***Week – 7 (31.05.2021 – 05.06.2021)***

***RANDOM CODES***

1. ***Maximum Gap:***

class Solution {

public:

int maximumGap(vector<int>& nums) {

if(nums.size()<2) return 0;

sort(nums.begin(), nums.end());

int i, max\_diff=0;

for(i=1; i<nums.size(); i++)

max\_diff = max(max\_diff,nums[i]-nums[i-1]);

return max\_diff;

}

};

1. ***Top K Frequent Elements:***

class Solution {

public:

vector<int> topKFrequent(vector<int>& nums, int k) {

map<int,int> m;

for(int i=0;i<nums.size();i++)

m[nums[i]]++;

priority\_queue<pair<int, int>> pq;

int i=0;

vector<int> res;

for(auto e : m)

pq.push({e.second,e.first});

while(!pq.empty() && i<k)

{

res.push\_back(pq.top().second);

pq.pop();

i++;

}

return res;

}

};

1. ***Sort Characters By Frequency:***

class Solution {

public:

string frequencySort(string s) {

map<char,int> m;

for(int i=0;i<s.size();i++)

m[s[i]]++;

priority\_queue<pair<int, char>> pq;

string res="";

int i;

for(auto e : m)

pq.push({e.second,e.first});

while(pq.size())

{

pair<int,char> p= pq.top();

pq.pop();

for(int i=0;i<p.first;i++)

res += p.second;

}

return res;

}

};