**6.Detailed code with Relevant comments**

**// Calculating frequency of elements in quarry array using Hashmap**

package Hashmap;

import java.util.HashMap;

import java.util.Map;

public class hash {

public static void main(String[] args) {

// Hashmap intialization

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

//Regular array

int a[] = {1, 2, 3, 4, 6, 6, 3, 6, 4, 7};

// creating hashtable of array a by using for loop

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

if (mpp.containsKey(a[i])) {

mpp.put(a[i], mpp.get(a[i]) + 1);

} else {

mpp.put(a[i], 1);

}

}

//Quarry array

int q[] = {3, 6, 4};

// for Loop for calculating frequency of element

for (int j = 0; j < q.length; j++) {

System.out.print("frequency of " + q[j] + " ");

if (mpp.containsKey(q[j])) {

System.out.print("is = " + mpp.get(q[j]));

System.out.println();

} else {

System.out.print(0);

System.out.println();

}

} } }

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**// Checking whether the Key is present or not using HashSet**

package Hashmap;

import java.util.HashSet;

public class hashsetque {

public static void main(String[] args) {

//Initializing hashset

HashSet<Integer> stt = new HashSet<>();

//regular array

int a[] = {1, 2, 3, 4, 6, 6, 3, 6, 4, 7};

// Adding elements into hashset

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

stt.add(a[i]);

}

//quarry array

int q[] = {3, 6, 4,100};

//for loop to check whether key ispresent or not

for (int j = 0; j < q.length; j++) {

System.out.print("Key = " + q[j] + "->");

if (stt.contains(q[j])) {

System.out.print("true");

System.out.println();

} else {

System.out.print("false");

System.out.println();

}

}

}

}

**7.Results :->**

Regular Array : ->

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 6 | 6 | 3 | 6 | 4 | 7 |

Quarry Array :->

|  |  |  |  |
| --- | --- | --- | --- |
| 3 | 6 | 4 | 100 |

**Output of Hashset:->**

Key = 3->true

Key = 6->true

Key = 4->true

Key = 100->false

Process finished with exit code 0

Quarry Array :->

|  |  |  |
| --- | --- | --- |
| 3 | 6 | 4 |

**Output of Hashmap :->**

frequency of 3 is = 2

frequency of 6 is = 3

frequency of 4 is = 2

Process finished with exit code 0