

1. Check if a Number is Positive and Negative in Python

Given an integer input, the objective is to check whether the given integer is Positive or Negative. In order to do so we have the following method,

1. Method 1: Using Brute Force
2. Method 2: Using Nested if-else Statements
3. Method 3: Using ternary operator

We'll discuss each method in-depth in the section below.

Related Pages

[Even or Odd number](#)

[Sum of First N Natural numbers](#)

[Sum of N natural numbers](#)

[Sum of numbers in a given range](#)

[Prime number within a given range](#)

Method 1: Using Brute Force

This method uses Brute Force to check whether a given integer is Positive or Negative.

Python Code

Run

```
num = 15

if num > 0:

    print('Positive')

elif num < 0:

    print('Negative')

else:

    print('Zero')
```

Output

Positive

Algorithm

This method uses Brute Force to check whether a given integer is Positive or Negative.

Algorithm for the above code is as follows,

- Initialize num as 15

- If the num > 0: it is a positive number.
- If the num < 0: it is a Negative number.
- Else the number has to be zero itself

Method 2: Using Nested if-else Statements

This method uses a nested if-else Statements to check whether a given number is Positive or Negative.

Python Code

Run

```
num = 15
```

```
if num>=0:
```

```
    if num==0:
```

```
        print('Zero')
```

```
    else:
```

```
        print("Positive")
```

```
else:
```

```
    print("Negative")
```

Output

Positive

Algorithm

This method uses a nested if-else Statements to check whether a given number is Positive or Negative.

Algorithm for the above code is as follows,

- Initialize num as 15
- If the num >= 0
 - If num == 0 : num is zero
 - Else number has to be positive
- Else the number has to be negative

Python Program to Find the Sum of First N Natural Numbers

2. Find the Sum of The First N Natural Numbers in Python

Given an integer input the objective is to write a code to Find the Sum of First N Natural Numbers in C++. To do so we simply keep adding the value of the iter variable using a for loop.

Example

Input : num = 8

Output : 36

Where first 8 number is 1, 2, 3, 4, 5, 6, 7, 8

Sum of numbers = $1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 = 36$

Find the Sum of the First N Natural Numbers in Python

Given an integer input of N, the objective is to find the sum of all the natural numbers until the given input integer. To do so we can use different approaches to write the Python code and some such methods are mentioned below,

- Method 1 : Using for Loop
- Method 2 : Using Formula for the Sum of Nth Term
- Method 3 : Using Recursion

We'll discuss and learn more about each above mentioned method in detail in the sections below.

Related Pages

[Sum of N natural numbers](#)

[Sum of numbers in a given range](#)

[Greatest of two numbers](#)

[Greatest of the Three numbers](#)

[Leap year or not](#)

Method 1 : Using for Loop

In this method we'll add all the natural numbers until the given integer input using for loop in Python.

Python Code

```
num = 5
sum = 0
for i in range(num+1):
    sum+=i
print(sum)
```

Output

15

Working

For a user input num.

1. Initialize a variable sum = 0.
2. Using a for loop in iteration 'i' iterate between [1, num].
3. Each time add 'i' to current sum as sum = sum + i.
4. Print sum.

Explanation

Given an integer input N, the objective is to calculate the sum of all the natural numbers until the integer N. To do so we iterate through all the numbers that lay within N and keep incrementing the sum value.

The algorithm for the above code is as follows,

1. Import the required module using the import keyword.
2. Initialize the required variables.
3. Run a for loop with range as N+1.
4. Keep adding the iter values to the Sum variable.
5. Print Sum variable using print() function.

The output for the above mentioned code is the sum of all the natural numbers until the given value.

Method 2 : Using Formula for the Sum of Nth Term

In this Method we use the formula for finding the sum of N term.

Formula to Find the Sum of N terms
$$\text{Sum} = (\text{Num} * (\text{Num} + 1)) / 2$$

Python Code

```
num = 5
```

```
print(int(num*(num+1)/2))
```

Output

15