

Python Workshop

Assignment - 2

What are the data types in python? Explain

Integer: positive or negative whole numbers are the integer datatypes in python

float: Any real Number with a floating point represents in which a fractional Component is denoted by a decimal Symbol or Scientific notation.

Complex Number: A num with a real and imaginary Component represented as $x+yj$, x and y are floats and j is -1 .

Boolean: Data with one of two built-in-values True or false. Notice that T and F are Capital. true and false are not valid booleans and python will throw an error for them.

string: A string Value is a Collection of one or more characters put in single, double or triple quotes.

list: A list object is an ordered Collection of one or more data items, not necessarily of the same type, put in square brackets.

tuple: A tuple object is an ordered Collection of one or more data items, not necessarily of the same types put in parentheses.

* Briefly Explain the history of python?

python was Created by Guido Van Rossum in 1980 to 1990. He was a member of the national Research institute of mathematics and Computer Science. Initially it was designed as a response to the ABC programmer language was that python had exception handling and was targeted for the Ameba operating system. the name python is named from the British TV show monty python. In addition to exception handling, python included classes, lists and strings.

* Explain the operators in python?

operators in python are

- Arithmetic operator
- Relational operator
- Assignment operator
- Logical operator
- membership operator
- Identify operator
- Bit Wise operator.

* Arithmetic operator are Addition, Subtraction, multiplication, Division, floor division, modulus, Exponentiation.

- ✦ Relational operators are $<, >, <=, >=, ==, !=$
- ✦ Assignment operators are $=, +=, -=, /=, *=, //=$
- ✦ Logical operators are and, or, not
- ✦ Membership operators are $in, not in$
- ✦ Identity operators are $is, is not$
- ✦ Bitwise operators are Binary And ($\&$) Binary Or ($|$)
Binary XOR (\sim) $<<, >>$

✦ Explain features of python?

Easy to Code

Free and open Source

Object Oriented language

GUI Programming Support

High-level language

Extensible feature.

python is portable language

python is integrated language

large standard library

Dynamically typed language.

♥ justify why python is interpreted language?

Unlike c/c++ etc, python is an interpreted object-oriented programming language. The Compiler which is a Compiled programming language. The Compiler translates the whole code in one-go rather than line-by-line. This is the reason why in c language, all the errors are listed during compilation only.