

```
>>> found=True
>>> print(not found)
False
>>> print(found)
True
>>> print(not True)
False
>>> print(not False)
True
```

### **Membership operators**

Membership operator is used with collection data types

Membership operator is used for searching or finding value inside collection values.

Membership returns Boolean value (True/False)

1. in
2. not in

```
>>> "python" in "python programming language"
True
>>> 10 in [10,20,30,40,50]
True
>>> "naresh@nareshit.com" in
["suresh@gmail.com","kishore@gmail.com"]
False
```

### **Example:**

# write a program to find input character is vowel or not

```
ch=input("enter any character") # B
print("vowel") if ch in "aeiouAEIOU" else print("not vowel")
```

### **Output**

```
===== RESTART: F:/python6pmaug/test30.py =====
enter any charactera
vowel
```

```
===== RESTART: F:/python6pmaug/test30.py =====
enter any characterl
vowel
```

```
===== RESTART: F:/python6pmaug/test30.py =====  
enter any characterb  
not vowel
```

### **Example:**

```
>>> 9988776655 not in [88776655432,7788996656]  
True
```

### **Identity Operators**

Every object in python is identified with unique address, this address is called id.

In python == operator is used to compare state of the object or value of the object.

Identity operator is used to compare object addresses

1. is
2. is not

Application development/Project development identity operator is used to find copy of object

Identity operator returns Boolean values (True/False)

```
>>> a=10  
>>> b=20  
>>> a is b  
False  
>>> c=a  
>>> a is c  
True  
>>> list1=[10,20,30,40,50]  
>>> list2=[10,20,30,40,50]  
>>> list1==list2  
True  
>>> list1 is list2  
False  
>>> list3=list1  
>>> list3 is list1  
True
```

### What is difference between == and is operator?

The == operator compares the value or equality of two objects, whereas the Python is operator checks whether two variables point to the same object in memory.

### Walrus operator

Walrus operator is introduced in python 3.8 version

Walrus operator is also called assignment expression operator

:= is called walrus operator

### Example:

```
a=5
b=2
c=(e:=a+b)*(d:=a-b)
print(a,b,c,d,e)
```

### Output:

5 2 21 3 7

### Example:

```
c=(a:=int(input("enter first number")))+(b:=int(input("enter second
number")))
print(a,b,c)
```

### Output

```
enter first number10
enter second number20
10 20 30
```

### Bitwise Operators

Bitwise operators are used to perform bitwise operations (using 0's and 1's). These operators are applied on binary values.

Operator	Description
>>	Right shift operator This operator is used for shifting number of bits towards right side. By shifting number of bits towards right side the value get decremented. The number of bits shifted towards right

	side is deleted. Shift operators are binary operator  value>>n
<<	Left shift operator
&	Bitwise and operator
	Bitwise or operator
^	Bitwise XOR operator
~	Bitwise not operator

A=10

A=A+5 → 15