Python Interview Questions

**Basics Python Questions-:**

(**NOTE -: All these questions should be solved without using any builtin python function)**

1. Given the length of any side find the area of an equilateral triangle.
2. Given an integer number n, return the difference between the product of its even digits and the sum of its odd digits.
3. Take input from the user in one line and the output should be a list.
4. Avnish is allowed to go out with his friends only on the even days of a given month. Write a program to count the number of days he can go out in the month of August.
5. Write a program to print the sum of negative numbers, sum of positive even numbers and the sum of positive odd numbers from a list of numbers (N) entered by the user. The list terminates when the user enters a zero.
6. Implement permutations(Npr) and combinations(Ncr).
7. A Person [is eligible to vote if his/her age is greater than or equal to 18. Define a method to find out if he/she is eligible to vote.](https://www.efaculty.in/java-programs/voting-age-program-in-java/) Check whether Anand can vote or not.
8. 1

1 1

1 2 1

1 3 3 1

1 4 6 4 1

1. 1

212

32123

4321234

32123

212

1

1. \*\*\*\*\*\*\*\*\*\*

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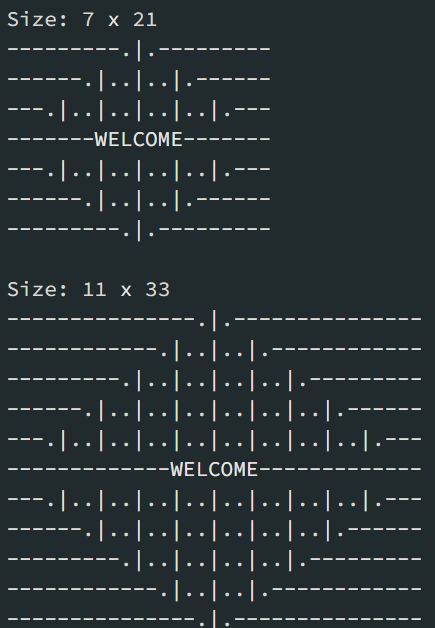
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1. Mr. Karthiken works in a door mat manufacturing company. One day, he designed a new door mat with the following specifications:
   1. Mat size must be N X M. (N is an odd natural number, and M is 3 times N.)
   2. The design should have ‘WELCOME’ written in the center.
   3. The design pattern should only use |, . and – characters.

Sample Design -:



1. Write a python program to print only the integers from the given list

input : l=[['a','b','c'],[[4],1,2,'c']]

output : 4,1,2

1. Write a program to check whether any given 2 strings have the same characters.

Input : S1 = cat

S2 = tac

Output: contains the same characters

1. Write a program to implement mean, median, and mode without using python inbuilt functions.
2. Write a program to reverse a list without using the python inbuilt function.
3. Write a python program to find the product of the second largest number and second smallest number in an array.
4. Write a program to convert 2 given lists into a dictionary.
5. Write a python program to create multi-level inheritance by creating ATM class.
6. Write a python program to create multi-level inheritance by creating ATM class.
7. In the above program add a functionality to make balance amount in your account secure.

21. Write a python program to remove every third character from any given string.

22. Write a python program to find the intersection of 2 sorted list without using python inbuilt function.

23. Write a python program to find superset of the given strings.

24. Write a python program to split the string if there is a repeating character in the string.

25. Write a python program to find the successive characters in any given string along with it’s frequency.

**Medium Python Questions-:**

(**NOTE -: All these questions should be solved without using any builtin python function)**

1. You have been given a number you have to find the square root of that without using any python built-in function.
2. You are given a list, you need to find the addition of individual elements in the list.

Input: l= [ 22, 1,33,555]

Output = 4,1,6,6

1. Given an array of length ‘N’, where each element denotes the position of a stall. Now you have ‘N’ stalls and an integer ‘K’ which denotes the number of horses that are mad. To prevent the horses from hurting each other, you need to assign the horses to the stalls, such that the minimum distance between any two of them is as large as possible. Return the largest minimum distance.

array: 1,2,4,8,9 & k=3

O/P: 3

Explanation: 1st horse at stall 1, 2nd horse at stall 4 and 3rd horse at stall 8

1. Write an efficient algorithm that searches for a value target in an m x n integer matrix. This matrix has the following properties:
   1. Integers in each row are sorted from right to left.
   2. The first integer of each row is greater than the last integer of the previous row.

Example-:

Input: matrix = [[1,3,5,7],[10,11,16,20],[23,30,34,60]], target = 3

Output: true

1. Given a list find the peak element in the array. A peak element is an element that is strictly greater than its neighbours.
2. Write a code to remove a character from a given array list using recursion.
3. Given a number calculate the number of steps to reduce it to zero.
4. Given an array nums of n integers, return an array of all the unique quadruplets [nums[a], nums[b], nums[c], nums[d]] such that:
   1. 0 <= a, b, c, d < n
   2. a, b, c, and d are distinct.
   3. nums[a] + nums[b] + nums[c] + nums[d] == target
5. Given an array find the sum of the maximum sub-array in that array.
6. Write a program to implement the Fibonacci series in the reverse order and also skip the alternate numbers.

input: 5

output: 3 , 1, 0

1. Given two numbers, hour and minutes, return the smaller angle (in degrees) formed between the hour and the minute hand.

