Python questions

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What are the supported data types in Python?
Python has five standard data types —
- Numbers
- String
- List
- Tuple
- Dictionary

What is the output of print str if str = 'Hello World!'?
What is the output of print str[0] if str = 'Hello World!'?

What is the output of print str[2:5] if str = 'Hello World!'?

What is the output of print str[2:] if str = 'Hello World!'?

What is the output of print list if list = ['abcd', 786 , 2.23, 'john', 70.2]?

What is the output of print list[0] if list = ['abcd', 786 , 2.23, 'john', 70.2]?

What is the output of print list[1:3] if list = ['abcd', 786 , 2.23, 'john', 70.2]?

What are tuples in Python?
A tuple is another sequence data type that is similar to the list. A tuple consists of a number of values separated by commas . Unlike lists, however, tuples are enclosed within parentheses.

What is the difference between tuples and lists in Python?
The main differences between lists and tuples are — Lists are enclosed in brackets ([ ]) and their elements and size can be changed, while tuples are enclosed in parentheses (( )) and cannot be updated. Tuples can be thought of as read-only lists.

What is the output of print tinytuple * 2 if tinytuple = (123, 'john')?
It will print tuple two times. Output would be (123, 'john', 123, 'john').

What are Python's dictionaries?
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. A dictionary key can be almost any Python type, but are usually numbers or strings. Values, on the other hand, can be any arbitrary Python object.

From <https://www.tutorialspoint.com/python/python_interview_questions.htm>

How will you create a dictionary in python?
Dictionaries are enclosed by curly braces ({ }) and values can be assigned and accessed using square braces ([]).
```
dict = {}
dict['one'] = "This is one"
dict[2]    = "This is two"
tinydict = {'name': 'john','code':6734, 'dept': 'sales'}
```

From <https://www.tutorialspoint.com/python/python_interview_questions.htm>

How will you get all the keys from the dictionary?
Using dictionary.keys() function, we can get all the keys from the dictionary object.
```
print dict.keys()   # Prints all the keys
```

From <https://www.tutorialspoint.com/python/python_interview_questions.htm>

How will you get all the values from the dictionary?
Using dictionary.values() function, we can get all the values from the dictionary object.
```
print dict.values()   # Prints all the values
```

From <https://www.tutorialspoint.com/python/python_interview_questions.htm>

How will you convert a string to a float in python?
float(x) — Converts x to a floating-point number.

From <https://www.tutorialspoint.com/python/python_interview_questions.htm>

What is the purpose of not in operator?
not in — Evaluates to true if it does not finds a variable in the specified sequence and false otherwise. x not in y, here not in results in a 1 if x is not a member of sequence y.

From <https://www.tutorialspoint.com/python/python_interview_questions.htm>

What is the purpose break statement in python?
break statement — Terminates the loop statement and transfers execution to the statement immediately following the loop.

What is the purpose continue statement in python?

continue statement — Causes the loop to skip the remainder of its body and immediately retest its condition prior to reiterating.

What is the purpose pass statement in python?

pass statement — The pass statement in Python is used when a statement is required syntactically but you do not want any command or code to execute.

How will you convert a string to all lowercase?

lower() — Converts all uppercase letters in string to lowercase.

What is the output of [1, 2, 3] + [4, 5, 6]?

[1, 2, 3, 4, 5, 6]

What is the output of L[1:] if L = [1,2,3]?

2, 3, Slicing fetches sections.

How will you reverse a list?

list.reverse() — Reverses objects of list in place.
list = list[::-1]

What is lambda function in python?

'lambda' is a keyword in python which creates an anonymous function. Lambda does not contain block of statements. It does not contain return statements.

lambda x: x.upper() #returns input string after converting it to uppercase

Is String in Python are immutable? (Yes/No)

Yes.

Write a function to give the sum of all the numbers in list?

Sample list — (100, 200, 300, 400, 0, 500)
Expected output — 1500
Program for sum of all the numbers in list is —

```python
def sum(numbers):
    total = 0
    for num in numbers:
        total+=num
    print("Sum of the numbers: ", total)
sum((100, 200, 300, 400, 0, 500))
```

Write a program to test whether the number is in the defined range or not?

Program is —

```python
def test_range(num):
    if num in range(0, 101):
        print("%s is in range"%str(num))
    else:
        print("%s is not in range"%str(num))
```