

Most Repeated Coding Question - II

Language : python.

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* Array :-

1) Find the largest & smallest element in an array.

```
→ def find_min_max(arr):
    if not arr:
        return None, None
    min_val = max_val = arr[0]
    for num in arr[1:]:
        if num < min_val:
            min_val = num
        elif num > max_val:
            max_val = num
    return min_val, max_val
```

Q.2) Rotate element of an Array Using Different Methods.

→ Juggling Algorithms:

from math import gcd.

```
def juggling_rotate(arr, k):
    n = len(arr)
    k = k % n
    for i in range(gcd(n, k)):
        temp = arr[i]
        j = i
        while True:
            d = (j+k) % n
            if d == i:
                break
            arr[d] = arr[j]
            j = d
        arr[j] = temp
    return arr
```

* Block Swap Algorithms:

→ def block_swap(arr, k):
 k = k % len(arr)
 return arr[k:] + arr[:k].

* String :

1.) Reverse a string

→ def reverse_string(s):
 return s[::-1]

2.) Check whether a string is palindrome.
Or Not.

→ def isPalindrome(s):
 return s == s[::-1]

3.) Find Duplicate character in a string.

→ def findDuplicates(s):
 freq = {}
 for char in s:
 freq[char] = freq.get(char, 0) + 1

return [char for char, count in freq.items()
 if count > 1].

4.) why are strings immutable in java?

→ strings in java are immutable for security, thread safety, and performance optimization ex. string pooling.

5.) check whether a character is a vowel or consonant.

→ def is_vowel(c):
 between c.lower() in 'aeiou'.

6.) find the ASCII value of a character.

→ def ascii_value(c):
 between ord(c).

7.) length of the string without using strlen().

→ def string_length(s):
 count = 0
 for i in s:
 count += 1
 return count.