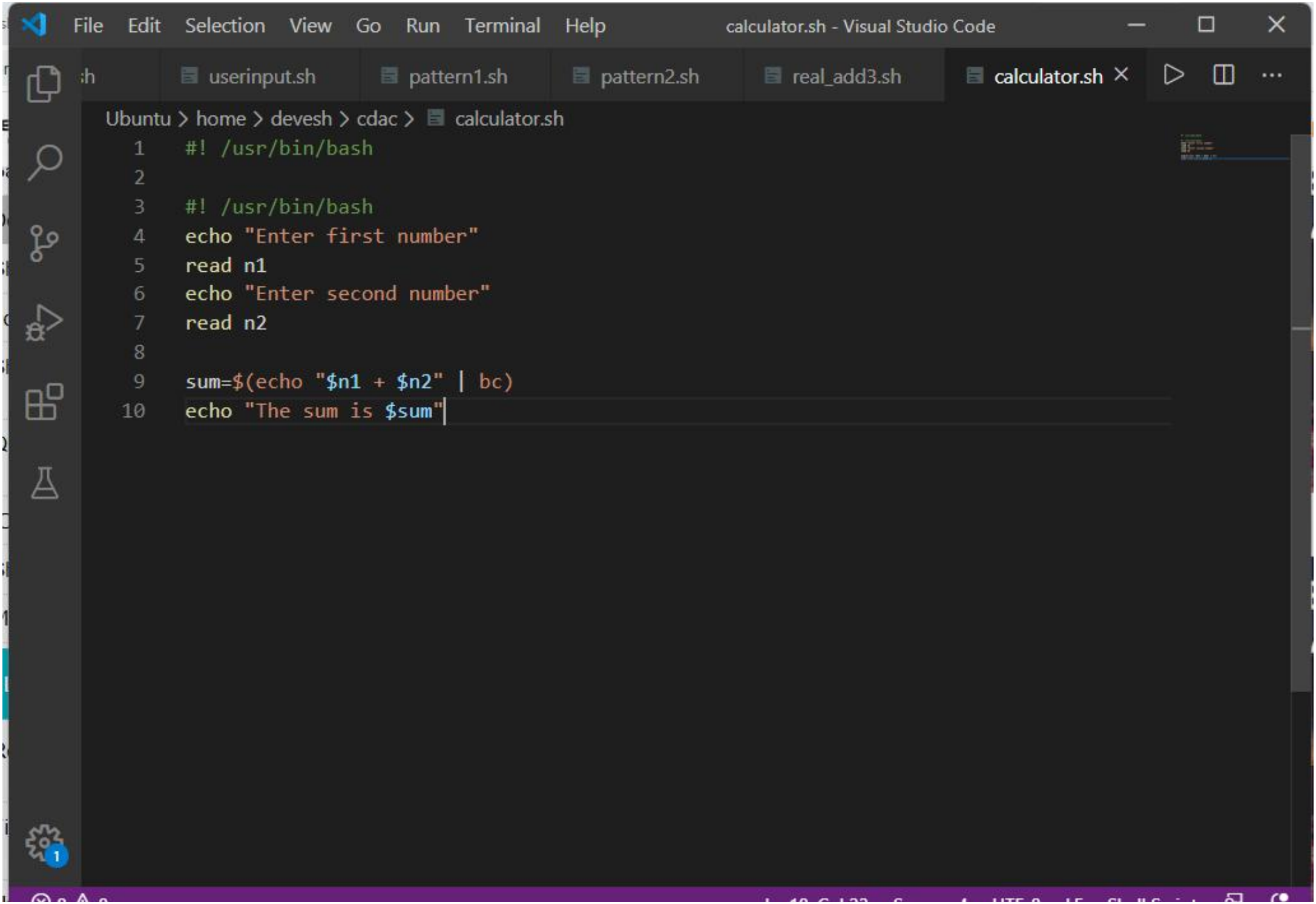
```
devesh@Dev:~/cdac$ ./pattern1.sh
Enter number
6
1
12
123
1234
12345
123456
devesh@Dev:~/cdac$
```

