// Find the top frequency of the element. if frequency is equal then we consider the higher value of element.

Example:

N=6

Array [] = {1,1,1,2,2,3,3,4,4,4}

K=3

==================================================================================

Approach 1:

1. Start
2. We can calculate and store the value of element and frequency in map data structure.
3. We take a pair vector and store all the map element into pair vector.
4. To use vector<pair<int, int>> p (m. begin (), m. end ());
5. Sort the pair vector according to frequency as well as if frequency is equal then consider the higher value.
6. Sort (p. begin (), p. end (), compare);
7. bool compare (pair <int, int > &a, pair <int, int > &b)

{

If (a. second == b. second)

{

return a. first > b. first;

}

return a. second > b. second;

}

1. finally create an answer vector that will store the top k frequency of the value.
2. End.

Code:

bool static compare (pair <int, int > &a, pair <int, int > &b)

{

If (a. second == b. second)

{

return a. first > b. first;

}

return a. second > b. second;

}

Vector<int> TopFrequency (vector<int> v, int k)

{

unodered\_map<int, int> m;

for (int I = 0, I < n; I + +)

{

m [ v [ I]] + +;  
 }

vector<pair<int, int>> p (m. begin (), m. end ());

sort (p. begin (), p. end (), compare);

vector<int> answer;

for (int I = 0; I < k; I ++)

{

answer. push\_back (p[i]. first);

}  
 return answer;  
}

Time Complexity is O (D log (D)) where D is distinct element in array.

Space complexity is O (D).

==================================================================================

### Q1. Kth smallest element

Link: <https://www.geeksforgeeks.org/problems/kth-smallest-element5635/1?itm_source=geeksforgeeks&itm_medium=article&itm_campaign=bottom_sticky_on>

### Q2. Insert a node in a BST

Link: <https://www.geeksforgeeks.org/problems/insert-a-node-in-a-bst/1?itm_source=geeksforgeeks&itm_medium=article&itm_campaign=bottom_sticky_on_article>

### Q3. Topological sort

Link: <https://www.geeksforgeeks.org/problems/topological-sort/1?itm_source=geeksforgeeks&itm_medium=article&itm_campaign=bottom_sticky_on_article>

### Q4. Missing number in array(4 apprach)

### Q5. Kadane's Algorithm(gfg)(Brute->better->optimal)

### Q6. Detect cycle in an undirected graph(vis) as undirected graph(pathvis,vis)