```cpp
#include <iostream>

using namespace std;

int n, m, a[20][100];

void creareMatrice(int n, int m, int a[20][100])
{
    int x, y;
    for (int i = 1; i <= m; i++)
    {
        cout << "Dati extremitatile muchiei " << i << ": ";
        cin >> x >> y;
        a[x][y]++;
        ///NEORIENTAT
        if (x != y)
            a[y][x]++;
    }
}

void afisareMatrice(int n, int a[20][100])
{
    int i, j;
    for (i = 1; i <= n; i++)
    {
        for (j = 1; j <= n; j++)
            cout << a[i][j] << " ";
        cout << endl;
    }
}

int main()
{
    cout << "Nr. noduri: ";
    cin >> n;
    cout << "Nr. muchii: ";
    cin >> m;

    creareMatrice(n, m, a);
    afisareMatrice(n, a);
}
#include <iostream>

using namespace std;

int n, m, a[20][100];

void creareMatrice(int n, int m, int a[20][100])
{
    int x, y;
    for (int i = 1; i <= m; i++)
    {
```

```
        cout << "Dati extremitatile muchiei " << i << ": ";
        cin >> x >> y;
        a[x][y]++;
    }
}

void afisareMatrice(int n, int a[20][100])
{
    int i, j;
    for (i = 1; i <= n; i++)
    {
        for (j = 1; j <= n; j++)
            cout << a[i][j] << " ";
        cout << endl;
    }
}

int main()
{
    cout << "Nr. noduri: ";
    cin >> n;
    cout << "Nr. muchii: ";
    cin >> m;

    creareMatrice(n, m, a);
    afisareMatrice(n, a);
}
#include <iostream>

using namespace std;

int n, m, b[20][100];

void creareMatriceIncid(int n, int m, int b[20][100])
{
    int x, y;
    for (int i = 1; i <= m; i++)
    {
        cout << "Dati extremitatile muchiei " << i << ": ";
        cin >> x >> y;
        b[x][i]++;
        b[y][i]++;
    }
}

void afisareMatrice(int n, int b[20][100])
{
    int i, j;
    for (i = 1; i <= n; i++)
    {
        for (j = 1; j <= m; j++)
            cout << b[i][j] << " ";
        cout << endl;
    }
```

```
}


int main()
{
    cout << "Nr. noduri: ";
    cin >> n;
    cout << "Nr. muchii: ";
    cin >> m;

    creareMatriceIncid(n, m, b);
    afisareMatrice(n, b);
}
#include <iostream>

using namespace std;

int n, m, b[20][100];

void creareMatriceIncid(int n, int m, int b[20][100])
{
    int x, y;
    for (int i = 1; i <= m; i++)
    {
        cout << "Dati extremitatile muchiei " << i << ": ";
        cin >> x >> y;
        b[x][i] = 1;
        b[y][i] = -1;
    }
}

void afisareMatrice(int n, int b[20][100])
{
    int i, j;
    for (i = 1; i <= n; i++)
    {
        for (j = 1; j <= m; j++)
            cout << b[i][j] << " ";
        cout << endl;
    }
}


int main()
{
    cout << "Nr. noduri: ";
    cin >> n;
    cout << "Nr. muchii: ";
    cin >> m;

    creareMatriceIncid(n, m, b);
    afisareMatrice(n, b);
}
#include <iostream>
```

```cpp
using namespace std;

int n, m, a[20][100];

void creareMatrice(int n, int m, int a[20][100])
{
    int x, y;
    for (int i = 1; i <= m; i++)
    {
        cout << "Dati extremitatile muchiei " << i << ": ";
        cin >> x >> y;
        a[x][y]++;
        if (x != y)
            a[y][x]++;
    }
}

void afisareMatrice(int n, int a[20][100])
{
    int i, j;
    for (i = 1; i <= n; i++)
    {
        for (j = 1; j <= n; j++)
            cout << a[i][j] << " ";
        cout << endl;
    }
}

void listaAdiac(int n, int a[20][100])
{
    int i, j;
    for (i = 1; i <= n; i++)
    {
