***Week – 6 (24.05.2021 – 29.05.2021)***

***RANDOM CODES***

1. ***Add Binary:***

class Solution {

public:

string addBinary(string a, string b) {

int i = a.size()-1, j = b.size()-1, carry = 0, sum=0;

string res="";

while(i>=0 || j>=0)

{

sum = carry;

carry = 0;

if(i>=0)

{

sum = sum + (a[i] - 48);

i--;

}

if(j>=0)

{

sum = sum + (b[j] - 48);

j--;

}

carry = sum/2;

sum = sum%2;

res = (char)(sum + 48) + res;

}

if(carry != 0) res = (char)(carry + 48) + res;

return res;

}

};

1. ***Evaluate Reverse Polish Notation:***

class Solution {

public:

string oper(int n1, int n2, string op)

{

if(op == "+") return to\_string(n2+n1);

if(op == "-") return to\_string(n2-n1);

if(op == "\*") return to\_string(n2\*n1);

if(op == "/") return to\_string(n2/n1);

return "";

}

int evalRPN(vector<string>& tokens) {

stack<string> val;

int n1, n2, i;

string n;

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

{

if(tokens[i]=="+" || tokens[i]=="-" || tokens[i]=="\*" || tokens[i]=="/")

{

n1 = stoi(val.top());

val.pop();

n2 = stoi(val.top());

val.pop();

n = oper(n1, n2, tokens[i]);

val.push(n);

}

else val.push(tokens[i]);

}

return stoi(val.top());

}

};

1. ***Ransom Note:***

class Solution {

public:

bool canConstruct(string ransomNote, string magazine) {

vector<int> v(26,0);

for(char c : magazine)

v[c - 'a']++;

for(char c : ransomNote)

{

if(v[c-'a']==0)

return false;

v[c-'a']--;

}

return true;

}

};