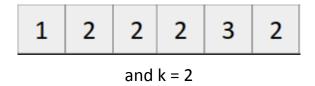
Top k most frequent elements in the stream

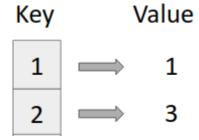
Problem

Given an array a[] of size n and value k. Our task is to output elements in decreasing frequency till we reach (k+1)th distinct element.

Example:



Output:



<u>Approach</u>

1. Create a map (say *freq*)

- 2. While traversing the array keep track of elements and when we find (k+1)th distinct element, break from the loop.
- 3. Output the element and frequency using map traversal.

```
int main(){
int n, k;
 cin \gg n \gg k;
vector<int> a(n);
 for(int i=0; i<n; i++) {
    cin \gg a[i];
map<int,int> freq;
 int cnt=0;
 for(int i=0; i<n; i++) {
     if(cnt = k \& freq[a[i]] = 0){
         break;
     if(freq[a[i]] = 0){
         cnt++;
    freq[a[i]]++;
map<int,int> :: iterator it;
 for(it = freq.begin(); it≠freq.end(); it+)
 {
     if(it\rightarrowsecond \neq 0){
         cout << it→first <<" "<< it→second << endl;
 return 0;
```