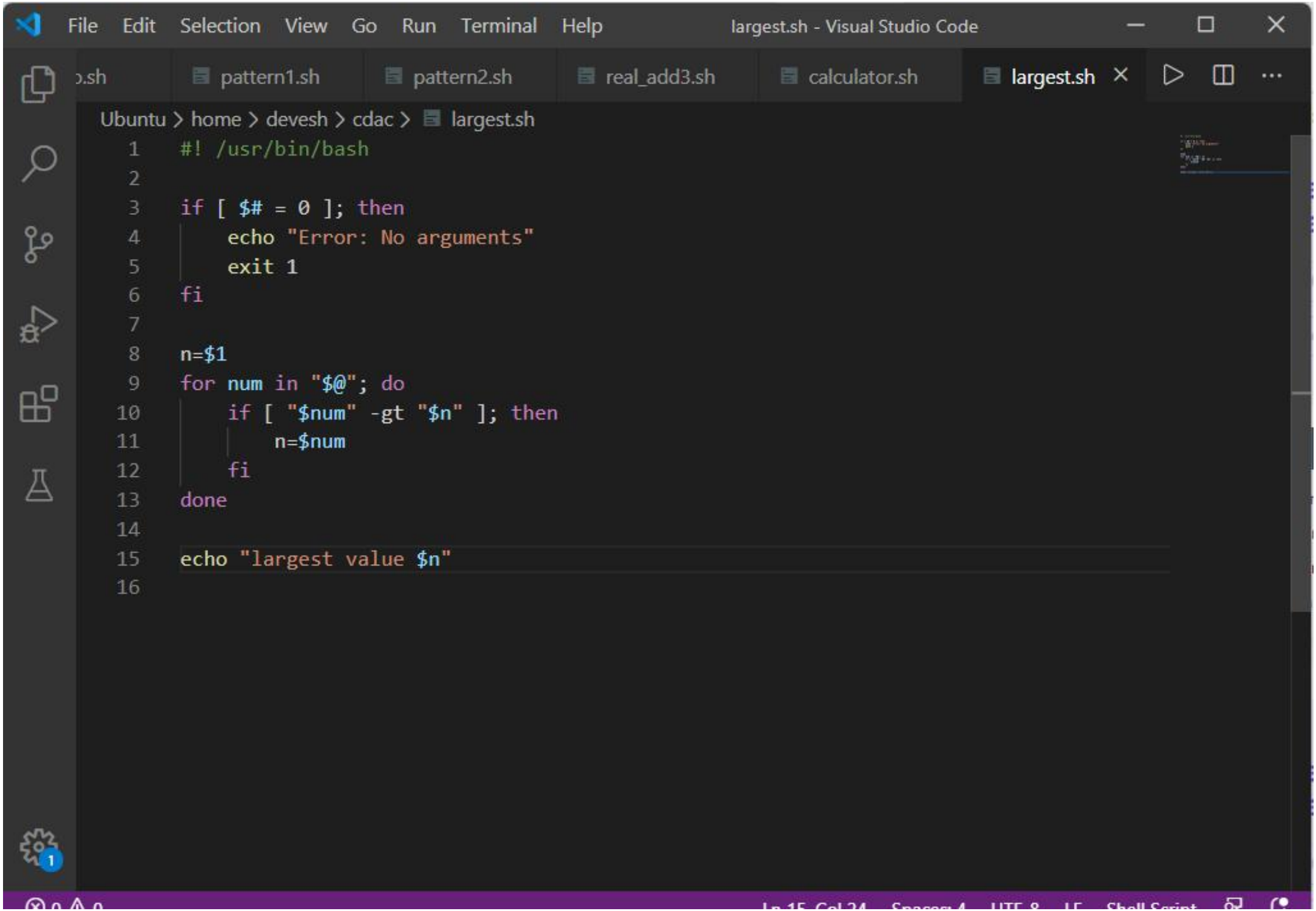

File Edit Selection View Go Run Terminal Help
pattern2.sh - Visual Studio Code
Hello.sh
userinput.sh
pattern1.sh
pattern2.sh
Ubuntu > home > devesh > cdac > pattern2.sh
#! /usr/bin/bash
echo "Enter number: "
read n
k=1
for ((i=1; i<=n; i++))
do
for ((j=1; j<=i; j++))
do
echo -n "$k"
k=$((k+1))
done
echo ""
done
Ln 15, Col 5
Spaces: 4
UTF-8
LF
Shell Script

```
devesh@Dev:~/cdac$ ./pattern2.sh
Enter number:
3
1
23
456
devesh@Dev:~/cdac$
```

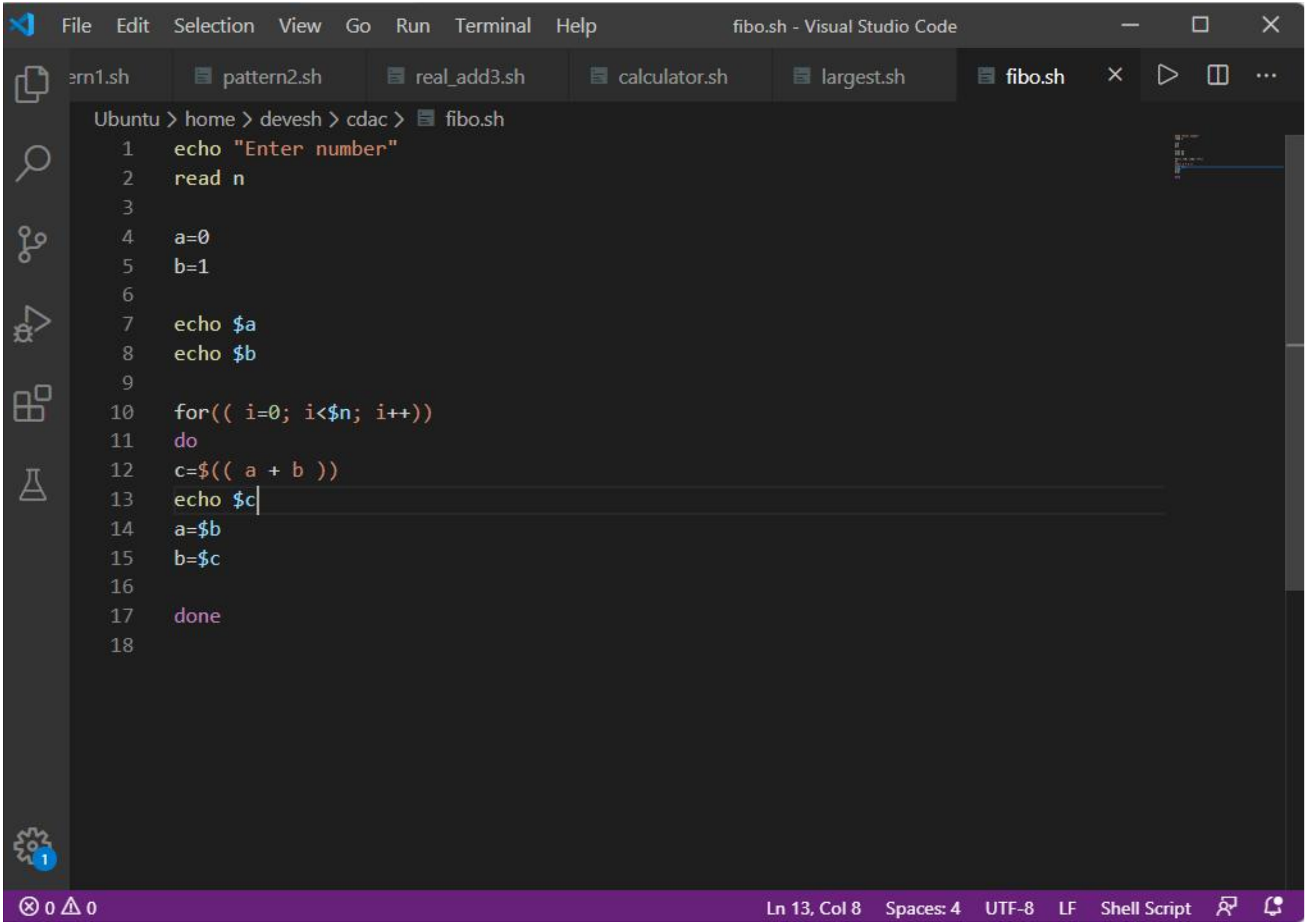

File Edit Selection View Go Run Terminal Help
real_add3.sh - Visual Studio Code
Hello.sh
userinput.sh
pattern1.sh
pattern2.sh
real_add3.sh
Ubuntu > home > devesh > cdac > real_add3.sh
#! /usr/bin/bash
echo "Enter first number"
read n1
echo "Enter second number"
read n2
sum=$(echo "$n1 + $n2" | bc)
echo "The sum is $sum"
0 0
Ln 8, Col 23
Spaces: 4
UTF-8
LF
Shell Script

```
devesh@Dev:~/cdac$ ./real_add3.sh
Enter first number
4.28
Enter second number
1.21
The sum is 5.49
devesh@Dev:~/cdac$
```

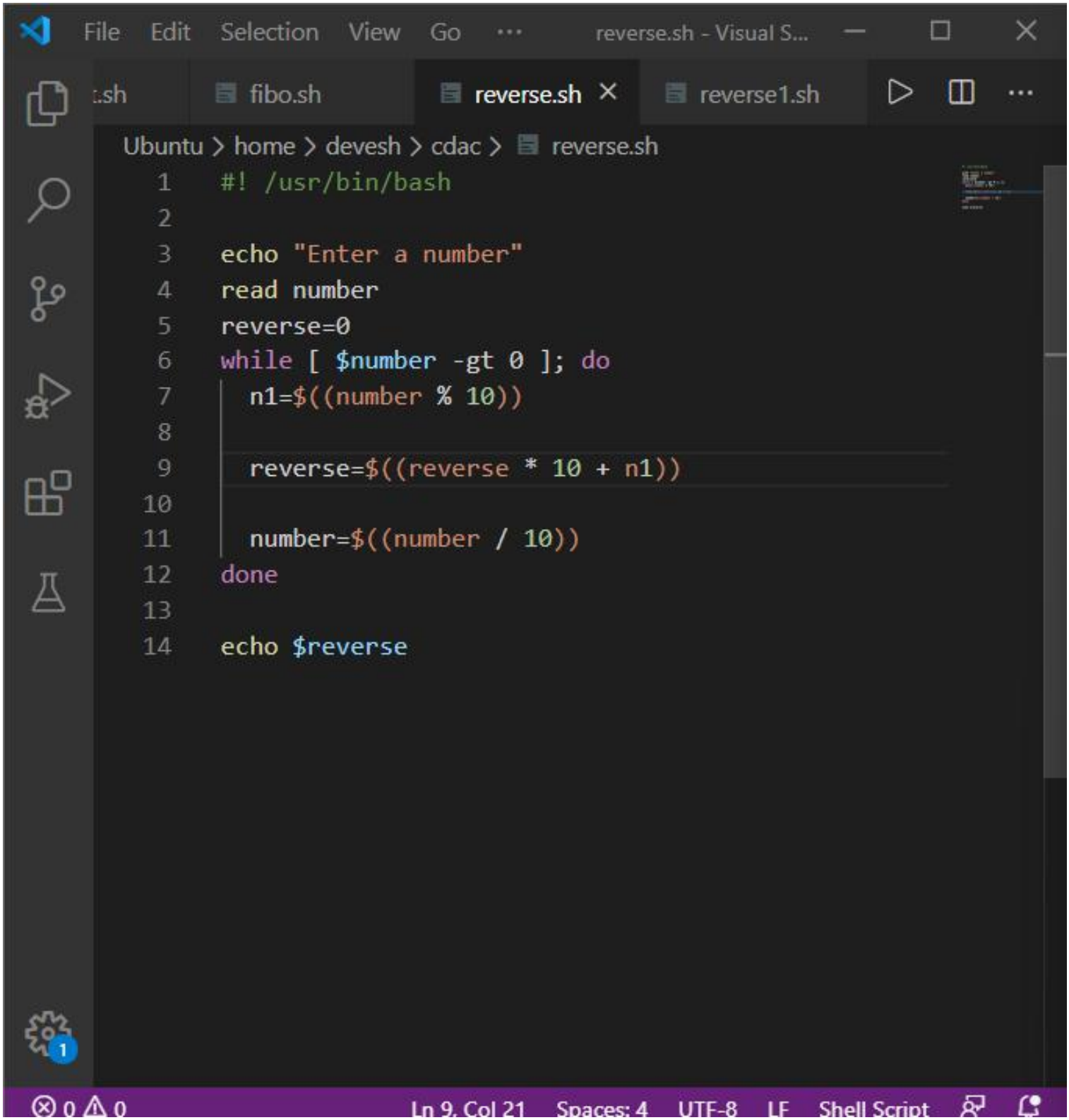

File Edit Selection View Go Run Terminal Help
calculator.sh - Visual Studio Code
userinput.sh
pattern1.sh
pattern2.sh
real_add3.sh
calculator.sh
Ubuntu > home > devesh > cdac > calculator.sh
#! /usr/bin/bash
#! /usr/bin/bash
echo "Enter first number"
read n1
echo "Enter second number"
read n2
sum=$(echo "$n1 + $n2" | bc)
echo "The sum is $sum"


File Edit Selection View Go Run Terminal Help
largest.sh - Visual Studio Code
pattern1.sh
pattern2.sh
real_add3.sh
calculator.sh
largest.sh
Ubuntu > home > devesh > cdac > largest.sh
#! /usr/bin/bash
if [$# = 0]; then
echo "Error: No arguments"
exit 1
fi
n=$1
for num in "$@"; do
if ["$num" -gt "$n"]; then
n=$num
fi
done
echo "largest value $n"

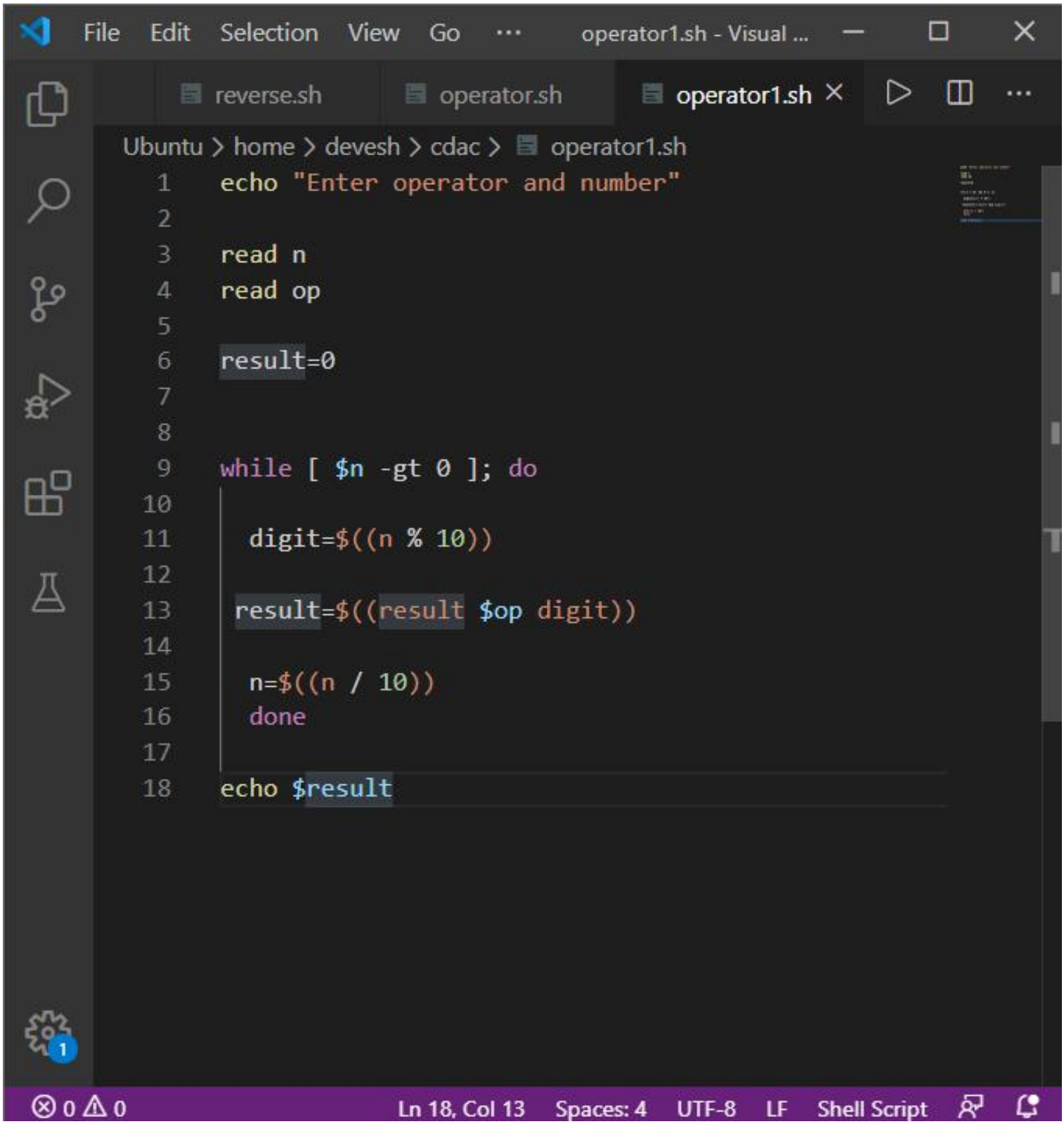
```
devesh@Dev:~/cdac$ ./largest.sh 1 3 8
The largest value is 8
devesh@Dev:~/cdac$ ./largest.sh 1 3 8 6 5 7 9 2
largest value 9
devesh@Dev:~/cdac$
```


