Programming with Python (2)

Note: Brief Summary of contents discussed. Jan 20, 2025

Relational Operators:

Used for comparing two expressions and yield True or False

==, <, >, <=, >=

- Strings are compared left to right, characters by characters, based on ASCII codes.

ASCII code range:
'A' - 'Z' [65-90]
'a' - 'z' [97-122]
'0' - '9' [48-57]

[0-9] < [A-Z] < [a-z]

- If a string is a prefix of another string, the longer string is considered longer.

Logical Operators

(in order of precedence/priority)
not,
and,
or

Order of precedence

Arithmetic operators > Relational Operators > Logical Operators

Arithmetic operators: +, -, *, /, //, **, %

Commenting a line of code in Python: Use '#'

Apply parenthesis to the following expressions and evaluate

a. not 9 == 8 and 7+1!=8 or 6 < 4.5
b. 7 ** 2 // 9 % 3
c. 5 % 10 + 10 - 25 * 8 // 5
d. 10!=9 and 29 >= 29 and 'hi' > 'hello' or 'bye' < 'Bye' and 7 <= 2.5
e. 7 ** 2 // 4+5 > 8 or 5!=6

Exercise: Perimeter and Area of a triangle with given sides

Write a program that:

- Ask the user for three sides of triangle
- Calculate the Perimeter and Area

#use ** operator for computing square root.
Note: s = (a + b + c)/2 , Area = sqrt(s(s-a)(s-b)(s-c))

Apply parenthesis and evaluate

1.
x < y or not z == y

(a) When x=0, y=6, z=10
(b) When x=1, y=1, z=1

2.

10 < 5 and 5/0 < 10

3.
10 > 5 and 5/0 < 10