

→ Hash Map

→ "abbac d baed cddd bbbacacab cd"

a: 7

b: 7

c: 4

d: 6

$$\underbrace{'d' - 'a'} = 3$$

~~2 2~~  
~~1 1 1~~  
[ ~~0~~ ~~0~~ ~~0~~ ]  
0 1 2 3 4 5 6 7 8 9 - - - - - 25

$$\left. \begin{array}{l} 'd' - 'a' = 3 \\ 'c' - 'a' = 2 \end{array} \right\} (\text{char})(\text{'a' + 2})$$

```

public static void printFreq(String str) {
    int[] freq = new int[26];
    for(char c: str.toCharArray()) {
        int idx = c - 'a';
        freq[idx] ++;
    }
}

```

$str = "acbbadabacd"$   
 $[ 'a', 'c', 'b', 'b', 'a', 'd', 'a', 'b', 'a', 'c', 'd' ]$   
 ↑ ↑  
 'c' - 'a'    'b' - 'a'

... 'a'    'a' - 'a'

'c' - 'a'    'b' - 'a'    1

{ 4 3 2 2 e 0 0 h ... }  
 0 1 2 3 4 5 6  
 ↑ ↑ ↑ ↑ ↑ ↑ ↑

↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓  
~~h h h h h h h h~~  
 e h l o

{ a c b a }  
 e: 3  
 l: 6  
 a: 3  
 e  
 l  
 o

"acdbdccc bbaaa a d c b b d"

$\begin{matrix} & 0 & 0 & 0 & 0 \\ \left[ \begin{array}{ccccccc} 5 & 7 & 8 & 9 & 0 & 0 & 0 \\ 0 & 1 & 2 & 3 & 4 & 5 & 6 & 7 & \dots & 25 \end{array} \right] \end{matrix}$

```
public static void printFreq(String str) {  
    int[] freq = new int[26];  
    for(int i = 0; i < str.length(); i++) {  
        char c = str.charAt(i);  
        int idx = c - 'a';  
        freq[idx]++;  
    }  
}
```

```
for(int i = 0; i < str.length(); i++) {
    char c = str.charAt(i);
    int idx = c - 'a';
    if(freq[idx] != 0) {
        System.out.println(c + "-" + freq[idx]);
        freq[idx] = 0;
    }
}
```

↑

1	1	0	0	0
0	1	0	0	0
0	0	1	0	0
0	0	0	1	0
0	0	0	0	1

↑

1	1	0	0	0
0	1	0	0	0
0	0	1	0	0
0	0	0	1	0
0	0	0	0	1

$$C = \frac{1}{2} \frac{d^2}{dx^2} \ln \left( \frac{1}{1 - \frac{1}{2} \frac{d^2}{dx^2}} \right)$$
$$|a'| - |a| = 0$$
$$\boxed{d' - a'} = 8$$

```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    String str = scn.nextLine();
    printFreq(str);
}
```

```
public static void printFreq(String str) { // 'ACCBAA' -
    int[] freq = new int[26];
    char[] arr = str.toCharArray();
    for(char c : arr) {
        int idx = c - 'a';
        freq[idx] ++;
    }
}
```

```
for(char c : arr) {
    int idx = c - 'a';
    if(freq[idx] != 0) {
        System.out.println(c + "-" + freq[idx]);
        freq[idx] = 0;
    }
}
```

$$\begin{aligned} & \text{'c' - 'a'} \\ & \text{'d' - 'a'} \end{aligned}$$

```

public static int getMaxFreqNumber(int[] arr) {
    → int[] freq = new int[10];
    → for(int ele : arr) freq[ele] ++; =
    → int max = 0;
    for(int i = 0; i < 10; i++) {
        if(freq[i] > freq[max]) max = i;
    }
    return max;
}

```

[ 1, 3, 1, 2, 5, 6, 3, 8, 4, 9, 5, 6, 5, 4, 9, 6, 6 ]

↑ ↑ ↑ ↑ ↑  
c6 4

space

→ [ 0 1 2 3 4 5 6 7 8 9 ]

2 2 2 3 4  
1 1 1 2 2  
0 0 0 0 0 0 0 0 0 0

⇒ [ 0 2 1 2 2 3 4 0 1 2 ]

0 1 2 3 4 5 6 7 8 9

1 2 3 4 5 6 7 8 9

(i=0)

max = 0, 1, 2, 3, 4, 5, 6

$$\begin{bmatrix} 0 & 2 & 2 & 0 & 2 & 1 \\ a & b & c & d & e & f \end{bmatrix}$$

(Arrows point from the second row to the first row, with some arrows crossed out.)

$0/2$  (circled)     $1$  (circled)

$\dots \rightarrow \text{C} \leftarrow \dots$

$nzf = \cancel{0} 2$

$\downarrow \downarrow \downarrow$   
 $bcbcbcbcb$

$\rightarrow \begin{matrix} \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 0 & 3 & 3 & 3 & 0 & 0 \\ a & b & c & d & e & f \end{matrix}$

0

$\frac{0}{3}$

$nzf = \cancel{0} \cancel{3} \cancel{3} 5 = 4$