


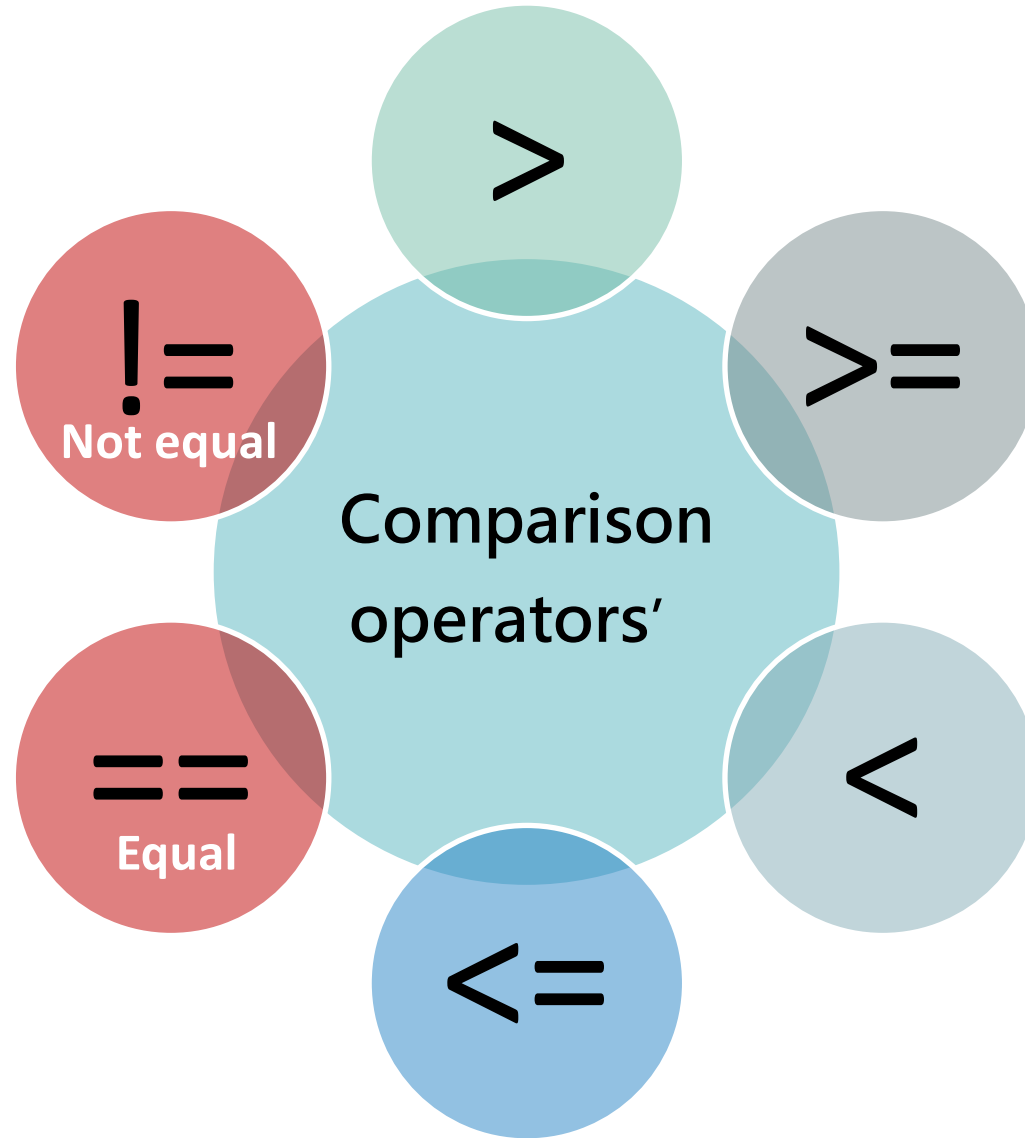


Python

The use of “If”



You can find the
maximum and
minimum when
"if "go with
comparison
operators



Comparison operators

Operator	Example	Meaning
==	$x==y$	Equal
!=	$x!=y$	Not equal
>	$x>y$	Greater than
<	$x<y$	Less than
>=	$x>=y$	Greater than or equal to
<=	$x<=y$	Less than or equal to





Python

Solve the problem with Python

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Enter two positive integers, a and b, and output maximum and minimum:

sample input :

20 10

Sample output :

maximum 20

Exercise



Solution 1:

```
num1 = int(input())
num2 = int(input())
if num1 > num2:
    print("maximum {}".format(num1))
if num1 < num2:
    print("maximum {}".format(num2))
```



Can we use solution1 to compare between 3 numbers?

