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Practice > Algorithms > Implementation > ACM ICPC Team > Editorial

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Problem

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Editorial by shashank21j

This is a brute force implementation problem.

For each pair i, j such that $i \neq j$ we check the number of unique subjects and update max along with its count.

See the code for details.

Featured Solutions

Python 2

```
n,m = [int(x) for x in raw_input().split()]
maxi = 0
cnt = 0
inp = [raw_input() for _ in range(n)]
for i in range(0,n):
    for j in range(i+1,n):
        set_bit = bin(int(inp[i],2) | (int(inp[j],2))).count("1")
        if set_bit>maxi:
            maxi = set_bit
            cnt = 1
        elif set_bit == maxi:
            cnt+=1
print maxi
print cnt
```

C++

```
#include <bits/stdc++.h>

using namespace std;

vector <string> v;
int main() {
    int n, m;
    cin >> n >> m;
    string s;
    for (int i = 0; i < n; i++) {
        cin >> s;
        v.push_back(s);
    }
    int ans = 0;
    int cnt = 0;
    for (int i = 0; i < n; i++) {
        for (int j = i + 1; j < n; j++) {
            int val = 0;
            for (int k = 0; k < m; k++) {
                if (v[i][k] == '1' || v[j][k] == '1') {
                    val++;
                }
            }
            if (ans < val) {
                ans = val;
                cnt = 1;
            } else if (ans == val) {
                cnt++;
            }
        }
    }
    cout << ans << endl << cnt << endl;
    return 0;
}
```

PHP

<?php

STATISTICS

Difficulty: Easy

Time Complexity: $O(n^3)$

Required Knowledge: Implementation

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Originally featured in [Weekly Challenges - Week 6](#)

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```
fscanf(STDIN, "%d %d", ` $People, $ `Topics);

$Person = array();
for(` $i = 0 ; $ `i < ` $People ; $ `i++)
    fscanf(STDIN, "%s\n", ` $Person[$ `i]);

$max_topics_known = -1;
$teams_that_know_max_topics = 0;
for (` $i = 0; $ `i < ` $People; $ `i++) {
    for (` $j = $ `i+1; ` $j < ` $People; $j++) {
        ` $topics_known = substr_count($ `Person[$ `i]|$ `Person[$j], "1");
        if (` $topics_known > ` $ `max_topics_known) {
            ` $max_topics_known = ` $ `topics_known;
            $teams_that_know_max_topics = 1;
        }
        else if (` $topics_known == ` $ `max_topics_known) $teams_that_know_max_topics++;
    }
}
echo ` $max_topics_known . "\n" . ` $ `teams_that_know_max_topics . "\n";
?>
```

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