

CodeaCats Week 6

1.

```
char findTheDifference(string s, string t) {
    // sort(s.begin(),s.end());
    // sort(t.begin(),t.end());
    // int i;
    // for(i=0;i<s.length();i++)
    //     if(s[i]!=t[i])
    //         return t[i];
    // return t[i];

    char v=0;
    for( char c:s)
        v^=c;
    for( char c:t)
        v^=c;
    return v;
}
```

2.

```
bool check_duck(string N){
    //code
    if(N[0]!='0')
        return false;
    for(int i=0;i<N.size();i++)
    {
        if(N[i]!='0')
            return true;
    }
    return false;
}
```

3.

```
class Solution {
public:
    int longestSubstring(string s, int k) {

        int len=s.length();

        if(len==0 || len<k)
            return 0;
        if(k<=1)
```

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        return len;

unordered_map<char,int> mp;
for(char c:s)
    mp[c]++;

int left =0;

while(left < len && mp[s[left]] >= k)
    left++;

if(left >= len-1)
    return left;

int L = longestSubstring(s.substr(0,left) ,k);

while(left < len && mp[s[left]] < k)
    left++;

int R = left < len ? longestSubstring(s.substr(left),k) : 0;

return max(L,R);
}
};

```

4.

```

int romanToInt(string s) {
    unordered_map<char, int> mp = {'M', 1000}, {'D', 500}, {'C', 100}, {'L', 50}, {'X', 10}, {'V', 5},
    {'I', 1}};
    int res = mp[s.back()];
    for(int i = 0; i < s.size() - 1; i++) {
        if(mp[s[i]] < mp[s[i + 1]]) res -= mp[s[i]];
        else res += mp[s[i]];
    }
    return res;
}

```

5.

```

int numJewelsInStones(string jewels, string stones) {
    int ctr=0;
    for(int i=0;i<jewels.length();i++){
        for(int j=0;j<stones.length();j++)

```

```

        if(jewels[i]==stones[j])
            ctr++;
    }
    return ctr;
}

//using set
int numJewelsInStones(string jewels, string stones) {
    int ctr=0;
    unordered_set<char> setJewels(jewels.begin(),jewels.end());
    for(char s:stones)
        if(setJewels.count(s))
            ctr++;
    return ctr;
}

```

6.

```

string interpret(string command) {
    string res;
    int i=0;
    while(command[i])
    {
        if(command[i]=='G'){
            res += 'G';
            i+=1;
        }
        else if(command[i] == '(' && command[i+1] == ')'){
            res += 'o';
            i+=2;
        }
        else if(command[i] == '(' && command[i+3] == ')'){
            res += "al";
            i += 4;
        }
    }
    return res;
}

```

7.

```
bool checkAlmostEquivalent(string word1, string word2) {  
    int alpha[26]={};  
    for( char c: word1)  
        alpha[c-'a']++;  
    for( char c: word2)  
        alpha[c-'a']--;  
    for(int i=0;i<26;i++)  
        if(abs(alpha[i])>3)  
            return false;  
    return true;  
}
```