File Edit Selection View Go Run Terminal Help
fibo.sh - Visual Studio Code
ern1.sh
pattern2.sh
real_add3.sh
calculator.sh
largest.sh
fibo.sh
Ubuntu > home > devesh > cdac > fibo.sh
1 echo "Enter number"
2 read n
3
4 a=0
5 b=1
6
7 echo $a
8 echo $b
9
10 for((i=0; i<$n; i++))
11 do
12 c=$((a + b))
13 echo $c
14 a=$b
15 b=$c
16
17 done
18
0 0
Ln 13, Col 8
Spaces: 4
UTF-8
LF
Shell Script

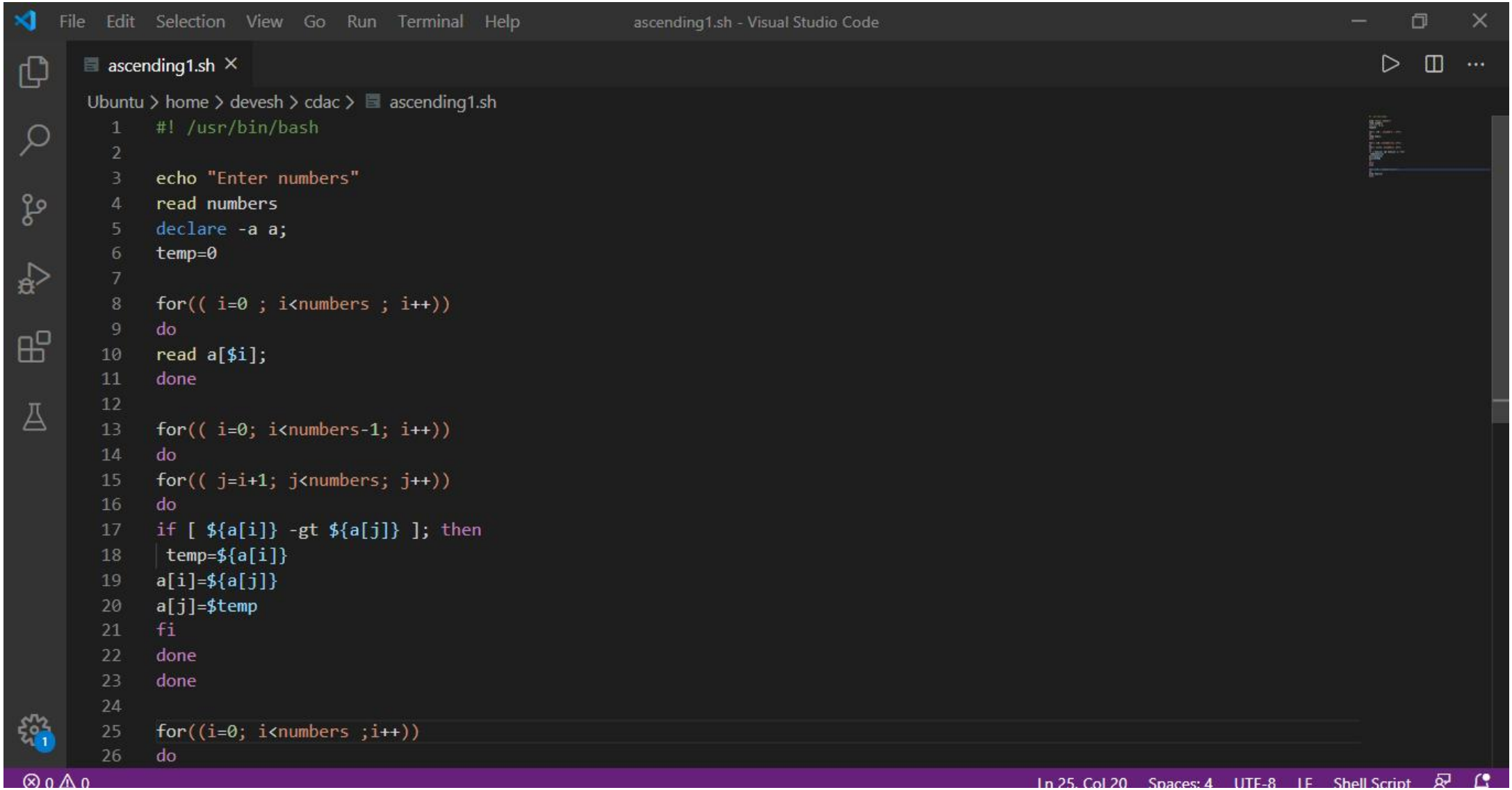
```
devesh@Dev:~/cdac$ ./fibo.sh
Enter number
5
0
1
1
2
3
5
8
devesh@Dev:~/cdac$
```

