

Python Essentials for Women in Life Sciences



CHRF

Child Health Research
Foundation
Prevent Infections, Save Lives

Conditional Statements

Day 02

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Structure of conditional statement:

Let,

p = condition, q = conclusion

If p , then q

p implies q

1.5.2.1 Example:

Let, $x = 5$,

If $x < 10$, then print: "Small Number"

If $x > 10$, then print: "Large Number"

So, the answer will be **Small Number**.

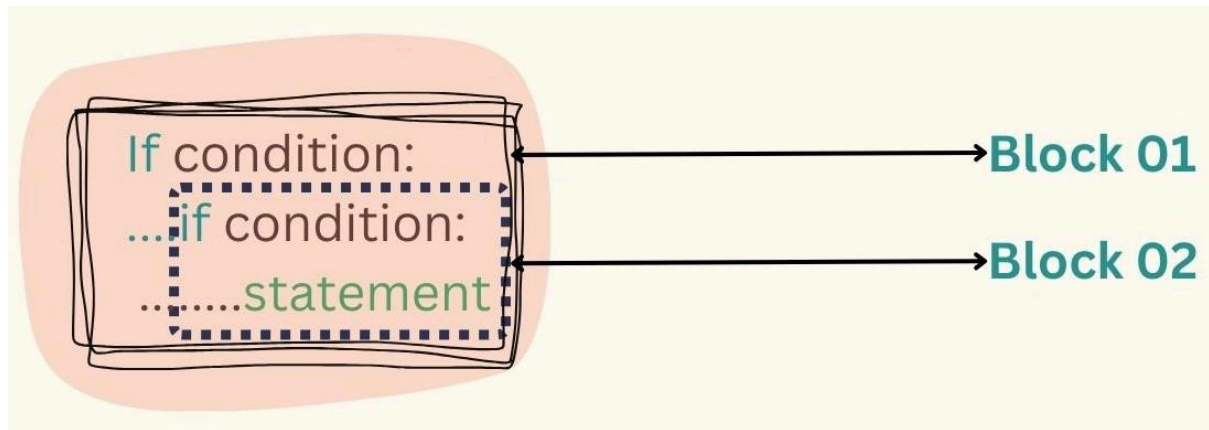
Comparison operator:

Python	Meaning
<	less than
<=	less than or equal to
==	equal to
>=	Greater than or equal to
>	Greater than
!=	not equal

Nested decision:

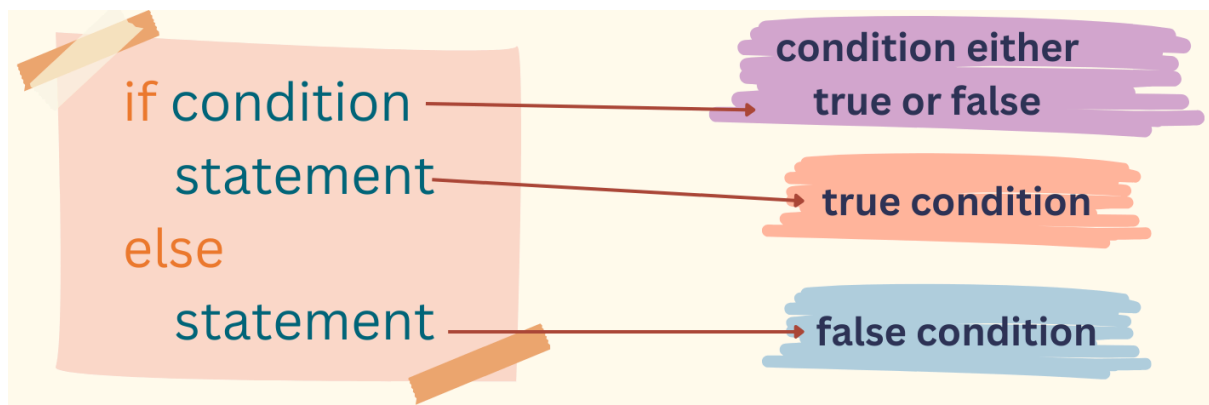
Sometimes you want to make a decision based on the result of a previous decision. One way to do this in Python is using nested conditionals, a second conditional executes only if the result of the first conditional is True.

So, here block 02 will execute only if block 01 executes.