Write a program, input 3 integers, and output the **maximum** and **minimum** values.

Sample input :

3
2
1

Sample output :

3
1

Exercise

```
if num1>num2 and num1>num3:
```

```
.....
```

```
if num2>num1 and num2>num3:
```

```
....
```



Can we use solution1 to compare between 5 numbers?

Write a program, input 5 integers, and output the **maximum** and **minimum** values.

Sample input :

3
2
1
6
7

Sample output :

7
1

if num1 > num2 and num1 > num3....:

.....

If num2 > num1 and num2 > num3....:

....

Exercise

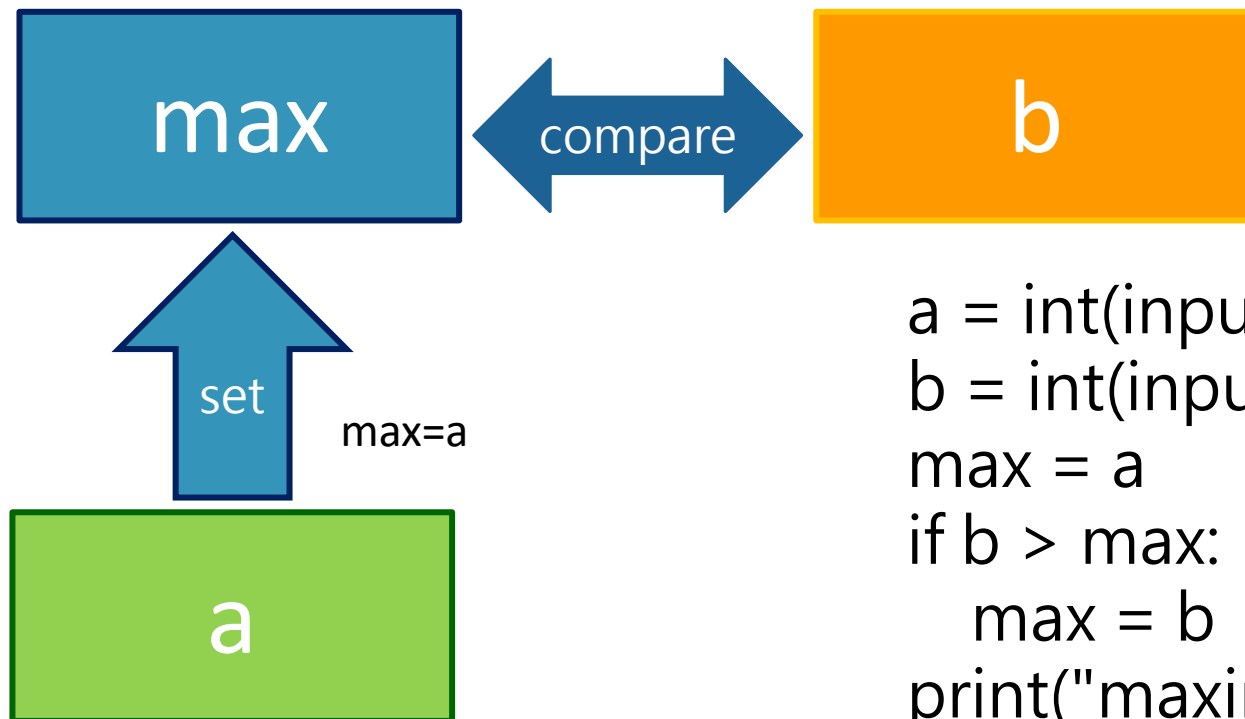


You're going to start paying attention on the method, when the amount of data grows larger. Otherwise, there will have efficiency problems!



Try swapping variables

Max is for storing the maximum value.



```
a = int(input())  
b = int(input())  
max = a  
if b > max:  
    max = b  
print("maximum{0}".format(max))
```



Try swapping variables to solve the number size problem

```
num1 = int(input())
num2 = int(input())
max = num1
if num2 > max:
    max = num2
print("maximum {0}".format(max))
```



When the number of comparisons becomes 3 or 5...

What method would you use?