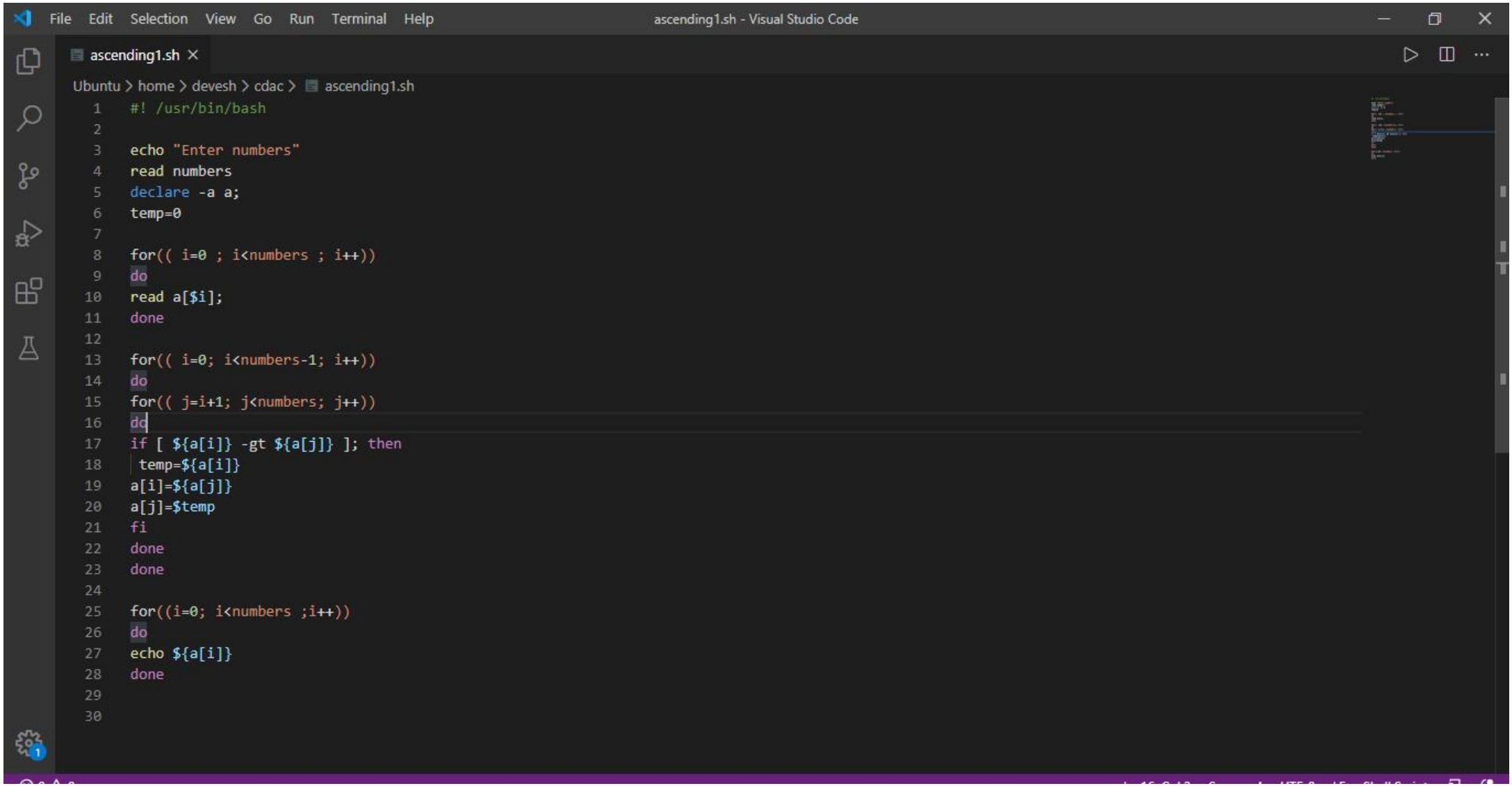

File Edit Selection View Go ···
reverse.sh - Visual S...
fibo.sh
reverse.sh
reverse1.sh
Ubuntu > home > devesh > cdac > reverse.sh
#! /usr/bin/bash
echo "Enter a number"
read number
reverse=0
while [$number -gt 0]; do
n1=$((number % 10))
reverse=$((reverse * 10 + n1))
number=$((number / 10))
done
echo $reverse
0 0
Ln 9, Col 21
Spaces: 4
UTF-8
LF
Shell Script

```
devesh@Dev:~/cdac$ ./reverse.sh
Enter a number
278936
639872
devesh@Dev:~/cdac$
```

