Shri Vile Parle Kelavani Mandal's

# INSTITUTE OF TECHNOLOGY

## DHULE (M.S.)

### DEPARMENT OF COMPUTER ENGINEERING

**Subject : Competitive Programming Lab**

**Name: Mohammed Meraj Mohammed Ashfaque** **Roll No. :** 32

**Class :** TY. Comp. Engg. **Batch : T2** **Division: T**

**Expt. No. :**01 **Date : 03/03/2025**

**Title : Mine Sweeper Problem**

Remark

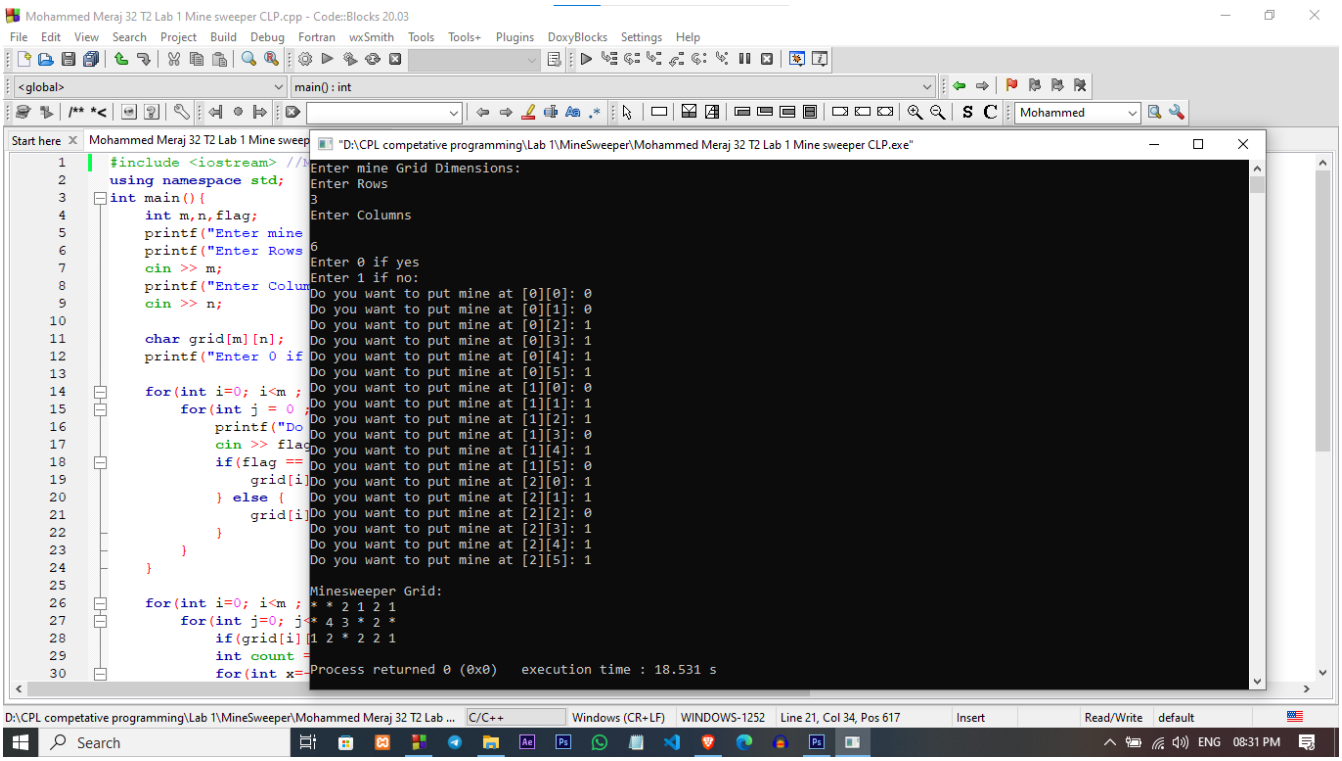
Signature

**Language: C++**

```
#include <iostream> //Mohammed Meraj - Roll No 32 - Batch: T2
using namespace std;
int main(){
   int m,n,flag;
   printf("Enter mine Grid Dimensions: \n");
   printf("Enter Rows \n");
   cin >> m;
   printf("Enter Columns \n\n");
   cin >> n;

   char grid[m][n];
   printf("Enter 0 if yes \nEnter 1 if no:\n");

   for(int i=0; i<m ; i++){
      for(int j = 0 ; j<n ; j++){
         printf("Do you want to put mine at [%d][%d]: ",i,j);
         cin >> flag;
         if(flag == 0){
            grid[i][j] = '*';
         } else {
            grid[i][j] = '.';
         }
      }
```

```
    }

    for(int i=0; i<m ; i++){
        for(int j=0; j<n; j++){
            if(grid[i][j] == '*') continue;
            int count = 0;
            for(int x=-1; x<=1; x++){
                for(int y=-1; y<=1; y++){
                    int ni = i + x;
                    int nj = j + y;
                    if(ni>=0 && ni<m && nj>=0 && nj<n && grid[ni][nj] == '*'){
                        count++;
                    }
                }
            }
            grid[i][j] = count + '0';
        }
    }

    printf("\nMinesweeper Grid:\n");
    for(int i=0; i<m ; i++){
        for(int j=0; j<n; j++){
            printf("%c ",grid[i][j]);
        }
        printf("\n");
    }
}
```

## Output :


Mohammed Meraj 32 T2 Lab 1 Mine sweeper CLP.cpp - Code::Blocks 20.03
"D:\CPL competative programming\Lab 1\MineSweeper\Mohammed Meraj 32 T2 Lab 1 Mine sweeper CLP.exe"
Enter mine Grid Dimensions:
Enter Rows
3
Enter Columns
6
Enter 0 if yes
Enter 1 if no:
Do you want to put mine at [0][0]: 0
Do you want to put mine at [0][1]: 0
Do you want to put mine at [0][2]: 1
Do you want to put mine at [0][3]: 1
Do you want to put mine at [0][4]: 1
Do you want to put mine at [0][5]: 1
Do you want to put mine at [1][0]: 0
Do you want to put mine at [1][1]: 1
Do you want to put mine at [1][2]: 1
Do you want to put mine at [1][3]: 0
Do you want to put mine at [1][4]: 1
Do you want to put mine at [1][5]: 0
Do you want to put mine at [2][0]: 1
Do you want to put mine at [2][1]: 1
Do you want to put mine at [2][2]: 0
Do you want to put mine at [2][3]: 1
Do you want to put mine at [2][4]: 1
Do you want to put mine at [2][5]: 1
Minesweeper Grid:
* * 2 1 2 1
* 4 3 * 2 *
1 2 * 2 2 1
Process returned 0 (0x0) execution time : 18.531 s

## Program ScreenShot: