



Subject: Programming With Python (01CT1309)	Aim: Write a program to perform different arithmetic operations on numbers in python.	
Experiment No: 02	Date: 17/07/25	Enrollment No: 92510133011

Aim: Write a program to perform different arithmetic operations on numbers in python.

IDE:

Arithmetic operations are fundamental to programming, and Python provides straightforward operators to perform these calculations. Let's revisit these basic arithmetic operations, which you've likely encountered in your math classes, and see how they can be used in Python.

Types of Arithmetic Operators in Python

Arithmetic operators in Python are fundamental tools used for performing basic mathematical operations. Here are the primary types of arithmetic operators:

- Addition
- Subtraction
- Multiplication
- Division
- Modulus
- Exponentiation
- Floor Division

Let's take a closer look at each of these operators to understand them better.

Addition

The addition operator in Python is “+”. It is used to add or sum two values.

Python Code:

```
num1, num2 = 10, 30
sum= num1+num2
print("The sum of",num1,"and",num2,"is:",sum)
```

Output:

```
thon.exe' 'c:\Users\trupa\vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher' '52061' '--' 'c:\Users\trupa\OneDrive\Documents\python'
The sum of 10 and 30 is: 40
```



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Subtraction

The subtraction operator in Python is “-”. It is used to subtraction or difference two values.

```
num1, num2 = 10, 30
```

```
sub= num1-num2
```

```
print("The subtraction of",num1,"and",num2,"is:",sub)
```

Output:

```
n.exe c:\Users\trupa\.vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher 52073 -- c:\Users\trupa\OneDrive\Documents\python PYTHON
The subtraction of 10 and 30 is: -20
```

Multiplication

The Arithmetic Operator in Python for multiplication is “*”. With this operator, we can find the product of two values.

```
num1, num2 = 10, 30
```

```
product= num1*num2
```

```
print("The product of",num1,"and",num2,"is:",product)
```

Output:

```
PS C:\Users\trupa\OneDrive\Documents> c;; cd 'c:\Users\trupa\OneDrive\Documents'; & 'c:\Users\trupa\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\trupa\.vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher' '52092' '--' 'c:\Users\trupa\OneDrive\Documents\python'
The product of 10 and 30 is: 300
PS C:\Users\trupa\OneDrive\Documents>
```

Division

The “/” operator is the division operator in Python. We can find the quotient when the first operand is divided by the second.

```
num1, num2 = 10, 30
```

```
div = num1/num2
```



Subject: Programming With Python (01CT1309)

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Experiment No: 02

Date:17/07/25

Enrollment No:92510133011

```
print("The division of",num1,"and",num2,"is:",div)
```

Output:

```
PS C:\Users\trupa\OneDrive\Documents> c;; cd 'c:\Users\trupa\OneDrive\Documents'; & 'c:\Users\trupa\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\trupa\.vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher' '52112' '--' 'c:\Users\trupa\OneDrive\Documents\python'
The division of 10 and 30 is: 0.3333333333333333
```

Modulus

The “%” operator is the division operator in Python. Using this, we can find the remainder when the first operand is divided by the second.

```
num1, num2 = 10, 30
```

```
rem = num1%num2
```

```
print("The remainder of",num1,"and",num2,"is:",rem)
```

Output:

```
PS C:\Users\trupa\OneDrive\Documents> c;; cd 'c:\Users\trupa\OneDrive\Documents'; & 'c:\Users\trupa\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\trupa\.vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher' '52124' '--' 'c:\Users\trupa\OneDrive\Documents\python'
The remainder of 10 and 30 is: 10
```

Exponentiation

The exponentiation operator in Python is denoted by “**”. It is used to raise the power of the first operand to the power of the second.

```
num1, num2 = 10, 3
```

```
exp = num1**num2
```

```
print("The exponentiation of",num1,"and",num2,"is:",exp)
```

Output:



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Experiment No: 02

Date:17/07/25

Enrollment No:92510133011

```
PS C:\Users\trupa\OneDrive\Documents> c;; cd 'c:\Users\trupa\OneDrive\Documents'; & 'c:\Users\trupa\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\trupa\.vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher' '52140' '--' 'c:\Users\trupa\OneDrive\Documents\python'
The exponentiation of 10 and 3 is: 1000
```