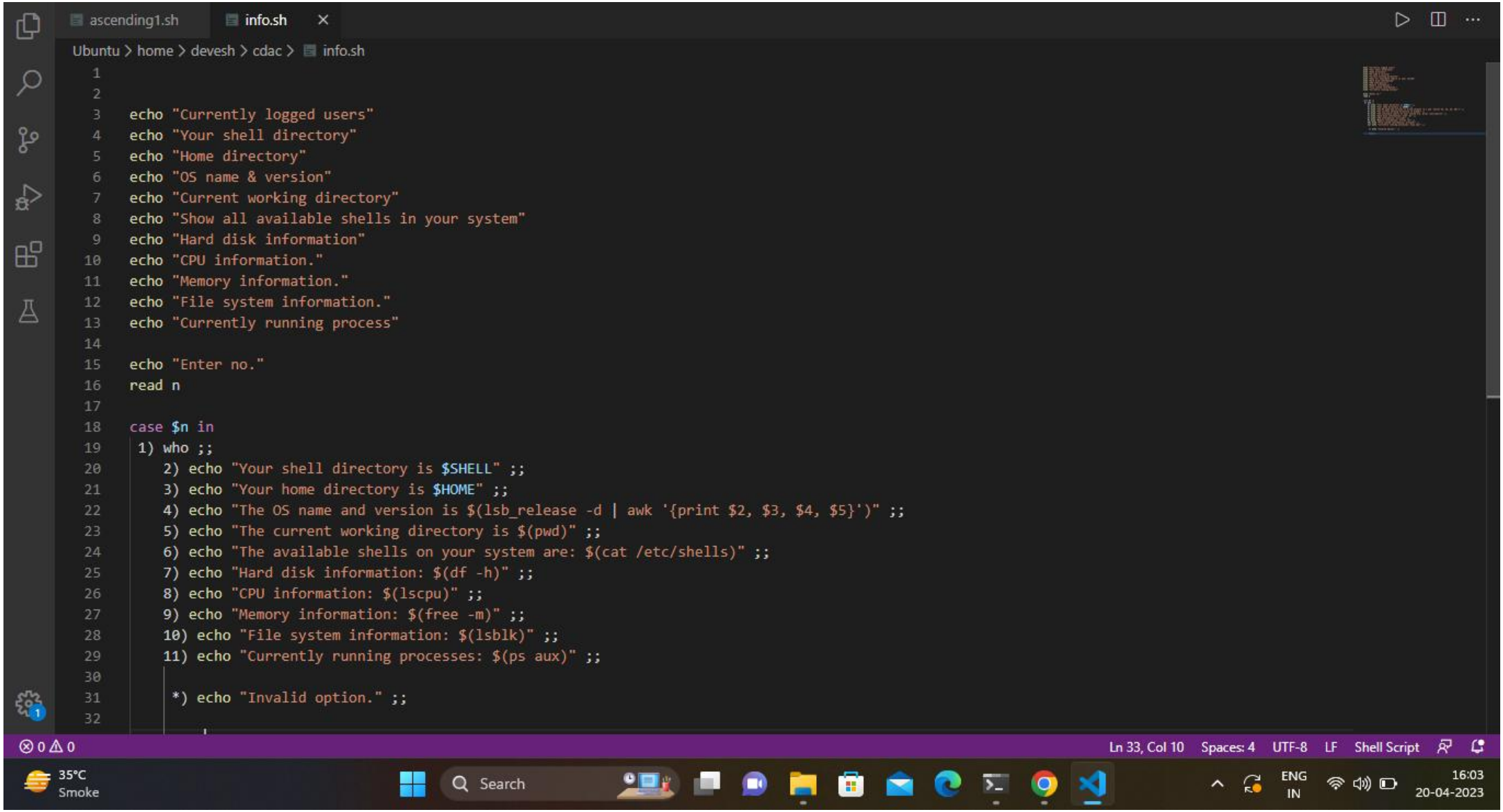

File Edit Selection View Go ··· operator1.sh - Visual ...
reverse.sh
operator.sh
operator1.sh
Ubuntu > home > devesh > cdac > operator1.sh
1 echo "Enter operator and number"
2
3 read n
4 read op
5
6 result=0
7
8
9 while [$n -gt 0]; do
10
11 digit=$((n % 10))
12
13 result=$((result $op digit))
14
15 n=$((n / 10))
16 done
17
18 echo $result
0 0
Ln 18, Col 13
Spaces: 4
UTF-8
LF
Shell Script

```
devesh@Dev:~/cdac$ ./operator1.sh
Enter operator and number
123
+
6
devesh@Dev:~/cdac$
```

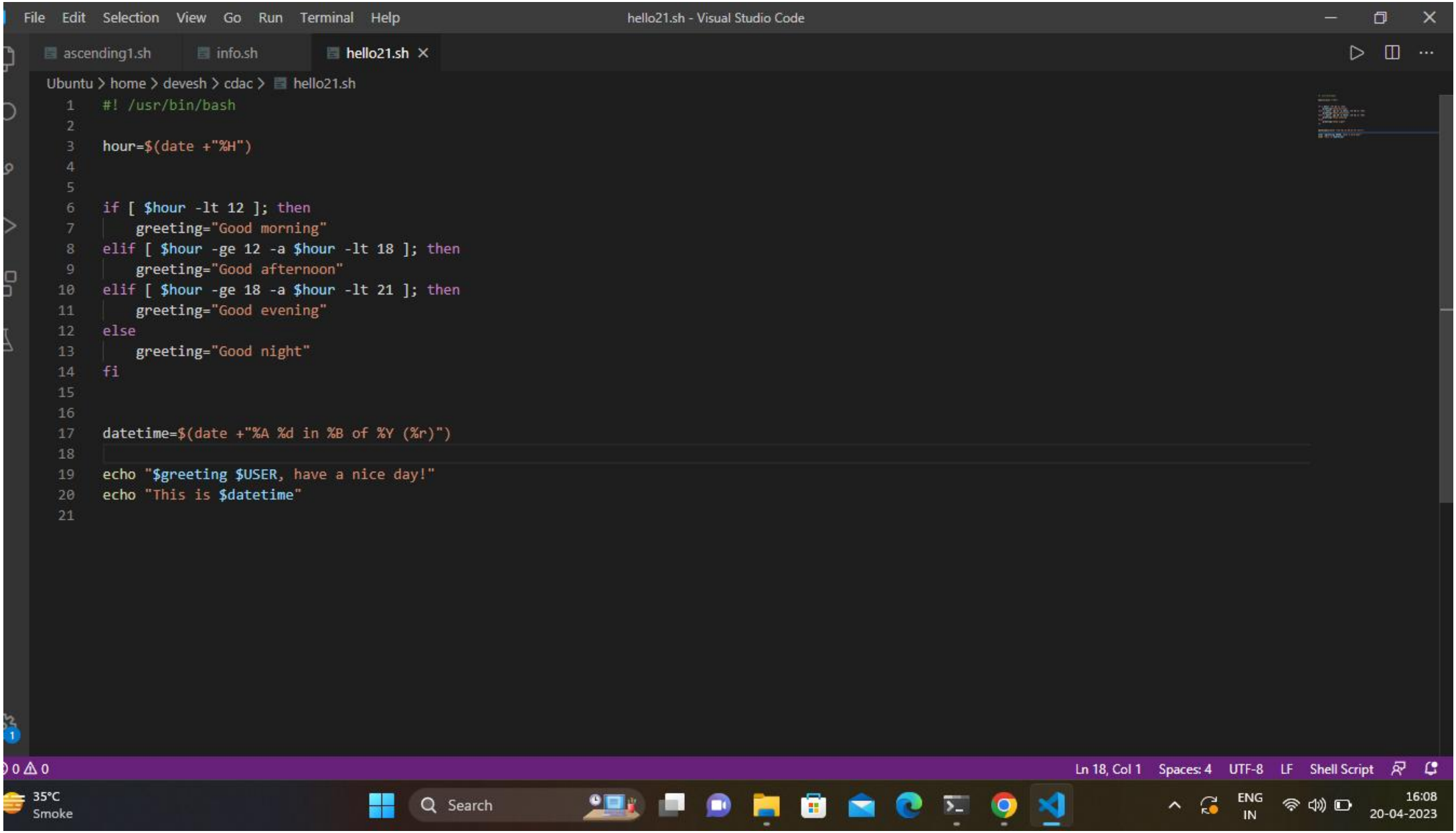

File Edit Selection View Go Run Terminal Help
ascending1.sh - Visual Studio Code
ascending1.sh
Ubuntu > home > devesh > cdac > ascending1.sh
#! /usr/bin/bash
echo "Enter numbers"
read numbers
declare -a a;
temp=0
for((i=0 ; i<numbers ; i++))
do
read a[$i];
done
for((i=0; i<numbers-1; i++))
do
for((j=i+1; j<numbers; j++))
do
if [${a[i]} -gt ${a[j]}]; then
temp=${a[i]}
a[i]=${a[j]}
a[j]=$temp
fi
done
done
for((i=0; i<numbers ;i++))
do
Ln 25, Col 20 Spaces: 4 UTF-8 LF Shell Script


