

Vector Uses

USED ARRAY/VECTOR

0	1	2	3	4	5	6	7	8	9	10
F	F	P	F	F	F	F	F	F	F	F
	T	T			T	T		T		

8, 5, 2, 1, 6, 8

FREQUENCY ARRAY

0	33	47	85	100
0	0	1	1	0

85, 33, 47, 85

$\frac{1}{2}$ etc.

```
string s;  
cin >> s
```

$s \rightarrow \boxed{\text{"hello"}}$

getline(cin, s) s → "hello world"

each char has an ascii value
assign ints to letters

A 0
B 1
C 2
z 25

```
vector<int> freq(26, 0);
for (int i = 0; i < s.size(); i++)
    if (s[i] >= 'a' && s[i] <= 'z')
        freq[s[i] - 'a']++;
```

Sliding Window

3, 2, 8, 5, 7, 6, 1, 4, 9, 8, 4, 4, 3

↑↑↑↑
s e

$C = 12$

(1, 1)

(1, 2)

(2, 2)

(2, 3)

(3, 3)

(4, 4)

(4, 5)

$C = 3$

(1, 1)

(1, 2)

(1, 3)

(2, 3)

(3, 3)

(3, 4)

(4, 4)

(5, 5)

s
e

1	1	1	2	2
0	1	2	5	8
3	4	6	7	9
3	3	4	2	1
✓	✓			