What are Python String formats and Python String replacements?

Python String Format: The String format() method in Python is mainly used to format the given string into an accurate output or result.

Syntax for String format() method:

```
template.format(p0, p1, ..., k0=v0, k1=v1, ...)
```

Python String Replace: This method is mainly used to return a copy of the string in which all the occurrence of the substring is replaced by another substring.

Syntax for String replace() method:

```
str.replace(old, new [, count])
```

Name some of the built-in modules in Python?

The built-in modules in Python are:

- sys module
- OS module
- random module
- collection module
- JSON
- Math module

What are the functions in Python?

In Python, functions are defined as a block of code that is executable only when it is called. The def keyword is used to define a function in Python.

What are Dict and List comprehensions in Python?

These are mostly used as syntax constructions to ease the creation of lists and dictionaries based on existing iterable

How can we access a module written in Python from C?

We can access the module written in Python from C by using the following method.

```
Module == PyImport_ImportModule("<modulename>");
```

Define the term lambda?

An anonymous function is known as a lambda function. This function can have any number of parameters but, can have just one statement.

Example:

```
a = lambda x,y : x+y
print(a(5, 6))
```

Output: 11

When would you use triple quotes as a delimiter?

Triple quotes “” or “‘ are string delimiters that can span multiple lines in Python. Triple quotes are usually used when spanning multiple lines, or enclosing a string that has a mix of single and double quotes contained therein.

How to remove values from a Python array?

Ans: The elements can be removed from a Python array using the remove() or pop() function. The difference between pop() and remove() will be explained in the below example.

Example:

```
x = arr.array('d',  [ 1.0, 2.2, 3.4, 4.8, 5.2, 6.6, 7.3])
print(x.pop())
print(x.pop(3))
x.remove(1.0)
print(a)
```

Output:

```
7.3
4.8
array(‘d’, [2.2, 3.4, 5.2, 6.6])
```

What is Try Block?

A block that is preceded by the try keyword is known as a try block

Syntax:

```
try{
   //statements that may cause an exception
}
```

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How do you copy an object in Python?

To copy objects in Python we can use methods called copy.copy() or copy.deepcopy().

How do we reverse a list in Python?

By using the list.reverse(): we can reverse the objects of the list in Python.

Range() method	Xrange() method
The xrange() method is not supported in Python3 so that the range() method is used for iteration in for loops.	The xrange() method is used only in Python 2 for the iteration in loops.
The list is returned by this range() method	It only returns the generator object because doesn't produce a static list during run tim
It occupies a huge amount of memory as it stores the complete list of iterating numbers in memory.	It occupies less memory because it only st number at a time in memory.

What are Keywords in Python?

Ans: Keywords in python are reserved words that have special meaning.They are generally used to define type of variables. Keywords cannot be used for variable or function names. There are following 33 keywords in python-

- And
- Or
- Not
- If
- Else
- For
- While
- Break

What are Literals in Python and explain about different Literals

A literal in python source code represents a fixed value for primitive data types. There are 5 types of literals in python-

1. **String literals**– A string literal is created by assigning some text enclosed in single or double quotes to a variable. To create multiline literals, assign the multiline text enclosed in triple quotes. Eg.`name=”Tanya”`
2. **A character literal**– It is created by assigning a single character enclosed in double quotes. Eg. `a=’t’`
3. **Numeric literals** include numeric values that can be either integer, floating point value, or a complex number. Eg. `a=50`
4. **Boolean literals**– These can be 2 values- either True or False.
5. **Literal Collections**– These are of 4 types-

a) List collections-Eg. `a=[1,2,3,’Amit’]`

b) Tuple literals- Eg. `a=(5,6,7,8)`

c) Dictionary literals- Eg. `dict={1: ’apple’, 2: ’mango, 3: ’banana`’}`

d) Set literals- Eg. `{“Tanya”, “Rohit”, “Mohan”}`

6. Special literal- Python has 1 special literal None which is used to return a null variable

What are the new features added in Python 3.9.0.0 version?

The new features in Python 3.9.0.0 version are-

- New Dictionary functions Merge(|) and Update(|=)
- New String Methods to Remove Prefixes and Suffixes

Is python case sensitive?

Ans: Yes. Python is a case sensitive language.

What is type conversion in Python?

Ans: Type conversion refers to the conversion of one data type into another.

int() – converts any data type into integer type

float() – converts any data type into float type

ord() – converts characters into integer

hex() – converts integers to hexadecimal

oct() – converts integer to octal

tuple() – This function is used to convert to a tuple.

set() – This function returns the type after converting to set.

list() – This function is used to convert any data type to a list type.

dict() – This function is used to convert a tuple of order (key, value) into a dictionary.

str() – Used to convert integer into a string.

complex(real,imag) – This function converts real numbers to complex(real,imag) number

Is indentation required in python?

Ans: Indentation is necessary for Python. It specifies a block of code. All code within loops, classes, functions, etc is specified within an indented block. It is usually done using four space characters. If your code is not indented necessarily, it will not execute accurately and will throw errors as well

SORT() AND SORTED() DIFFERENCE

Sort is faster compare to sorted()

Sort returns none

It is only applicable to lists

Sort () does in place sorting

The main difference between **sort()** and **sorted()** is that the **sorted()** function takes any iterable (list, tuple, set, dictionary) and returns a new sorted object without affecting the original. On the other hand, **sort()** does in-place sorting meaning it won't create a new list but updates the given list itself in the desired order (ascending or descending).

sort()

```
>>> mylist = [5, 4, 3, 2, 1]

>>> mylist.sort()

 >>> mylist
[1, 2, 3, 4, 5]
```

Sorted() is slower compare to sort()

Sorted () returns sorted list

It is applicable to list ,set, dict, tuple

Sorted () returns sorted object without affecting original object

sorted()

```
>>> mylist = [5, 4, 3, 2, 1]
 >>> sorted(mylist)
[1, 2, 3, 4, 5]

>>> mylist
[5, 4, 3, 2, 1]
```

Not only list, but you can also sort any iterable tuple, list, and dictionaries using the **sorted()** function.