File Edit Selection View Go Run Terminal Help
ascending1.sh - Visual Studio Code
ascending1.sh
Ubuntu > home > devesh > cdac > ascending1.sh
#! /usr/bin/bash
echo "Enter numbers"
read numbers
declare -a a;
temp=0
for((i=0 ; i<numbers ; i++))
do
read a[$i];
done
for((i=0; i<numbers-1; i++))
do
for((j=i+1; j<numbers; j++))
do
if [${a[i]} -gt ${a[j]}]; then
temp=${a[i]}
a[i]=${a[j]}
a[j]=$temp
fi
done
done
for((i=0; i<numbers ;i++))
do
echo ${a[i]}
done

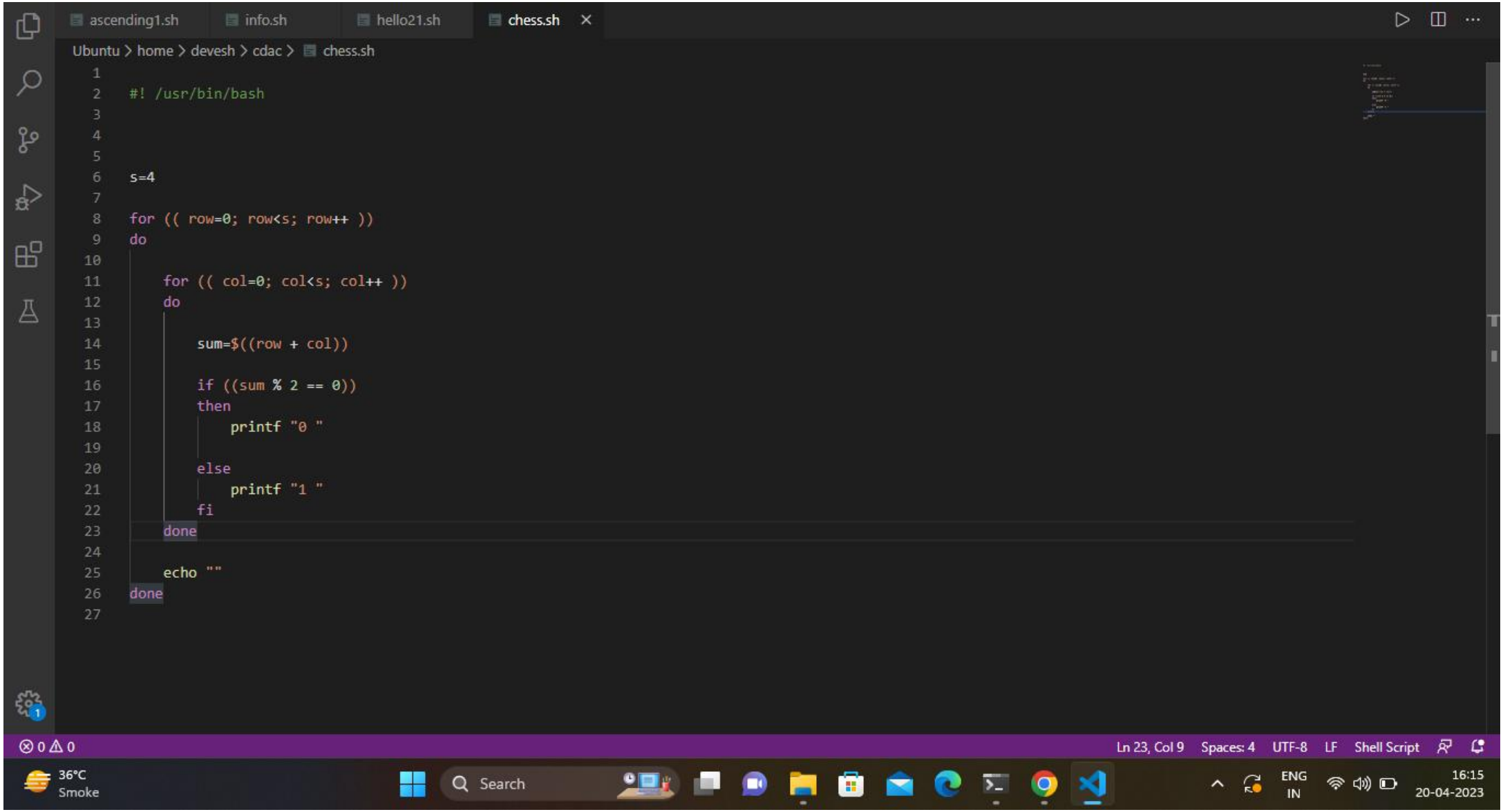
```
devesh@Dev:~/cdac$ ./ascending1.sh
Enter numbers
5
50
40
30
20
10
devesh@Dev:~/cdac$ ./ascending1.sh
Enter numbers
5
50
40
30
20
10
10
20
30
40
50
devesh@Dev:~/cdac$
```

