Program -1

Code:
```cpp
#// K distinct elements or
// Print all distinct elements sorted by frequency.
#include < bits/ stdc++.h>
using namespace std;


Void   KTop ( int arr[ ], int  n , int  k) {
         Vector <int > top (k+1);
         // frequency array.
         unordered -map <int , int > freq;
         for ( int  m=0 ; m<n; m++) {
             freq [a [m] ] ++;
             top [k] = arr[m] ;
             auto it =  find (top. begin () , top.end()-1,
arr [m] );
             for ( int i = distance (top. begin () , it ) -1; i>=0;
--i) {

                 if ( freq( top[i] < freq .[top [i+1]] ), ww
                     Swap (top[i], top[i+1]);
                 else if  (( freq [top [i] ] ==. freq [top [i+1]]
                     && ( top [i] > top [i+1]))
                     swap ( top [i], top[i+1]);
                 else.
                     break;
        }
}
```

```
// Print output.
    for (int i = 0 ; i < k && top [i] != 0 ;++i )
            cout << top [i] <<' ';
    }

    cout <<endl ;
}
```

Eg:-

enter value of k : 4
enter number of elements in array : 5
enter numbers in the Array : 5 2 13 2 .
Output :
5 2 5 1 2 5 1 2 3 5   2 1 3 5

→ in the program   freq → hastable
                   top → arr with length k+1