1. What are datatypes in python? Explain.

python provides various standard date types that define the storage method on each of them the data types defined in python are given below.

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Employ is worth winger without of

- 1. Numbers
- 2. string
- 3. List
- 4. Tuple
- 5. Dictionary.

Numbers:

Numbers stores numeric values python Greates number Objects when a number is assigned to a variable ports invisioning to the holds is believed to

Eq: a=3, 6=5; 100 pm brelians 1018 22 and 107

a, b are number Objects.

It supports a types of numericalata those are

.. int 2. long 3. float 4. Complex re control polipiol off the at

String: 0000 construction of the will expended The string Can be defined as sequence of characters supresented in the quotation mailes. In python, we can use lingle, double, or triple gots to define a string. at woodpaned that he had appropriate with the

dist: dists are similar to arrays in c. However, the list Can Contain data of different types. The items stored in the list are separated by comma() and enclosed with squere brackets(). Ruple:

A tuple is similar to the list in many ways. Like list, tuples also contain the collection of the items of different data types. The items of the luple one separated with a Commaci) and enclosed in conversion and applying the free for parentheses ().

Dictionary:

Dictionary is an ordered set of a key-value pair Of items. It is like an associative arrayor a hash dable where each key stores a specific value.

a. Briefly explain history of python?

Python is dynamically typed and garbage Collected It supports multiple programming paradigms, including gtructured, object-oriented and functional programming python is Often described as a Batteries included" language du to êts Comprehensive Standard library.

python was conceined in the lotte 1980s as a successor to the ABC language python 20 reliased in 2000 introduced features like list comprehensions and a garbage Collection system with afterence counting.

python 8.0, released in 2008, was a major revision of the language that is not completely backward Comportible and much pythons code does not run unmodified on python 3.

pothon interpreties are available for many operating Systems. A global Community of peogrammers develops and maintains Courthon, an open Source reference implement -attion of non-profit organization, the python software foundation, manages and direct resources for python

- 3. Explain all the operators in python?
 - ago go ago. Lology borrot den water 1. Asthmetic Operators :

These are used to perform mathematical operation like addition, substraction, multiplication and division was son and about the state of the

+ > nty, * >n*y, 11 -> n/y

-> or-y, 1 > >4y, 0/ > 244 xx -> 2x*+y.

of been in ai ten bio ai 2- relation operator:

These will compare the values. It either acturns

true or balle according to condition. Sullas ton it work to so

>> 01>4, ==> n==4, !=>n!4.

>= > カン=リ1

These perform cogical AND cogical OR and 3. Logical operators: of teamples of louting

Cogical NOT operations.

s and snandy

s or is more and promotory but failed inching

as not a not u.

4 Bit wise operators: shere acts on bits and performs bit by bit

perceiption syntax 3 90 2000 10 10 10 10 19 19 10 10 operat or Bitwise AND oc & y Bitwise or $\alpha 1 y$ Bitwise NOT was now have designed willing XNY Bitwise zight shift 2>> Bitwise XOR

Assignment operators are used to assign 5. Assignment operators: values to the variables

and one interior epighem, on epich historic articles are

operators:

= 1 += 1 -= 1 *= 1 | = 1 + *= 18= 11= 1

A=1>>=.

6. special operators: " my ai morning and the windy There are some special lype of operators

tike intermediate majory of been the major

Identily operators: is - True is the operands are édentical is not - True if the operands are not identical. Ruse- 1 brock block

T. Membership operators:

in and not in are used in this operators.

· place of people

in - True if value is found in sequence not in - True if not found in the sequence.

4. Explain the beature of python?

The professo deplace AND features of python are ;

1. Losy to code:

python is high well programming conquare python is very easy to learn the no seek servers of the servers

3. Execand open source: waters anitylesses

python language is fixely available at Offline website and you can dowload it from the links easily.

3. Object oriented Canguage:

One of the Key feature of python is Object Oriented programming. python supports Object Oriented Concepts.

4. High level language:

programs in python we don't need the remember the system architecture, not do we need to manage memory.

5. Extensible feature:

python is excursible Congulage and also Can

Compile that:

6. Dynamically Typed Language:

Pothon is dynamically-typed Canguage and means the type for a variable is decided at seen time not in advance.

5. Justify why python is intractive interpreted language 9

Python is an interacted interpreted Canquage because unike coct etc, python is an interpreted object oriented programming language. By interpreter it is meant that each time a program is run the interpreter checks through the Cocle for errors and then interprets the instructions

inte machine readable tyle Code

Whe Can easily integrated python with other Canguage like c, c++ etc other is no need to Compile python Cike c, c++ etc other is no need to Compile python Code. The Code this make it easier to debug one code. The Source Code of python is converted into immediate form Called byte Code.

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