```
ubuntu@ubuntu:~/Desktop$ gcc insertion.c
ubuntu@ubuntu:~/Desktop$ ./a.out
 enter the size of the array 7
 enter the array at position 0 :1
 enter the array at position 1 :2
 enter the array at position 2 :3
 enter the array at position 3 :4
 enter the array at position 4 :5
 enter the array at position 5 :6
 enter the array at position 6 :7
 enter 1 to insert a element in an array
2 to print the array
3 to exit :1
 enetr the position at which you want to insert data :4
 enter the new element :5
12345567
```

```
ubuntu@ubuntu:~/Desktop$ ./a.out
Given array elements are :
arr[0] = 18
arr[1] = 30
arr[2] = 15
arr[3] = 70
arr[4] = 12

Array elements after updation :
arr[0] = 18
arr[1] = 30
arr[2] = 50
arr[3] = 70
arr[4] = 12
```

```
ubuntu@ubuntu:~/Desktop$ gcc deletion.c
ubuntu@ubuntu:~/Desktop$ ./a.out
Please enter the number of elements you want to add:10

Please enter the elements:
1
2
3
4
5
5
7
8
9
10
Array before Deletion: 1 2 3 4 5 5 7 8 9 10
Please enter the element to delete: 5
Array after deletion: 1 2 3 4 5 7 8 9 10 ubuntu@ubuntu:~/Deskto
```

```
ubuntu@ubuntu:~/Desktop$ ./a.out
how many elements you want to add:6
Please enter the elements of array:
1
2
3
4
5
6

7
7
the elements in the array are:1
2
3
4
5
6
7
```

```
How many elements to addd: 5
enter array elements:
1
2
3
4
5
enter element to search:2
element found at index 1
ubuntu@ubuntu:~/Desktop$
```

```
ubuntu@ubuntu:~/Desktop$ gcc pushandpopoperations.c
ubuntu@ubuntu:~/Desktop$ ./a.out

 enter the size of stack(upto 100): 10

          STACK OPERATIONS
         XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
                    1.PUSH
                    2.POP
                    3.show
                    4.EXIT
 Enter your Choice:1
 enter any value to push:3

 Enter your Choice:2

 the element popped is:  3

 Enter your Choice:3

 the stack is empty
 Enter your Choice:4

           EXIT ubuntu@ubuntu:~/Desktop$
```

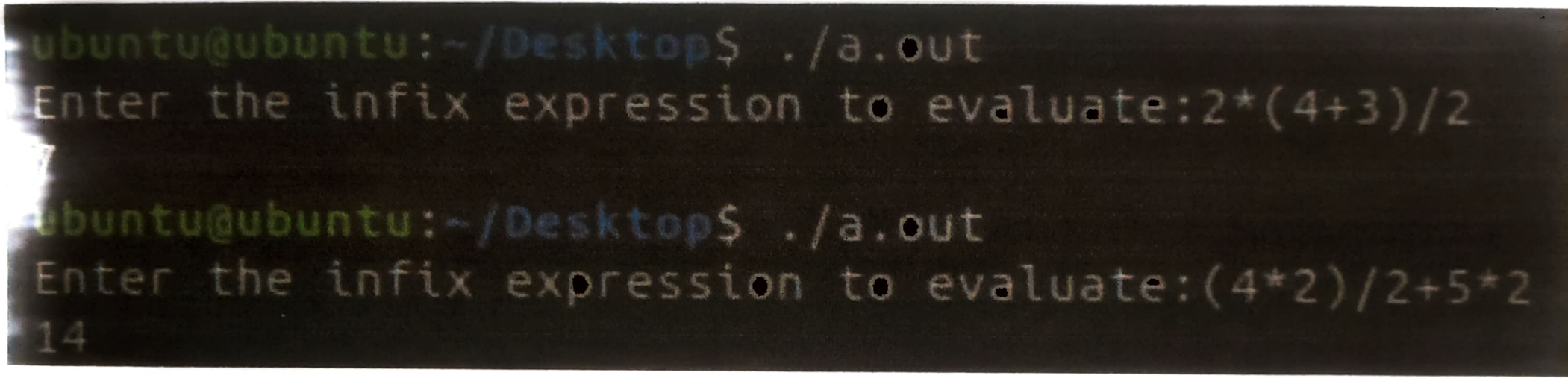
```
ubuntu@ubuntu:~/Desktop$ ./a.out
enter any algebraic expression : (a*(b+c)**(b+c)*a)
Balanced Parentheses
Expression is Valid!!!
ubuntu@ubuntu:~/Desktop$ ./a.out
enter any algebraic expression : (a+b)(c+d)
Balanced Parentheses
Expression is Valid!!!
ubuntu@ubuntu:~/Desktop$ ./a.out
enter any algebraic expression : ()/())
Right parentheses are more than left parentheses
Expression is Invalid!!!
ubuntu@ubuntu:~/Desktop$ ./a.out
enter any algebraic expression : (()()
Left parentheses more than right parentheses
Expression is Invalid!!!
ubuntu@ubuntu:~/Desktop$
```

```
Please enter the postfix expression: 562+*124/-

The value of the postfix expression is:  0.50
```

