Python Workshop

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CSE B4

What are data types in Python? Explain

Ans **Integer**: is positive or negative whole numbers are the integer datatypes in python.

Float: Any real number with a floating point represent in which a fractional component is denoted by a decimal symbol or scientific notation

Complex numbers: A number with a real and imaginary component represents as x+yj, x and y are floats and j is -1.

Boolean: Data with one or 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 collection of one or more characters put in single, double or triple quotes.

List: A list object is ordered collection of one or more data items not necessarily of same type put in square brackets.

Tuple: A type object is an ordered collection of one or more data items not necessarily of same type put in parenthesis

* Briefly explain the history of Python?

Ans: Python was created by Guido Von Rossum in 1980 to 1990. He was a member of the National research institute of Mathematics and Computer Science. Initially it was designed as response to ABC programmer language was the Python had expetation handling and was targeted for Amoeba 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.

Ans: Operators in Python are Arithmetic operators
Relational operators
Assignment operators
Logical operators
Membership operators
Identity operators
Bitwise operators.

=> Arithmetic operators are addition(+), Subtraction(-) multiplication(*), division(/), modulus(%), exponent

=> Relational operators are <, >, <=, >=, ==, !=.

=> Assignment operators are =, += , -=, *= , /=, **=, //= .

=> Logical operators are "and, or, not"

=> Membership operators: in, not in

=> Identity operators: are is, is not.

=> Bitwise operators are Binary And (&). Binary (or) | Binary XOR (^) ~, <<, >>

* Explain Features of Python.

Ans: => Easy to code

=> Free and open source

=> Object oriented Language

=> GUI programming Support

=> High-level language

=> Extensible Language

=> Python is portable Language

=> It is integrated language

=> Large Standard library

=> Dynamically typed langugage.

* Justify why Python is "interpreted language.

Ans: Unlike C / C++ etc, Python is an interpred object oriented programming language, Compiler which is compiled programming language the compiler translated the whole code in one-go rather than line by line. This is the reason why in 'C' language all errors are listed during compiler only