

Introduction to PYTHON – Part 4

Python 025 – If Statements I

Often we have the need to do a comparison between two objects such as numbers. For instance, if we wanted to compare the variable “number1” to zero, we would use an if statement:

```
if number1 < 0:  
    print 'negative'  
elif number1 == 0:  
    print 'zero'  
else:  
    print 'must be positive!'
```

Operation	Meaning
<	strictly less than
<=	less than or equal
>	strictly greater than
>=	greater than or equal
==	equal
!=	not equal Note: != can also be written <>, but this is an obsolete usage kept for backwards compatibility only. New code should always use !=.
is	object identity
is not	negated object identity

Assignment

Write a program that prompts for two numbers, then informs us if the 1st number is less, greater than, or equal to the 2nd number.

Save as "025.py".

Python 025a – If Statements II

Assignment

Write a program that prompts for 5 grades between 0 and 100, then outputs the numerical average and the grade average (A = 80-100, B = 70-79.9, C = 60-69.9, D = 50-59.9, F < 50).

Write this program as efficiently as possible. (Think carefully about your approach!)

Save as "025a.py".

Python 025b – If Statements II

Assignment

Referring to program A1 in the [1990 \(Niagara South\)](#) programming competition, write the program but amend it so it loops infinitely until the Exit option is chosen. (Note: you may need to refer to [Counters and While Loops](#) for assistance.)

Save as "025b.py".

QUESTION A-1 [SAVE ON DISK AS "Q.A1"]

Write a program which accepts a number as input from the user and then offers the user a menu of calculation choices:

1. Square of the number
2. Square root of the number
3. Reciprocal of the number
4. Cube of the number
5. Cube root of the number
0. Exit program