Assessment 1

Define a function that will receive two integer parameters and will print all the numbers in between (inclusive) without using any for/while loop.

Your answer

Imagine there is a heart rate monitoring instrument. Machine code that's integrated inside it, performs numerous functions. One of the functions, getHeartRate() - returns you the heart rate in bpm (unit) in that specific moment when called. Implement a function that will alert the system if the heart rate is over 120bpm atleast thrice in the last five seconds

Your answer

Missy and Mussy are very messy sisters. Their dresser drawer consists of 43 white socks, 21 black socks, 23 blue socks and 8 red socks. What is the minimum number of socks they must remove from the drawer, in order to be certain that they have removed at least five socks of all the different colors? Explain Your answer.

Your answer

Write a javascript function that will accept an array as its single argument. Once invoked, it will return the html that can render a bar-chart like graph considering the array values as its y-axis values. Following image is a sample of the view that the returned html should render if the provided array is [5, 2, 23, 44, 16].

Your answer

How can we utilize dynamic programming to find the list of all prime numbers up to N in lowest amount of time? Given that there is no memory limit. Writing the function following any coding structure (even pseudocode) would be appreciable, though describing the procedure appropriately without any code would still suffice.

Your answer

Consider an array with n elements and value of all the elements is zero. We can perform following operations on the array. (a) Incremental Operations: Choose 1 element from the array and increment its value by 1. (b). Doubling Operation: Double the values of all the elements of array. We are given a desired array target [] containing n elements. Compute and return the smallest possible number of the operations needed to change the array from all zeros to desired array.

Your answer

Implement the binary search of a sorted array of integers.

Your answer

Write a function to find the number of pairs in an integer array whose sum is equal to 10 (must be done in linear time).For example, in the array [2, 23, -13, 8, 5, 4, 2, 8] there are three pairs of integers (2, 8), (2, 8) and (23, -13) whose sum is 10. So the output is 3.

Your answer

Write a single for/while loop to print "1 2 3 4 5 4 3 2 1"

Your answer

Write a javascript function that will traverse all the elements inside an HTMLBodyElement (document.body) and log the elements in the console - without using .getElementsByTagName or document.all. (Hint: Using .firstElementChild and .nextElementSibling attributes of an Element, in a recursive function - can do the trick.)

Your answer