Python Assignment-2

① What are the data types in Python? Explain.

Ⓐ Data types are the classification & categorization of data items. Data types represent a kind of value which determines what operations can be performed on that data.

Python has the following standard & built-in data types:

Numeric

A numeric value is any representation of data which has a numeric value. Python identifies three types of numbers.

→ Integers: positive & negative whole number.

→ float: Any real number with a floating point representation in which a fractional component is denoted by a decimal symbol & scientific notation

→ complex number: A number with a real and imaginary component represented as x+yi.

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 is an of one or more data items, not necessarily of the same type, put in parentheses.

→ Dictionary.

A dictionary object is an unordered collection of data in a key : value pair form. A collection of such pairs is enclosed in curly brackets,

② Briefly explain history of Python.

Python is an interpreted, high-level, general-purpose programming. Created by Guido van Rossum and first released in 1991, Python's design Philosophy emphasizes code readability with its notable use of significan whitespace.

→ Python was conceived in the late 1980s as a successor to the ABC language. Python 2.0, released in 2000, introduced features like list comprehensions, and a garbage collection system with reference counting.

→ Python 3.0, realsed in 2008 was a major revis of the language that is not completely backward-compatable & much python 2 code does not run unmodified on Python 3.

(3) explain all the operators in Python.

comparison and Logical operators in Python.

Assuming that x=10, and y=20, the result of the operation in also given table.

>	True if the left operand is than the right one	>>> x>y false.
<	True if the operand is lower than right one	>>> x<y True
==	True if the operands are equal	>>> x==y false
!=	True if the operands are not equal	>>> x!=y True.
>=	True if the left operand is higher than or equal to the right one	>>> x>=y false.
<=	True if the left operand is lower than or equal to right one.	>>> x<=y True

Logical operators

and	True if both are true	>>> x and y False.
or	True if at least one is true	>>> x or y True.
not	returns True if an expression evaluates to false and vice-versa	>>> not x false.

explain the features of python.

1. Easy to learn and use.
2. expressive language
3. Interpreted language.
4. cross-platform language.
5. Free and open source
6. object-oriented language
7. extensible
8. Large standard library
9. GUI