19-11-2024 DSA PRACTICE PROBLEM-7

1.LongestSubstringUnique  
  
package Problems;

import java.util.Set;

import java.util.HashSet;

public class LongestSubstringUnique {

public static int SubstringUnique(String S) {

int start = 0;

int end = 0;

int maxlen =Math.*min*(S.length(),1);

Set<Character> seen = new HashSet<>();

while (end < S.length())

{

char c = S.charAt(end);

while (seen.contains(c))

{

seen.remove(S.charAt(start));

start+=1;

}

seen.add(c);

maxlen = Math.*max*(maxlen,(end - start)+1);

end +=1;

}

return maxlen;

}

public static void main(String[] args) {

String S = "abcdb";

int result = *SubstringUnique*(S);

System.***out***.println("Longest Substring Unique: "+result);

}

}

OP:

Longest Substring Unique: 4

TIMECOMPLEXTIY:O(n)  
SPACECOMPLEXTIY:O(n)