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(1)

Ans:- 1) Numbers: Number data type store numeric values. Number objects are created when you assign a value to them.

2) Strings: Strings in python are identified as a contiguous set of characters represented in quotation marks (both quotes)

3) Lists: Lists are most versatile of python's compound datatypes. A list contains items separated by comma and enclosed within square brackets ([ ])

4) Tuples: A tuple is another sequence data type that is similar to list. A tuple consists of number of values separated by commas, here tuples are enclosed within parenthesis.

5) 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. Dictionaries are enclosed within curly braces.

(2) Briefly Explain History of python?

Ans: Python is conceived in the late 1980s by Guido van Rossun at centrum wiskunde & informatica (CWI) in Netherlands as a succesor to the ABC language capable of exception handling and interfacing with Amoeba operating system. Its implementation began in December 1989. Van Rossun shouldered sole responsibility for project until 12 July 2018, when he announced his "permanent vacation" from his responsibilities as python's Benevalent Dictator for Life, a title the python community bestowed upon him to reflect his longterm commitment as projects chief decision-maker.

(3)

Ans: Arithmetic operators: used to perform mathematical operations.

operator	meaning	example
+	Adding operands	x+y
-	subtraction	x-y
*	multiplication	x*y
/	division	x/y
%	modulus / remainder	x%y
//	floor division	x//y
**	Exponential	x**y (x^y)

Comparison operators:

Operator	meaning	Example
>	greaterthan greater than	x>y
<	less than	x<y
==	Equal to	x==y
!=	not Equal	x!=y
>=	greaterthan or Equal to	x>=y
<=	less than or Equal to	x<=y

Logical operators:

operator	meaning	Example
and	both conditions are true	x and y
or	any one condition is true	x or y
not	True if condition is false	not x

Bitwise operators: works on binary digits.

operator	meaning	example
&	Bitwise AND	x&y
|	Bitwise OR	x|y

~	Bitwise NOT	~x
^	Bitwise XOR	x ^ y
>>	Bitwise right shift	x >> 2
<<	Bitwise left shift	x << 2

Assignment operator:

operator	example	equivalent to
=	x = 5	x = 5
+=	x += 5	x = x + 5
-=	x -= 5	x = x - 5
*=	x *= 5	x = x * 5
/=	x /= 5	x = x / 5
%=	x %= 5	x = x % 5
//=	x //= 5	x = x // 5
**=	x **= 5	x = x ** 5
&=	x &= 5	x = x & 5
|=	x |= 5	x = x | 5
^=	x ^= 5	x = x ^ 5
>>=	x >>= 5	x = x >> 5
<<=	x <<= 5	x = x << 5

identical

membership operators

operator	meaning	Example
in	True if value/variable is found in sequence	5 in x
not in	True if value/variable is not found in sequence	5 not in x

(4)

Ans: (a) Easy to Code

(b) open source and free

(c) support for Gui?

(d) object-oriented approach.

(e) high-level language.

(f) Integrated by Nature.

(g) highly portable.

(h) highly Dyramic

(i) Extensive Array of Library.

(5) Ans

Ans:- 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 code for errors and then interprets the instructions into machine-readable bytecode. An interpreter is a translator in computer's language which translates the given code line-by-line in machine readable byte codes. And if any errors is encountered it stops translation until the error is fixed. In languages like 'c' whole code is 'compiled at once. This is the reason why in C, all the errors are listed during compilation only

Ex:-

```
print "\n\n --- This line is correct ---.\n\n" #l1
print Hello  # this is wrong                  #l2
```

```
:~/Desktop/test $ python g.py
---- This line is correct ----
Traceback(most recent call last):
  File "g.py", line 5, in
NameError.
```