Answers within 10-5 of the actual value will be accepted as correct.

1. Write a python program to multiply the 2D matrix.
2. You have a 4\*4 matrix find the number of ways you can reach (4,4) from (1,1) and return the count.
3. You have a 4\*4 matrix find the number of ways you can reach (4,4) from (1,1) and return all the possible ways in a array list.
4. You have a 4\*4 matrix find the number of ways you can reach (4,4) from (1,1) and return all the possible ways in a array list. Considering that you have a obstacle at (2,2).
5. You have a 4\*4 matrix find the number of ways you can reach (4,4) from (1,1) and return the count. Considering you can move only Vertically and Horizontally.
6. You have a 4\*4 matrix find the number of ways you can reach (3,3) from (0,0) and return the count. Considering you can move only Vertically, Horizontally and diagonally also you have obstacle at (1,2), (2,0), (3,1).
7. You are given a 4 \* 4 maze, you are allowed to travel in all the 4 directions UP, DOWN, LEFT and RIGHT. Print all the possible path that are possible to reach the last block of the maze using recursion.
8. You are given a 4 \* 4 maze, you are allowed to travel in all the 4 directions UP, DOWN, LEFT and RIGHT. Print all the possible matrix that are possible to reach the last block of the maze using recursion.
9. Create a prime number list from (1,100)
10. Find the Factorial of a given number.
11. Compare Two Numbers using the else-if statement and output smaller and larger numbers.
12. Write a program to determine If the given year is a Leap year.
13. [Print all the elements in the Fibonacci number series.](https://www.csestack.org/recursion/)Hint: This program can be implemented using a loop or recursion technique.
14. [Write a program to check if the number is a Palindrome number or not.](https://www.csestack.org/program-palindrome/)
15. Generate all the prime numbers between one & the given number.
16. Print the Pyramid of stars using nested for loops.
17. Print all the unique numbers from the array. ([Python](https://www.csestack.org/unique-elements-from-list-in-python/))
18. Write a program to generate 5 Random nos. between 1 to 100 and the number should not contain a decimal value.
19. Write a program to display a grade according to Marks obtained by the student.
20. Find SUM AND PRODUCT of a given Digits in the number.
21. Write a program to find the sum of all integers greater than 150 and less than 290 that are divisible by 3.
22. Write a program to concatenate strings using for Loop.
23. Display Multiplication Table for the given number.
24. Write a program to Swap the values given by the user without using the third variable. ([Python](https://www.csestack.org/python-program-swap-two-variables-without-using-third-variable/))
25. Write a program to convert given the number of days into months and days. (For the sake of simplicity, assume that each month contains 30 days).
26. Print the Invert Triangle using the while loop.
27. Write a program to find whether given no. is Armstrong or not.
28. Write a program to print the day of the week based on the given number using the switch case. (For example, print “Monday” for user input 1, print “Tuesday” for user input 2…)
29. What is the Harmonic Series? Write a program to generate the Harmonic Series.
30. Write a program to find the average of consecutive n-Odd numbers and n-Even numbers.
31. Print the Triangle as follow, using for loops. 1 2 3 4 5 6 7 8 9 10 … N
32. Create the class having a member variable of employee detail and getter and setter function for each variable.
33. Find all the permutations of the given string “iNeuron.ai”.
34. [Write a program in Python for, In array 1-100 numbers are stored, one number is missing how do you find it.](https://quescol.com/interview-preparation/find-missing-number-in-array-in-python)
35. [Write a program in Python for, In a array 1-100 multiple numbers are duplicates, how do you find it.](https://quescol.com/interview-preparation/find-duplicates-in-an-array-python)
36. [Write a program in Python for, How to find all pairs in array of integers whose sum is equal to given number.](https://quescol.com/interview-preparation/python-coding-question#)
37. [Write a program in Python for, How to compare two array is equal in size or not.](https://quescol.com/interview-preparation/compare-two-array-size)
38. [Write a program in Python to find largest and smallest number in array.](https://quescol.com/interview-preparation/smallest-and-largest-in-array-in-python)
39. [Write a program in Python to find second highest number in an integer array.](https://quescol.com/interview-preparation/second-largest-number-in-an-array-python)
40. [Write a program in Python to find top two maximum number in array?](https://quescol.com/interview-preparation/top-two-maximum-number-in-array-python)
41. [Write a program in Python to remove duplicate elements form array.](https://quescol.com/interview-preparation/remove-duplicates-from-array-python)
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47. [Python program to insert element at a given location in Array.](https://quescol.com/interview-preparation/insert-given-location-python)
48. [Python Program to delete element at end of Array.](https://quescol.com/interview-preparation/python-coding-question#)
49. [Python Program to delete given element from Array.](https://quescol.com/interview-preparation/delete-element-array-python)
50. [Python Program to delete element from array at given index.](https://quescol.com/interview-preparation/python-coding-question#)
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52. [Python Program to print all even numbers in array.](https://quescol.com/interview-preparation/print-even-number-array-python)
