Data structures - Java - Day 6

* Just did some practice in Hashing today
* Understood the Concepts of Hashing and HashMap

These are the problems I have solved today

// 1. Find the most frequent element in an array of integers.

// 2. Find the least frequent element in an array of integers.

// 3. Find the character with the highest frequency in a string.

// 4. Find the character with the lowest frequency in a string.

// 5. Find the most frequent word in a sentence.

// 6. Find the least frequent word in a sentence.

import java.util.\*;

public class hashing

{

public static void main(String[] args)

{

Scanner sc = new Scanner (System.in);

int n = sc.nextInt();

int arr [] = new int [n];

for(int i=0;i<n;i++)

{

arr[i]=sc.nextInt();

}

HashMap<Integer,Integer> map = new HashMap<>();

for(int i=0;i<n;i++)

{

map.put(arr[i],map.getOrDefault(arr[i], 0)+1);

}

int maxfreq = 0;

int maxelement = -1;

for(Map.Entry<Integer,Integer> summa : map.entrySet())

{

if(summa.getValue()>maxfreq)

{

maxfreq= summa.getValue();

maxelement = summa.getKey();

}

}

System.out.println("Element with highest frequency is: "+maxelement);

System.out.println("Frequency is: "+maxfreq);

}

}

import java.util.\*;

public class hashing

{

public static void main(String[] args)

{

Scanner sc = new Scanner (System.in);

int n = sc.nextInt();

int arr [] = new int [n];

for(int i=0;i<n;i++)

{

arr[i]=sc.nextInt();

}

HashMap<Integer,Integer> map = new HashMap<>();

for(int i=0;i<n;i++)

{

map.put(arr[i],map.getOrDefault(arr[i], 0)+1);

}

int minfreq = Integer.MAX\_VALUE;

int maxelement = -1;

for(Map.Entry<Integer,Integer> summa : map.entrySet())

{

if(summa.getValue()<minfreq)

{

minfreq= summa.getValue();

maxelement = summa.getKey();

}

}

System.out.println("Element with lowest frequency is: "+maxelement);

System.out.println("Frequency is: "+minfreq);

}

}

import java.util.\*;

public class hashing

{

public static void main(String[] args)

{

Scanner sc = new Scanner (System.in);

String s = sc.nextLine();

HashMap<Character,Integer> map = new HashMap<>();

for(int i=0;i<s.length();i++)

{

map.put(s.charAt(i),map.getOrDefault(s.charAt(i), 0)+1);

}

int maxfreq = Integer.MIN\_VALUE;

char minelement ='\0';

for(Map.Entry<Character,Integer> summa : map.entrySet())

{

if(summa.getValue()>maxfreq)

{

maxfreq= summa.getValue();

minelement = summa.getKey();

}

}

System.out.println("Element with highest frequency is: "+minelement);

System.out.println("Frequency is: "+maxfreq);

}

}

import java.util.\*;

public class hashing

{

public static void main(String[] args)

{

Scanner sc = new Scanner (System.in);

String s = sc.nextLine();

HashMap<Character,Integer> map = new HashMap<>();

for(int i=0;i<s.length();i++)

{

map.put(s.charAt(i),map.getOrDefault(s.charAt(i), 0)+1);

}

int maxfreq = Integer.MIN\_VALUE;

char minelement ='\0';

for(Map.Entry<Character,Integer> summa : map.entrySet())

{

if(summa.getValue()>maxfreq)

{

maxfreq= summa.getValue();

minelement = summa.getKey();

}

}

System.out.println("Element with highest frequency is: "+minelement);

System.out.println("Frequency is: "+maxfreq);

}

}

import java.util.\*;

public class hashing

{

public static void main(String[] args)

{

Scanner sc = new Scanner (System.in);

String s = sc.nextLine();

String[] words = s.split(" ");

HashMap<String,Integer> map = new HashMap<>();

for(String word : words)

{

map.put(word,map.getOrDefault(word, 0)+1);

}

int maxfreq = Integer.MIN\_VALUE;

String maxword = "";

for(Map.Entry<String,Integer> summa : map.entrySet())

{

if(summa.getValue()>maxfreq)

{

maxfreq= summa.getValue();

maxword = summa.getKey();

}

}

System.out.println("Element with lowest frequency is: "+maxword);

System.out.println("Frequency is: "+maxfreq);

}

}

import java.util.\*;

public class hashing

{

public static void main(String[] args)

{

Scanner sc = new Scanner (System.in);

String s = sc.nextLine();

String[] words = s.split(" ");

HashMap<String,Integer> map = new HashMap<>();

for(String word : words)

{

map.put(word,map.getOrDefault(word, 0)+1);

}

int minfreq = Integer.MAX\_VALUE;

String maxword = "";

for(Map.Entry<String,Integer> summa : map.entrySet())

{

if(summa.getValue()<minfreq)

{

minfreq= summa.getValue();

maxword = summa.getKey();

}

}

System.out.println("Element with lowest frequency is: "+maxword);

System.out.println("Frequency is: "+minfreq);

}

}