Python Cheat Sheet: 14 Interview Questions

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Question	Code	Question	Code
| **Check if list contains integer x** | ```python
l = [3, 3, 4, 5, 2, 111, 5]
print(111 in l) # True
``` | **Get missing number in [1...100]** | ```python
def get_missing_number(lst):
    return set(range(lst[len(lst)-1])[1:]) - set(l)
l = list(range(1,100))
l.remove(50)
print(get_missing_number(l)) # 50
``` |
| **Find duplicate number in integer list** | ```python
def find_duplicates(elements):
    duplicates, seen = set(), set()
    for element in elements:
        if element in seen:
            duplicates.add(element)
        seen.add(element)
    return list(duplicates)
``` | **Compute the intersection of two lists** | ```python
def intersect(lst1, lst2):
    res, lst2_copy = [], lst2[:]
    for el in lst1:
        if el in lst2_copy:
            res.append(el)
            lst2_copy.remove(el)
    return res
``` |
| **Check if two strings are anagrams** | ```python
def is_anagram(s1, s2):
    return set(s1) == set(s2)
print(is_anagram("elvis", "lives")) # True
``` | **Find max and min in unsorted list** | ```python
l = [4, 3, 6, 3, 4, 888, 1, -11, 22, 3]
print(max(l)) # 888
print(min(l)) # -11
``` |
| **Remove all duplicates from list** | ```python
lst = list(range(10)) + list(range(10))
lst = list(set(lst))
print(lst)
# [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
``` | **Reverse string using recursion** | ```python
def reverse(string):
    if len(string)<=1: return string
    return reverse(string[1:])+string[0]
print(reverse("hello")) # olleh
``` |
| **Find pairs of integers in list so that their sum is equal to integer x** | ```python
def find_pairs(l, x):
    pairs = []
    for (i, el_1) in enumerate(l):
        for (j, el_2) in enumerate(l[i+1:]):
            if el_1 + el_2 == x:
                pairs.append((el_1, el_2))
    return pairs
``` | **Compute the first n Fibonacci numbers** | ```python
a, b = 0, 1
n = 10
for i in range(n):
    print(b)
    a, b = b, a+b
# 1, 1, 2, 3, 5, 8, ...
``` |
| **Check if a string is a palindrome** | ```python
def is_palindrome(phrase):
    return phrase == phrase[::-1]
print(is_palindrome("anna")) # True
``` | **Sort list with Quicksort algorithm** | ```python
def qsort(L):
    if L == []: return []
    return qsort([x for x in L[1:] if x< L[0]]) + L[0:1] +
qsort([x for x in L[1:] if x>=L[0]])
lst = [44, 33, 22, 5, 77, 55, 999]
print(qsort(lst))
# [5, 22, 33, 44, 55, 77, 999]
``` |
| **Use list as stack, array, and queue** | ```python
# as a list ...
l = [3, 4]
l += [5, 6] # l = [3, 4, 5, 6]

# ... as a stack ...
l.append(10) # l = [4, 5, 6, 10]
l.pop() # l = [4, 5, 6]

# ... and as a queue
l.insert(0, 5) # l = [5, 4, 5, 6]
l.pop() # l = [5, 4, 5]
``` | **Find all permutations of string** | ```python
def get_permutations(w):
    if len(w)<=1:
        return set(w)
    smaller = get_permutations(w[1:])
    perms = set()
    for x in smaller:
        for pos in range(0,len(x)+1):
            perm = x[:pos] + w[0] + x[pos:]
            perms.add(perm)
    return perms
print(get_permutations("nan"))
# {'nna', 'ann', 'nan'}
``` |

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