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① What are data types in python? Explain.

They are the classification or categorization of data items. Data types represent a kind of value which determines what operations can be Performed on that data. Numeric, non-numeric and Boolean (True/false) data are the most used data types.

There are 5 data types of python.

- Numbers - Type: int, float, complex
- string
- List
- Tuple
- Dictionary

Built - In Data types.

Numeric

sequence - list, tuple, range

mapping : dict

set : set, frozenset

Boolean : bool

Binary : bytes, bytearray, memoryview

Eg:- print the datatype of the variable x

x = 5
print(type(x))

(2). Briefly Explain in History of Python.

Python is an interpreted, high-level, general purpose programming language, created by Guido von Rossum and first released in 1991.

* It was design by philosophy emphasizes code readability, with notable use of significant whitespace.

* Paradigm - Multi paradigm: functional, imperative, Object oriented, structured, reflective.

→ Designed by   Guido von Rossum

→ Developer   Python software foundation.

→ First appeared in year 1990; 30 years ago.

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(3) Explain all the operators in python.

- Arithmetic operators are used to perform mathematical operations like addition, substraction, Multiplication etc.

Operators	Meaning	Example
+	Add 2 operands or unary plus	x + y + z
-	subtract right operand	x - y - z

| * | Multiply two operands | $x * y$ |

| / | Divide left operand by right two | x / y |

| % | Modulus - remainder of the division of left operand by the right | $x \% y$ |

| // | Floor division - division that results into whole number adjusted to the left | $x // y$ |

| ** | Exponent - left operand raised to the power of right | $x ** y$ |

Eg:-
```
x = 15
y = 9
print ('x + y' = , x+y)
print ('x-y' =, x-y)
print ('x**y= ,' x*y)
print ('x / y = ', x/y)
print ('x // y = ', x//y)
print ('x ** y =', x**y)
```

Q Explain the features of Python.

A Python features are in dynamic High level, Free Open source and interpreted programming language. It supports object oriented programming as well as procedural oriented programming.

* In python, we don't need to declare the type of variable because it is a dynamic type language

* It is easy to learn and use

* Expressive language

* Interpreted language

* Cross-platform language

* Free and open source

* Object-oriented language

* Extensible

* Large standard library.

* GUI programming support

* Integrated.

(5) Justify why Python is interactive interpreted language.

unlike c/c++ ext.c, python is an interpreted object-oriented programming language. . . . .

* unlike c language, which is 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..

* We can actually sit at a python prompt and interact with the interpreted directly to write our programs.

* It runs directly from the source code.