Engineering Animuthyam

Java DSA – Course Part - 38

Sliding Window or Two pointers

Concept and Leetcode Problem

Course Link:
https://www.youtube.com/playlist?list=PLjzLBp9HHZWhVXBSPS1VqxXXDoVk07gd9

Website Link:
https://www.vigneshreddyjulakanti.in/

Hello machas, Bagunnara

Concepts

How return works in functions

Example: Two strings equal or not

How to send HashMap as a parameter into function.

Comparing two values in HashMap(127)

How to compare two HashMaps equal or not.

How to check If two strings are anagrams or not

```java
import java.util.*;
class HelloWorld {
    public static void main(String[] args) {
        HashMap<Integer,Integer> a=new HashMap<>();
        HashMap<Integer,Integer> b=new HashMap<>();
        a.put(5,128);
        b.put(6,128);
        System.out.println(a.get(5)==b.get(6));
    }
}
```

438. Find All Anagrams in a String

https://leetcode.com/problems/find-all-anagrams-in-a-string/

```java
class Solution {
    public boolean AreEqual(HashMap<Character,Integer> hms,HashMap<Character,Integer> hmp){
        if(hms.size()!=hmp.size()){
            System.out.println("a");
            return false;
        }

        for(char key:hms.keySet()){
            if(!hmp.containsKey(key)){
                System.out.println("b");
                return false;
            }
            int a=hms.get(key);
                int b = hmp.get(key);
            if(a!=b){
                System.out.println(hms.get(key)+" "+hmp.get(key)+" "+key);

                System.out.println(a!=b);
                  System.out.println("c");
                return false;
            }

        }
         System.out.println("d");
        return true;
    }
}
```

```java
public List<Integer> findAnagrams(String s, String p) {
    HashMap <Character,Integer> hmp = new HashMap<>();
    for(int i=0;i<p.length();i++){
        char ch = p.charAt(i);
        hmp.put(ch,hmp.getOrDefault(ch,0)+1);
    }

    int l = 0;
    int k = p.length();
    List<Integer> ans = new ArrayList<>();
    HashMap <Character,Integer> hms=new HashMap<>();
    for(int r=0;r<s.length();r++){
        char ch=s.charAt(r);
        hms.put(ch,hms.getOrDefault(ch,0)+1);

        if(r-l==k){
            char tch=s.charAt(l);
            hms.put(tch,hms.getOrDefault(tch,0)-1);
            if(hms.get(tch)==0){
                hms.remove(tch);
            }
            l++;
        }
        if(l==0 && r==l+k-1){
            System.out.println(hms.size()==hmp.size());
            System.out.println(hmp);
            System.out.println((r-l+1)+" "+k);
        }
        if(r-l+1==k && AreEqual(hms,hmp)){
            ans.add(l);
        }
    }
    return ans;


}
```