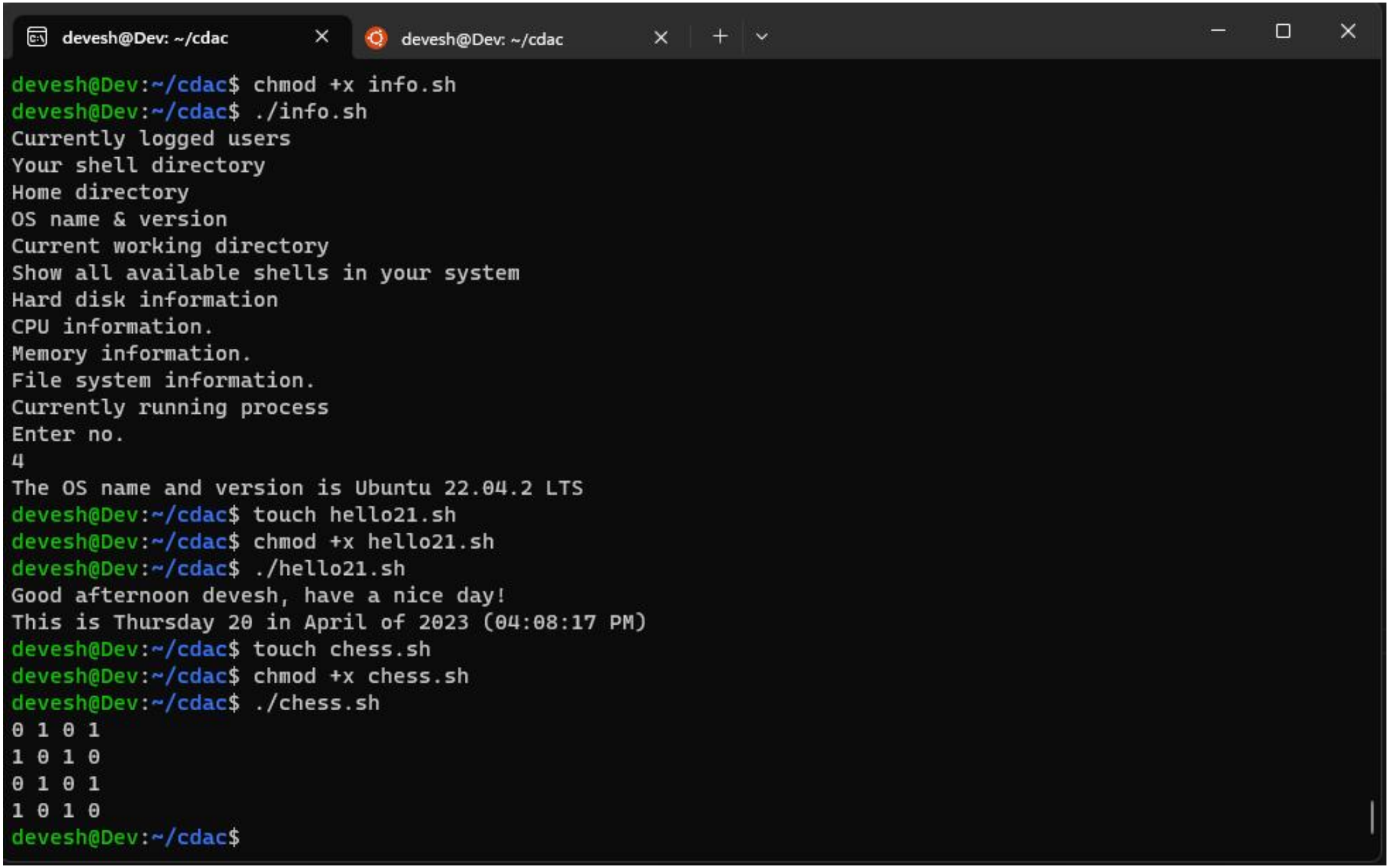

ascending1.sh
info.sh
Ubuntu > home > devesh > cdac > info.sh
echo "Currently logged users"
echo "Your shell directory"
echo "Home directory"
echo "OS name & version"
echo "Current working directory"
echo "Show all available shells in your system"
echo "Hard disk information"
echo "CPU information."
echo "Memory information."
echo "File system information."
echo "Currently running process"
echo "Enter no."
read n
case $n in
1) who ;;
2) echo "Your shell directory is $SHELL" ;;
3) echo "Your home directory is $HOME" ;;
4) echo "The OS name and version is $(lsb_release -d | awk '{print $2, $3, $4, $5}')" ;;
5) echo "The current working directory is $(pwd)" ;;
6) echo "The available shells on your system are: $(cat /etc/shells)" ;;
7) echo "Hard disk information: $(df -h)" ;;
8) echo "CPU information: $(lscpu)" ;;
9) echo "Memory information: $(free -m)" ;;
10) echo "File system information: $(lsblk)" ;;
11) echo "Currently running processes: $(ps aux)" ;;
*) echo "Invalid option." ;;
Ln 33, Col 10
Spaces: 4
UTF-8
LF
Shell Script
35°C
Smoke
Search
ENG
IN
16:03
20-04-2023

```
devesh@Dev:~/cdac$ chmod +x info.sh
devesh@Dev:~/cdac$ ./info.sh
Currently logged users
Your shell directory
Home directory
OS name & version
Current working directory
Show all available shells in your system
Hard disk information
CPU information.
Memory information.
File system information.
Currently running process
Enter no.
4
The OS name and version is Ubuntu 22.04.2 LTS
devesh@Dev:~/cdac$
```


File Edit Selection View Go Run Terminal Help
hello21.sh - Visual Studio Code
ascending1.sh
info.sh
hello21.sh
Ubuntu > home > devesh > cdac > hello21.sh
#! /usr/bin/bash
hour=$(date +"%H")
if [$hour -lt 12]; then
greeting="Good morning"
elif [$hour -ge 12 -a $hour -lt 18]; then
greeting="Good afternoon"
elif [$hour -ge 18 -a $hour -lt 21]; then
greeting="Good evening"
else
greeting="Good night"
fi
datetime=$(date +"%A %d in %B of %Y (%r)")
echo "$greeting $USER, have a nice day!"
echo "This is $datetime"
Ln 18, Col 1
Spaces: 4
UTF-8
LF
Shell Script
35°C
Smoke
Search
ENG
IN
16:08
20-04-2023

```
devesh@Dev:~/cdac$ ./hello21.sh
Good afternoon devesh, have a nice day!
This is Thursday 20 in April of 2023 (04:08:17 PM)
devesh@Dev:~/cdac$
```


ascending1.sh
info.sh
hello21.sh
chess.sh
Ubuntu > home > devesh > cdac > chess.sh
#! /usr/bin/bash
s=4
for ((row=0; row<s; row++))
do
for ((col=0; col<s; col++))
do
sum=$((row + col))
if ((sum % 2 == 0))
then
printf "0 "
else
printf "1 "
fi
done
echo ""
done
Ln 23, Col 9
Spaces: 4
UTF-8
LF
Shell Script
36°C
Smoke
Search
ENG
IN
16:15
20-04-2023


devesh@Dev: ~/cdac
devesh@Dev: ~/cdac
devesh@Dev:~/cdac$ chmod +x info.sh
devesh@Dev:~/cdac$ ./info.sh
Currently logged users
Your shell directory
Home directory
OS name & version
Current working directory
Show all available shells in your system
Hard disk information
CPU information.
Memory information.
File system information.
Currently running process
Enter no.
4
The OS name and version is Ubuntu 22.04.2 LTS
devesh@Dev:~/cdac$ touch hello21.sh
devesh@Dev:~/cdac$ chmod +x hello21.sh
devesh@Dev:~/cdac$ ./hello21.sh
Good afternoon devesh, have a nice day!
This is Thursday 20 in April of 2023 (04:08:17 PM)
devesh@Dev:~/cdac$ touch chess.sh
devesh@Dev:~/cdac$ chmod +x chess.sh
devesh@Dev:~/cdac$ ./chess.sh
0 1 0 1
1 0 1 0
0 1 0 1
1 0 1 0
devesh@Dev:~/cdac$