***Week – 3 (14.04.2021 – 18.04.2021)***

***RANDOM CODES***

1. ***Single Number:***

class Solution {

public:

int singleNumber(vector<int>& nums) {

int i;

map<int,int> m;

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

m[nums[i]]++;

for(auto e : m)

if(e.second == 1) return e.first;

return 0;

}

};

1. ***Set Mismatch:***

class Solution {

public:

vector<int> findErrorNums(vector<int>& nums) {

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

vector<int> res;

int i, missing, dup;

map<int,int> m;

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

m[i] = 0;

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

m[nums[i]]++;

for(auto e : m)

{

if(e.second == 0) missing = e.first;

if(e.second == 2) dup = e.first;

}

res.push\_back(dup);

res.push\_back(missing);

return res;

}

};

1. ***Smallest Integer Divisible by K:***

class Solution {

public:

int smallestRepunitDivByK(int K) {

if(K%2 == 0 || K%5 == 0) return -1;

int i=1;

long long int num = 1;

while(num%K != 0)

{

num = (num\*10 + 1)%K;

i++;

}

return i;

}

};

1. ***Smallest Range I:***

class Solution {

public:

int smallestRangeI(vector<int>& A, int K) {

return max(0, \*max\_element(A.begin(),A.end()) - \*min\_element(A.begin(),A.end()) - 2\*K);

}

};

1. ***Calculate Money in Leetcode Bank:***

class Solution {

public:

int totalMoney(int n) {

int i=1, j=0, sum=0, day=1;

while(day<=n)

{

i = 1;

while(i<=7 && day<=n)

{

sum = sum + i + j;

i++;

day++;

}

j++;

}

return sum;

}

};

1. ***Subtract the Product and Sum of Digits of an Integer:***

class Solution {

public:

int subtractProductAndSum(int n) {

int sum=0, prod=1, rem;

while(n>0)

{

rem = n%10;

sum = sum + rem;

prod = prod \* rem;

n= n/10;

}

return (prod-sum);

}

};

1. ***Search in Rotated Sorted Array II:***

class Solution {

public:

bool search(vector<int>& nums, int target) {

int i;

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

if(nums[i] == target) return true;

return false;

}

};

1. ***Height Checker:***

class Solution {

public:

int heightChecker(vector<int>& heights) {

vector<int> h = heights;

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

int i, count = 0;

for(i=0; i<heights.size(); i++)

if(h[i] != heights[i]) count++;

return count;

}

};