Assignment-2 321810303036

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1. What are the data types in python & Explain

A:i. Numbers

ii. Strings

iii. Lists

iv. Tuples

v. Dictionary

i. Numbers - Number data types store numeric values, number objects are created when you assign a value to them.

ii. Strings - Strings in python are identified as a contiguous set of characters represented in the quotation mark. Python allows either pairs of single or double quotes.

iii. Lists - Lists are the most versatile of python's compound data types. A list contains items separated by commas and enclosed within square brackets.

iv. Tuples - It is similar to lists it consists of a number of values separated by commas, unlike lists.

v. Dictionary:- python's dictionaries are kind of hash-table type. They work like associative arrays or hashes found in perl and consist of

Key value pairs.

2. Briefly explain history of python.

→ Started implementing in the year 1989 Guido Van Rossum began doing its application based work in december of 1989 by at centrum wiskunde & informatica. phyton is a widely used general purpose, high level programming language. It was mainly developed for emphasis on code readability, and its syntax allows programmers to except Concept in fewer lines of code. This programming language used for developing both desktop and web applications, and it can be used for developing complex scientific & numeric applications, and it can be used for developing Complex scientific & numeric application, it is designed with features to facilitate data analysis & visulization.

3. Explain all the operators in phyton?

→ different types of phyton operators:-

→ Arithemetic, Relational, Assignment, Logical, membership, identity and bitwise.

1. Arithemetic Operators:- These are used to perform mathematical operation like addition, Subtraction, multiplication and division.

+ → x+y, * → x*y, // → x//y

- → x-y, / → x/y, % → x%y, ** → x**y

2. Relation operators :- These will compare the values. It either return true or false according to condition.

> → x>y, == → x==y, != → x!=y

>= → x>=y. < → x<y, <= → x<=y.

3. Logical operators :- These perform logical AND Logical OR and Logical NOT operations.

⇒ and → x and y.

⇒ or → x or y

⇒ not → not x.

4. Assignment operators :- Assignment operators are used to assign values to the variables.

operators : =, +=, -=, *=, /=, %=, //=, **=, &=, |=, ^=, >>=

5. Bitwise operators :- These acts on bits and perform bit by bit operator.

operator	Description	Syntax
&	Bitwise AND	x&y
|	Bitwise OR	x|y
~	Bitwise NOT	~x
^	Bitwise XOR	x^y
>>	Bitwise right shift	x>>

6. Special Operators:- These are some special type of operators like

Identity operators:-

is - True if the operands are identical.

is not - True if the operands are not identical.

7. Membership operators:- in and not in are used in this operators.

in - True if value is found in sequence.

not in - True if not found in the sequence.

4. Explain the features of python?

→ Features of python are

- Simple
- Easy to learn
- Free & Open Source
- Python is a Beginner's Language.
- Portable
- Interpreted.
- Object Oriented.
- Extensible.
- Embeddable
- Extensive Libraries
- Databases
- GUI programming
- Scalable.

5. Justify why python is interactive interpreted Language?

→ Python prompt & interact with the interpreter directly to write your programs. python is Object Oriented python supports object-oriented style or technique of programming that encapsulates code within objects. It is interpreted Language because it goes through an interpreter, which turns code you write into the Language

understood by your computer's processor.

Unlike C/C++ etc, Python is an interpreted object-oriented programming language. By interpreted it is meant that each time a program is run the interpreter checks through the code for errors & then interprets the instructions into machine readable bytecode.