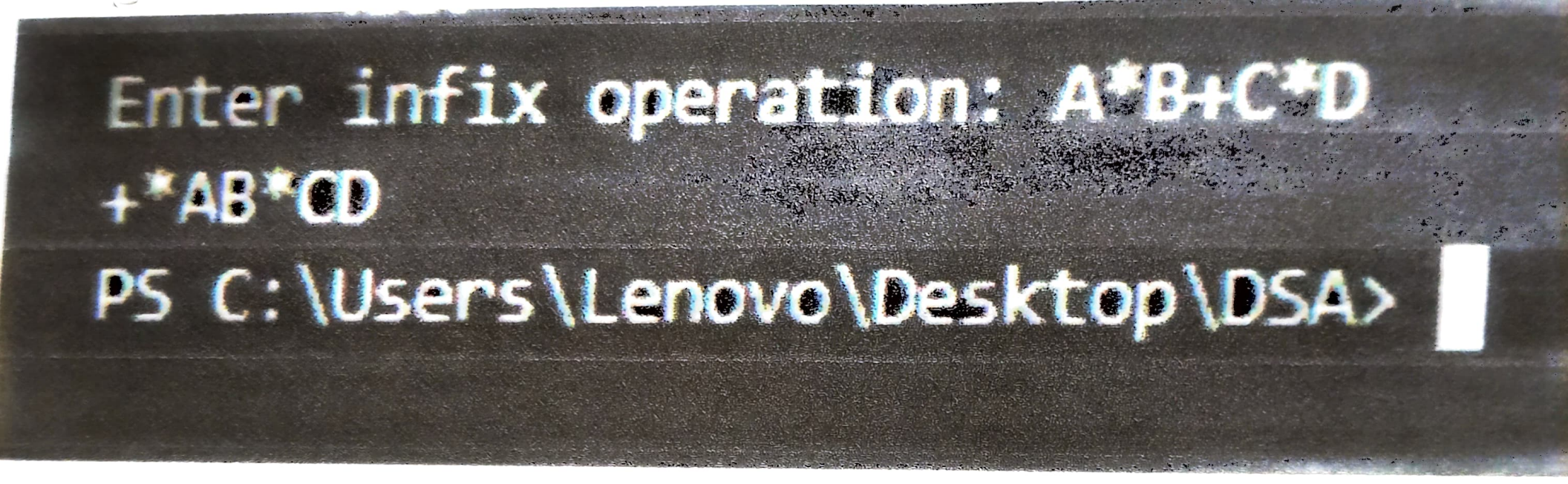
```
Please enter the postfix expression: 231*+9-

 The value of the postfix expression is: -4.00
```

```
Please enter the prefix expression: 546+*493/+*

The answer for your prefix expression is: 5
```

```
Please enter the prefix expression: *+221/-42+-531

The answer for your prefix expression is: 4
```


ubuntu@ubuntu:~/Desktop$ ./a.out
Enter the infix expression to evaluate:2*(4+3)/2
7
ubuntu@ubuntu:~/Desktop$ ./a.out
Enter the infix expression to evaluate:(4*2)/2+5*2
14

```
a [redacted]-VirtualBox: [redacted]$
[redacted]-VirtualBox: [redacted]$ gcc postfixtoinfix.c
[redacted]-VirtualBox: [redacted]$ ./a.out
Enter the expression : a+b*c

a b c * + [redacted]-VirtualBox: [redacted]$
```


Enter infix operation: A*B+C*D
+*AB*CD
PS C:\Users\Lenovo\Desktop\DSA>

Give an Expression

Given Prefix Expression

Infix Expression

```
Enter the Postfix Expression : : AB*CD*+

The Infix Expression is : : A*B+C*D
PS C:\Users\Lenovo\Desktop\DSA>
```