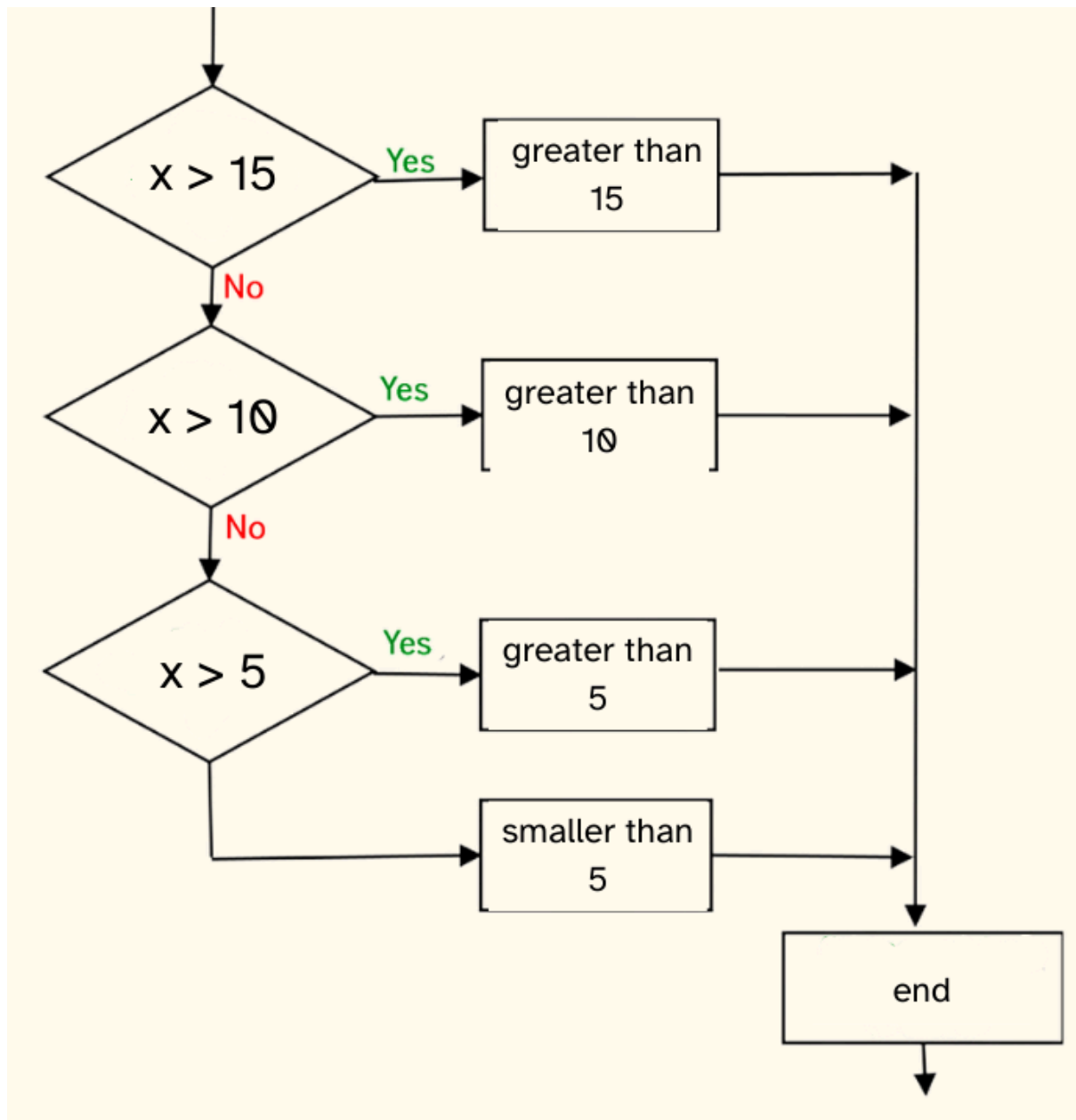
Multiway Decision with else:

The if-else statement is used to execute both the true part and the false part of a given condition. If the condition is true, the if block code is executed and if the condition is false, the else block code is executed.



Multiway Decision with elif:

'Elif' stands for 'else if' and is used in Python programming to test multiple conditions. It is written following an if statement in Python to check an alternative condition if the first condition is false. The code block under the elif statement will be executed only if its condition is true.



References:

1. <https://www.simplilearn.com/tutorials/python-tutorial/python-if-else-statement#:~:text=The%20if%2Delse%20statement%20is,else%20block%20code%20is%20executed.>
2. <https://www.pythonclassroom.com/decisions-if-elif-else/nested-if>
3. <https://www.mygreatlearning.com/blog/else-if-python/#:~:text='Elif'%20stands%20for%20'else,programming%20to%20test%20multiple%20conditions.>