

## Assignment-2

1) What are the datatypes in python.

1)

~~→ Numbers~~

→ Numbers: Numbers datatype. Store numeric values. Numbers objects are created when you assign a value to them.

→ String: These are the sequence of characters enclosed in single (or) double quotes.

→ List: A list contains an item which are separated by commas and enclosed within square brackets []

→ Tuple: A Tuple consists of a no. of values separated by commas, enclosed within parenthesis.

→ Dictionary: They consist of key value pairs. A dictionary key can be of any type but are generally numbers (or) strings. These are enclosed in curly braces {}.

2) Briefly explain history of python?

A)

\* Python was conceived in the late 1980's.

\* Its implementation was started in December 1989 by Guido van Rossum at CWI in the Netherlands.

\* Python was named for the BBC TV show Monty Python's Flying Circus.

\* Python 2.0 was released on October 16, 2000 with new features including a cycle-detecting garbage collector for memory management and



Support for Unicode. The most imp change was to the development process.

\* Python 3.0, backwards - In Compatible release. Released. on December 3, 2008 After a long period of testing. Many of Major features have been back ported to the backwards. - Compatible while by now. Unsupported, Python 2.6 and 2.7

3) Explain all the operators in python?

A) Operators are the Symbol. that perform Mathematical Operations between two Operand.

1) Arithmetic Operators:-

Operator	Description	Syntax.
+	Addition	$a + b$
-	Subtraction	$a - b$
*	Multiplication.	$a * b$
/	Division.	$a / b$
//	floor Division	$a // b$
%	Modulus	$a \% b$
**	Power.	$a ** b$

2) Relational Operator:-

Operator	Description	Syntax
>	Greater than.	$a > b$
<	Less than	$a < b$
>=	Greater than (or) Equal to.	$a >= b$

$< =$  Less than (or) equal to  $a < = b$

$=$  Equal to.  $a = b$

$!=$  Not Equal to  $a != b$

### 3) Logical Operator:-

Operator	Description	Syntax
and.	Logical AND	$a \text{ and } b$
or	Logical OR.	$a \text{ or } b$
not	Logical Not	$\text{not } a$

### 4) Bitwise Operator:-

Operator	Description	Syntax
$\&$	Bitwise AND	$a \& b$
	Bitwise OR.	$a   b$
$\sim$	Bitwise NOT	$\sim a$
$\wedge$	Bitwise XOR	$a \wedge b$
$\gg$	Bitwise right	$a \gg$
$\ll$	Bitwise Left Shift.	$a \ll$

### 5) Special Operator:-

$\text{is}$  - True. if the operands are identical.

$\text{is not}$  - True if the operands are not identical

### 6) Membership Operator:-

$\text{in}$  - True if value is found in sequence.

$\text{not in}$  - True if value is not found in sequence.



4) Explain the features of python?

A).

i) Easy to learn & use:- python is very easy to use.

ii) Expressive language:- It is more understandable and readable

iii) Cross platform language:- It is a portable language. It can be used in diff. & Multiple platforms.

iv) Object Oriented language:- python

Supports Object Oriented language, Concept of classes and objects. Come into existence.

v) Extensible:- The code is easy extendable by adding Multiple features

vi) Integrated:- It can be easily integrated by C, C++ & Java

5) Justify python is an interactive interpreted language.

A). python is interactive! you can actually sit at a python prompt and interact with interpreter directly to write your program. Python is Object Oriented that encapsulates Program with Objects.