Floor Division

It is denoted by “//” in Python. We use it to find the floor of the quotient when the first operand is divided by the second.

```
num1, num2 = 10, 3
```

```
floordiv = num1//num2
```

```
print("The Floor Division of",num1,"and",num2,"is:",floordiv)
```

Output:

```
PS C:\Users\trupa\OneDrive\Documents> c;; cd 'c:\Users\trupa\OneDrive\Documents'; & 'c:\Users\trupa\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\trupa\.vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher' '52179' '--' 'c:\Users\trupa\OneDrive\Documents\python'
The Floor Division of 10 and 3 is: 3
```

Task:

```
x = 8
```

```
y = 3
```

```
mod = x % y
```

```
print (mod)
```

Output:



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Subject: Programming With Python (01CT1309)

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```
PS C:\Users\trupa\OneDrive\Documents> c;; cd 'c:\Users\trupa\OneDrive\Documents'; & 'c:\Users\trupa\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\trupa\.vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher' '52191' '--' 'c:\Users\trupa\OneDrive\Documents\python'
```

2

a = -5

b = 2

res1 = a % b

print (res1)

Output:

```
PS C:\Users\trupa\OneDrive\Documents> c;; cd 'c:\Users\trupa\OneDrive\Documents'; & 'c:\Users\trupa\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\trupa\.vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher' '52210' '--' 'c:\Users\trupa\OneDrive\Documents\python'
```

1

m = 5

n = -2

res2 = m % n

print (res2)

Output:

e = -5

```
PS C:\Users\trupa\OneDrive\Documents> c;; cd 'c:\Users\trupa\OneDrive\Documents'; & 'c:\Users\trupa\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\trupa\.vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher' '52222' '--' 'c:\Users\trupa\OneDrive\Documents\python'
```

-1

f = -2

res3 = e % f

print (res3)

Output:



Subject: Programming With Python (01CT1309)

Aim: Write a program to perform different arithmetic operations on numbers in python.

Experiment No: 02

Date:17/07/25

Enrollment No:92510133011

```
PS C:\Users\trupa\OneDrive\Documents> c:; cd 'c:\Users\trupa\OneDrive\Documents'; & 'c:\Users\trupa\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\trupa\.vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher' '52235' '--' 'c:\Users\trupa\OneDrive\Documents\python'
-1
```

Order of precedence of Arithmetic operators in Python

Arithmetic Operators in Python follow a basic order of precedence. When more than one operator is used, they are executed according to this order:

Operator	Purpose
----------	---------

(Parentheses
---	-------------

**	Exponent
----	----------

%, *, /, //	Modulos, Multiplication, Division and Floor division
-------------	--

+, -	Addition and Subtraction
------	--------------------------

The operator listed at the top of the table will be executed first.

```
print(((5 + 4) / 3) * 2)
```

Output:

```
PS C:\Users\trupa\OneDrive\Documents> c:; cd 'c:\Users\trupa\OneDrive\Documents'; & 'c:\Users\trupa\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\trupa\.vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher' '52250' '--' 'c:\Users\trupa\OneDrive\Documents\python'
6.0
```

```
x = 3
```

```
y = 4
```

```
z = 6
```

```
print(x*y//z)
```



Marwadi University
Faculty of Engineering & Technology
Department of Information and Communication Technology

Subject: Programming With Python (01CT1309)

Aim: Write a program to perform different arithmetic operations on numbers in python.

Experiment No: 02

Date:17/07/25

Enrollment No:92510133011

```
print(x*(y//z))
```

Output:

```
PS C:\Users\trupa\OneDrive\Documents> c;; cd 'c:\Users\trupa\OneDrive\Documents'; & 'c:\Users\trupa\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\trupa\.vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher' '52262' '--' 'c:\Users\trupa\OneDrive\Documents\python'
2
0
PS C:\Users\trupa\OneDrive\Documents>
```

x = 2

y = 3

z = 2

```
print(x**y**z)
```

```
print((x**y)**z)
```

Output:

```
PS C:\Users\trupa\OneDrive\Documents> c;; cd 'c:\Users\trupa\OneDrive\Documents'; & 'c:\Users\trupa\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\trupa\.vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher' '52274' '--' 'c:\Users\trupa\OneDrive\Documents\python'
512
64
PS C:\Users\trupa\OneDrive\Documents>
```

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Post Lab

Write a python code for calculating the Area and Perimeter of a Rectangle