        cout << i << ": ";
        for (j = 1; j <= n; j++)
            if (a[i][j] != 0)
                cout << j << " ";
        cout << endl;
    }
}

int main()
{
    cout << "Nr. noduri: ";
    cin >> n;
    cout << "Nr. muchii: ";
    cin >> m;

    creareMatrice(n, m, a);
    listaAdiac(n, a);
}
#include <iostream>
```

```cpp
using namespace std;

int n, m, a[20][100];

void creareMatrice(int n, int m, int a[20][100])
{
    int x, y;
    for (int i = 1; i <= m; i++)
    {
        cout << "Dati extremitatile muchiei " << i << ": ";
        cin >> x >> y;
        a[x][y]++;
    }
}

void afisareMatrice(int n, int a[20][100])
{
    int i, j;
    for (i = 1; i <= n; i++)
    {
        for (j = 1; j <= n; j++)
            cout << a[i][j] << " ";
        cout << endl;
    }
}

void listaAdiac(int n, int a[20][100])
{
    int i, j;
    for (i = 1; i <= n; i++)
    {
        cout << i << ": ";
        for (j = 1; j <= n; j++)
            if (a[i][j] != 0)
                cout << j;
        cout << endl;
    }
}

int main()
{
    cout << "Nr. noduri: ";
    cin >> n;
    cout << "Nr. muchii: ";
    cin >> m;

    creareMatrice(n, m, a);
    listaAdiac(n, a);
}
#include <iostream>

using namespace std;

int n, m, a[20][100];
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```
void creareMatrice(int n, int m, int a[20][100])
{
    int x, y;
    for (int i = 1; i <= m; i++)
    {
        cout << "Dati extremitatile muchiei " << i << ": ";
        cin >> x >> y;
        a[x][y]++;
        ///NEORIENTAT
        if (x != y)
            a[y][x]++;
    }
}

void afisareMatrice(int n, int a[20][100])
{
    int i, j;
    for (i = 1; i <= n; i++)
    {
        for (j = 1; j <= n; j++)
            cout << a[i][j] << " ";
        cout << endl;
    }
}

void calculGrade(int n, int a[20][100])
{
    for (int i = 1; i <= n; i++)
    {
        int s = 0;
        cout << "Gradul nodului " << i << ": ";
        for (int j = 1; j <= n; j++)
            s += a[i][j];
        cout << s << endl;
    }
}

int main()
{
    cout << "Nr. noduri: ";
    cin >> n;
    cout << "Nr. muchii: ";
    cin >> m;

    creareMatrice(n, m, a);
    calculGrade(n, a);
}
#include <iostream>

using namespace std;

int n, m, a[20][100];
```

```cpp
void creareMatrice(int n, int m, int a[20][100])
{
    int x, y;
    for (int i = 1; i <= m; i++)
    {
        cout << "Dati extremitatile muchiei " << i << ": ";
        cin >> x >> y;
        a[x][y]++;
    }
}

void afisareMatrice(int n, int a[20][100])
{
    int i, j;
    for (i = 1; i <= n; i++)
    {
        for (j = 1; j <= n; j++)
            cout << a[i][j] << " ";
        cout << endl;
    }
}

void calculGrade(int n, int a[20][100])
{
    for (int i = 1; i <= n; i++)
    {
        int s = 0, gin = 0, gout = 0;
        for (int j = 1; j <= n; j++) {
            gin += a[i][j];
            gout += a[j][i];
        }
        s = gin + gout;
        cout << "Gradul de intrare al nodului " << i << ": " << gin << endl;
        cout << "Gradul de iesire al nodului " << i << ": " << gout << endl;
        cout << "Gradul total al nodului " << i << ": " << s << endl;
        cout << endl;
    }
}

int main()
{
    cout << "Nr. noduri: ";
    cin >> n;
    cout << "Nr. muchii: ";
    cin >> m;

    creareMatrice(n, m, a);
    calculGrade(n, a);
}
```