

Sumanth.k.v

IBM18CS119

Batch-6

```
int vis[1001][1001] = {False}
```

```
int arr[1001][1001];
```

```
int m, n;
```

```
int parent[1001][1001] = {0}
```

```
bool isValid(int x, int y)
```

```
{ if (x > m || y > n || y <= 0 || x <= 0)
  return false;
```

```
if (vis[x][y] == false || arr[x][y] == 0)
  return false;
```

```
return true;
```

```
}
```

```
void union(int x, int y, int par)
```

```
{ vis[x][y] = True;
```

```
parent[x][y] = par;
```

```
if (isValid(x-1, y+1))
  union(x-1, y+1, par);
```

```
if (isValid(x, y+1))
  union(x, y+1, par);
```

```
if (isValid(x+1, y+1))
  union(x+1, y+1, par);
```

```
if (isValid(x, y-1))
  union(x, y-1, par);
```

```
if (isValid(x+1, y-1))
    union(x+1, y-1, par)
```

```
if (isValid(x+1, y))
    union(x+1, y, par)
```

```
if (isValid(x-1, y-1))
    union(x-1, y-1, par) union(x-1, y-1, par)
```

```
}
int main() {
    cin >> m >> n;
    for i = 1 to m
        for j = 1 to n
            cin >> arr[i][j]
```

```
cont for i = 1 to m
    for j = 1 to n
        if (arr[i][j] == 1 && !vis[i][j])
            union(i, j, i)
```

```
map<int, int> mp;
for i = 1 to m
    for j = 1 to n
        if (parent[i][j] != -1)
            mp[parent[i][j]]++;
```

```
cout << mp.size() << endl;
```

```
}
```