```
length = float(input("Enter the length of the rectangle: "))
width = float(input("Enter the width of the rectangle: "))
area = length * width
perimeter = 2 * (length + width)
print("Area of the rectangle:", area)
print("Perimeter of the rectangle:", perimeter)
```



Marwadi University
Faculty of Engineering & Technology
Department of Information and Communication Technology

Subject: Programming With Python (01CT1309)

Aim: Write a program to perform different arithmetic operations on numbers in python.

Experiment No: 02

Date:17/07/25

Enrollment No:92510133011

```
PS C:\Users\trupa\OneDrive\Documents> c;; cd 'c:\Users\trupa\OneDrive\Documents'; & 'c:\Users\trupa\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\trupa\.vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher' '52318' '--' 'c:\Users\trupa\OneDrive\Documents\python'
Enter the length of the rectangle: 6
Enter the width of the rectangle: 8
Area of the rectangle: 48.0
Perimeter of the rectangle: 28.0
PS C:\Users\trupa\OneDrive\Documents>
```

Write a python code for testing if a number is even or odd

```
num = int(input("Enter a number: "))
if num % 2 == 0:
    print("The number is Even.")
else:
    print("The number is Odd.)
```

```
PS C:\Users\trupa\OneDrive\Documents> c;; cd 'c:\Users\trupa\OneDrive\Documents'; & 'c:\Users\trupa\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\trupa\.vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher' '52395' '--' 'c:\Users\trupa\OneDrive\Documents\python'
Enter a number: 11
The number is Odd.
PS C:\Users\trupa\OneDrive\Documents>
```

Write a python code for calculate the area and volume of the Cube.

```
side = float(input("Enter the side length of the cube: "))
area = 6 * (side ** 2)
volume = side ** 3
print("Surface Area of Cube:", area)
print("Volume of Cube:", volume)
```



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```
PS C:\Users\trupa\OneDrive\Documents> c;; cd 'c:\Users\trupa\OneDrive\Documents'; & 'c:\Users\trupa\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\trupa\.vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher' '52413' '--' 'c:\Users\trupa\OneDrive\Documents\python'
Enter the side length of the cube: 12
Surface Area of Cube: 864.0
Volume of Cube: 1728.0
```

Write a python code to solve the equation $z = (x+y)*(x-y)$

```
x = float(input("Enter value of x: "))
y = float(input("Enter value of y: "))
z = (x + y) * (x - y)
print("The value of z is:", z)
```

```
PS C:\Users\trupa\OneDrive\Documents> c;; cd 'c:\Users\trupa\OneDrive\Documents'; & 'c:\Users\trupa\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\trupa\.vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher' '52437' '--' 'c:\Users\trupa\OneDrive\Documents\python'
Enter value of x: 6
Enter value of y: 8
The value of z is: -28.0
```

Write a python code to solve the equation $z = (x+y)*(x+y)-2xy$; write a comment on it.

```
x = float(input("Enter value of x: "))
y = float(input("Enter value of y: "))
z = (x + y) * (x + y) - 2 * x * y
print("The value of z is:", z)
```

```
PS C:\Users\trupa\OneDrive\Documents> c;; cd 'c:\Users\trupa\OneDrive\Documents'; & 'c:\Users\trupa\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\trupa\.vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher' '64251' '--' 'c:\Users\trupa\OneDrive\Documents\python'
Enter value of x: 8
Enter value of y: 10
The value of z is: 164.0
```

Write a python code for Converting Celsius to Fahrenheit

```
celsius = float(input("Enter temperature in Celsius: "))
fahrenheit = (celsius * 9/5) + 32
print("Temperature in Fahrenheit:", fahrenheit)
```



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```
PS C:\Users\trupa\OneDrive\Documents> c;; cd 'c:\Users\trupa\OneDrive\Documents'; & 'c:\Users\trupa\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\trupa\vscode\extensions\ms-python.debugpy-2025.10.0-win32-x64\bundled\libs\debugpy\launcher' '64289' '--' 'c:\Users\trupa\OneDrive\Documents\python'
Enter temperature in Celsius: 60
Temperature in Fahrenheit: 140.0
PS C:\Users\trupa\OneDrive\Documents>
```