DSA-DAY2

https://www.geeksforgeeks.org/problems/anagram-1587115620/1

```
class Solution {
  public:
    // Function is to check whether two strings are anagram o
    bool areAnagrams(string& s1, string& s2) {
        // Your code here
        unordered_map<char,int> mp;
        if(s1.length() != s2.length()) return  false;
        for(int i=0;i<s1.length();i++)
        {
            mp[s1[i]]++;
            mp[s2[i]]--;
        }
        for(auto i:mp){
            if(i.second!=0) return false;
        }
        return true;
    }
};
```

https://www.geeksforgeeks.org/problems/row-with-max-1s0023/1

```
// User function template for C++
class Solution {
  public:
    int rowWithMax1s(vector<vector<int> > &arr) {
        // code here
        int ans = -1 ,j = arr[0].size()-1 ,i =0;
        while(i<arr.size()){
            while(j>=0 && arr[i][j]==1){
                ans =i;
                j--;
            }
```

```
            i++;
        }
        return ans;
    }
};
```

https://www.geeksforgeeks.org/problems/longest-consecutive-subsequence2449/1

```
class Solution {
  public:

    // Function to return length of longest subsequence of co
    int findLongestConseqSubseq(vector<int>& arr) {
        // Your code here
        sort(arr.begin(),arr.end());
        int ans = 0,tmp=0,n=arr.size();
       for(int i=1;i<n;i++){

            if(arr[i-1]==arr[i]) continue;
            else if(arr[i-1]+1==arr[i]) tmp++;
            else tmp = 0;
            ans = max(tmp,ans);
        }
        return ++ans;
    }
};
```

https://www.geeksforgeeks.org/problems/longest-palindrome-in-a-string3411/1

```
class Solution {
  public:
    string longestPalindrome(string& s) {
        // code here
        if(s.length()  <= 1) return s;
        int mx = 1,st=0,n=s.length();
```

```
        vector<vector<bool>> dp(n,vector<bool>(n,false));
        for(int i=0;i<n;i++){
            dp[i][i]=true;
            for(int j=0;j<i;j++){
                if(s[i]== s[j] && (i-j<=2 || dp[j+1][i-1])){
                    dp[j][i] = true;
                    if(i-j+1 > mx){
                        mx=i-j+1;
                        st=j;
                    }
                }
            }
        }
        return s.substr(st,mx);
    }
};
```

https://www.geeksforgeeks.org/problems/rat-in-a-maze-problem/1

```
// User function template for C++

class Solution {
  public:
  #define vvi vector<vector<int>>
  #define vi vector<int>
  #define vs vector<string>
  #define pb push_back

    void f(vvi& mat,vvi& vis,int i,int j,vs& ans,string s){


        int n=mat.size(),m=mat[0].size();

        if(i==n-1 && j==m-1){
            if(mat[i][j]==0) ans.pb("-1");
            else ans.pb(s);
            return ;
```

```
        }


        vis[i][j]=1;
        vi r = {-1,0,1,0} ,c ={0,-1,0,1};
        vs tmp ={"U","L","D","R"};

        for(int k=0;k<4;k++){
            int nr = i+r[k],nc=j+c[k];
            if(nr>=0 && nr<n && nc>=0 && nc<m && mat[nr][nc] 
                f(mat,vis,nr,nc,ans,s+tmp[k]);
            }
        }

        vis[i][j]=0;



    }
    vector<string> findPath(vector<vector<int>> &mat) {

        vs ans;
        if(!mat[0][0]) return {"-1"};
        vector<vector<int>> vis(mat.size(),vector<int>(mat[0]
        f(mat,vis,0,0,ans,"");
        if(!ans.size()) return {"-1"};
        return ans;

    }
};
```