Introduction to Python

Variables, expressions, & statements

Using colab, save files, Python 3.0

Expressions, operator precedence, and order of operations (read math)

- type()
- String
- Integer
- Float
- Boolean

Naming conventions

Comments

Naming Conventions

Good names:

- area
- radius
- numberCounter (camelCase)
- user_profile

Bad names:

- A, b, o, O, l, I
- _new_name, 1new_name
- data_structure
- asd123

Demo

1. Variables
2. Expressions
3. Operators
4. type()
    a. (Note: lowercase)
5. print()

Input and Output

input()

- User given parameters

print()

- Result

Demo

1. input()

Class practice

1. Open colab.research.google.com
2. Create a new file
    a. Test code block and text block
3. Ask user for two numbers -- remember naming conventions
4. Add these numbers together and print
5. Subtract these numbers and print
6. Multiply and print
7. Divide these numbers and print
    a. Try with a 0 divisor
    b. int() vs float()

Answer form

Assignment 1

1. Write a python program that will accept the radius of a circle from the user and compute the area.
    a. Test using the following values:
        i. r = 1.1, Area = 3.7994
        ii. r = 2.2, Area = 15.1976
        iii. Note: Formula for Area of a circle: A = π*r^2
        iv. Note: Use variables for pi, r, and area
        v. Note: For pi, use approximation 3.14

Assignment 1 (cont.)

2. Write a python program that asks the user their name. Then print out a line saying: name + ", what year were you born?". Then ask the user what year they were born. Print the line: “You are” + age + “years old.”
    a. Example:
        i. Input: What is your name?
            1. Bob
        ii. Output: Your name is Bob.
        iii. Input: Bob, what year were you born?
            1. 1980
        iv. Output: You are 40 years old.
    b. Note: You have to first ask for the user’s name before asking for a year