# Frequency Counter

## 1. Write a algorithm and java program to find the minimum value with minimum frequency.

## 2. Write a algorithm and java program to find the minimum value with maximum frequency.

## 3. Write a algorithm and java program to find the maximum value with minimum frequency.

## 4. Write a algorithm and java program to find the maximum value with maximum frequency.

### Code

import java.util.Arrays;  
  
class FreqCounter {  
 public static void main(String args[]) {  
 int arr[] = {1, 2, 2, 4, 2, 5, 6, 6 , 2, 7, 7, 3, 7, 1};  
 int n = arr.length;  
  
 Arrays.sort(arr);  
  
 System.out.println("Array: " + Arrays.toString(arr));  
  
 //1. Write a algorithm and java program to find the minimum value with minimum frequency.  
  
 int val = arr[0];  
 int min\_freq = n;  
 int i=0;  
 int j=1;  
  
 while (i<n && j<n) {  
 int freq = 1;  
 for (; j<n; ++j) {  
 if (arr[j] == arr[i])  
 freq++;  
 else  
 break;  
 }  
  
 if (freq < min\_freq) {  
 min\_freq = freq;  
 val = arr[i];  
 }  
 i=j;  
 ++j;  
 }  
  
  
 System.out.println("Minimum Value with Minimum Frequency");  
 System.out.println("Minimum Value: " + val);  
 System.out.println("Minimum Frequency: " + min\_freq);  
 System.out.println();  
  
  
 //2. Write a algorithm and java program to find the minimum value with maximum frequency.  
  
  
 val = arr[0];  
 int max\_freq = 0;  
 i=0;  
 j=1;  
  
 while (i<n && j<n) {  
 int freq = 1;  
 for (; j<n; ++j) {  
 if (arr[j] == arr[i])  
 freq++;  
 else  
 break;  
 }  
  
 if (freq > max\_freq) {  
 max\_freq = freq;  
 val = arr[i];  
 }  
 i=j;  
 ++j;  
 }  
  
  
 System.out.println("Minimum Value with Maximum Frequency");  
 System.out.println("Minimum Value: " + val);  
 System.out.println("Maximum Frequency: " + max\_freq);  
 System.out.println();  
  
  
 //3. Write a algorithm and java program to find the maximum value with minimum frequency.  
  
  
 val = arr[0];  
 min\_freq = n;  
 i=n-1;  
 j=i-1;  
  
 while (i>-1 && j>-1) {  
 int freq = 1;  
 for (; j>-1; --j) {  
 if (arr[j] == arr[i])  
 freq++;  
 else  
 break;  
 }  
  
 if (freq < min\_freq) {  
 min\_freq = freq;  
 val = arr[i];  
 }  
 i=j;  
 --j;  
 }  
  
  
 System.out.println("Maximum Value With Minimum Frequency");  
 System.out.println("Maximum Value: " + val);  
 System.out.println("Minimum Frequency: " + min\_freq);  
 System.out.println();  
  
 //4. Write a algorithm and java program to find the maximum value with maximum frequency.  
  
 val = arr[0];  
 max\_freq = 0;  
 i=n-1;  
 j=i-1;  
  
 while (i>-1 && j>-1) {  
 int freq = 1;  
 for (; j>-1; --j) {  
 if (arr[j] == arr[i])  
 freq++;  
 else  
 break;  
 }  
  
 if (freq > max\_freq) {  
 max\_freq = freq;  
 val = arr[i];  
 }  
 i=j;  
 --j;  
 }  
  
  
 System.out.println("Maximum Value With Maximum Frequency");  
 System.out.println("Maximum Value: " + val);  
 System.out.println("Maximum Frequency: " + max\_freq);  
 System.out.println();  
 }  
}

## Output

Array: [1, 1, 2, 2, 2, 2, 3, 4, 5, 6, 6, 7, 7, 7]  
Minimum Value with Minimum Frequency  
Minimum Value: 3  
Minimum Frequency: 1  
  
Minimum Value with Maximum Frequency  
Minimum Value: 2  
Maximum Frequency: 4  
  
Maximum Value With Minimum Frequency  
Maximum Value: 5  
Minimum Frequency: 1  
  
Maximum Value With Maximum Frequency  
Maximum Value: 2  
Maximum Frequency: 4  
  
  
[Process exited 0]