DAILY DSA | DAY-9 | SORTING ALGORITHMS – Practise Sorting algorithm|
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Problem statement:
Assume you're a networking/maintenance engineer. For the past couple of days, you have observed a web server that keeps crashing each day. You suspect it begins failing after a certain number of requests are served. Luckily, you have the request logs for the server. You see that it returns a status code of 200, but at some point, it begins returning a status code of 500 instead

200, 200, 200, ... 200, 500, 500, 500

In order to find the breaking point, let's write a function find_first_error_status_code(array, num) that returns the index at which the num first appears in the input array. In this case, we want to efficiently find the first 500 in the server log.

Input: An array of numbers, a number to find

Output: The index of the array at which num first appears, or -1 if it does not

HINT1: We know the statuses start at 200 and then change to 500. How can we use this information to our advantage?

HINT 2: Is there a search algorithm that works in lon(n) time with the sorted array?

HINT 3: Can you modify binary search to find the first occurrence of a number?

Does your solution work in O(log n) time?