53. [Python Program to print all odd numbers in array.](https://quescol.com/interview-preparation/print-odd-number-array-python)
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56. [Python Program to merge two arrays.](https://quescol.com/interview-preparation/python-coding-question#)
57. [Python Program to find highest frequency element in array.](https://quescol.com/interview-preparation/python-coding-question#)
58. [Python Program to add two number using recursion.](https://quescol.com/interview-preparation/python-coding-question#)
59. [Python Program to find sum of digit of number using recursion.](https://quescol.com/interview-preparation/python-coding-question#)
60. [Python Program to Create and Traverse Singly linked list.](https://quescol.com/interview-preparation/linked-list-creation-traversing-python)
61. [Python program to insert a node in linked list.](https://quescol.com/interview-preparation/python-program-insert-node-linked-list)
62. [Write a program in Python to reverse a singly linked list.](https://quescol.com/interview-preparation/reverse-singly-linked-list-python)
63. [Python Program to search an element in singly linked list.](https://quescol.com/interview-preparation/search-singly-linked-list-python)
64. [Linked list Deletion in Python: At beginning, End, Given location](https://quescol.com/interview-preparation/linked-list-deletion-python)
65. [Write a program in Python to find 3rd element of Linked List from last in single pass.](https://quescol.com/interview-preparation/python-coding-question#)
66. [Write a program in Python to find middle element of a linked list in single pass.](https://quescol.com/interview-preparation/python-coding-question#)
67. [Python program to remove given character from String.](https://quescol.com/interview-preparation/remove-a-character-from-string-in-python)
68. [Python Program to count occurrence of a given characters in string.](https://quescol.com/interview-preparation/count-characters-in-string)
69. [Python Program to check if two Strings are Anagram.](https://quescol.com/interview-preparation/anagram-program-in-python)
70. [Python program to check a String is palindrome or not.](https://quescol.com/interview-preparation/palindrome-program-of-string-in-python)
71. [Python program to check given character is vowel or consonant.](https://quescol.com/interview-preparation/vowel-consonant-python-program)
72. [Python program to check given character is digit or not.](https://quescol.com/interview-preparation/check-given-character-digit-or-not-python)
73. [Python program to check given character is digit or not using isdigit() method.](https://quescol.com/interview-preparation/check-digit-using-isdigit)
74. [Python program to replace the string space with a given character.](https://quescol.com/interview-preparation/replace-space-string-python-2)
75. [Python program to replace the string space with a given character using replace() method.](https://quescol.com/interview-preparation/replace-space-string-python-2)
76. [Python program to convert lowercase char to uppercase of string.](https://quescol.com/interview-preparation/convert-lowercase-uppercase-python)
77. [Python program to convert lowercase vowel to uppercase in string.](https://quescol.com/interview-preparation/c-program-to-convert-lowercase-vowel-to-uppercase)
78. [Python program to delete vowels in a given string.](https://quescol.com/interview-preparation/python-program-remove-vowel-string)
79. [Python program to count Occurrence Of Vowels & Consonants in a String.](https://quescol.com/interview-preparation/count-vowel-consonant-string-python)
80. [Python program to print the highest frequency character in a String.](https://quescol.com/interview-preparation/python-coding-question#)
81. [Python program to Replace First Occurrence Of Vowel With ‘-‘ in String.](https://quescol.com/interview-preparation/python-coding-question#)
82. [Python program to count alphabets, digits and special characters.](https://quescol.com/interview-preparation/count-digit-alphabet-special-char-python)
83. [Python program to separate characters in a given string.](https://quescol.com/interview-preparation/python-coding-question#)
84. [Python program to remove blank space from string.](https://quescol.com/interview-preparation/remove-space-string-python)
85. [Python program to concatenate two strings using join() method.](https://quescol.com/interview-preparation/python-concatenate-two-string-join)
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110. [Python Program to find sum of digit of number using recursion.](https://quescol.com/interview-preparation/python-coding-question#)
111. You are given words. Some words may repeat. For each word, output its number of occurrences. The output order should correspond with the input order of appearance of the word. See the sample input/output for clarification.If the following string is given as input to the program:

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Bcdef

Abcdefg

Bcde

bcdef

1. You are given a string.Your task is to count the frequency of letters of the string and print the letters in descending order of frequency. Ex -: aabbbccde
2. Write a Python program that accepts a string and calculate the number of digits and letters.
3. Given a number N.Find Sum of 1 to N Using Recursion
4. Please write a program which count and print the numbers of each character in a string input by console.
5. Use dict to store key/value pairs. Use dict.get() method to lookup a key with default value.\
6. Please write a program which accepts a string from console and print it in reverse order.
7. Use list[::-1] to iterate a list in a reverse order.