# STRUKTUR DATA

(Tugas2)

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*UNIVERSITAS PADJADJARAN*

*FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM*

*Program Studi INFORMATIKA*

*2022*

1.

```
/*  Nama Program    : Quiz1
    Nama            : Prames Ray Lapian
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    Tanggal Buat    : 14 Mar 2022
    Deskripsi       : Cari jumlah baris dan jumlah kolom dari suatu matriks
    Lokasi File     : C:\Users\prame\Documents\PRAMES\PERKULIAHAN\SEMESTER
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************************************************/
#include <iostream>
using namespace std;

typedef int matriks[10][10];

void banyakData(int& nBaris, int& nKolom)
{
    cout << "Banyak baris : "; cin >> nBaris;
    cout << "Banyak kolom : "; cin >> nKolom;
}

void isiMatriks(int nBaris, int nKolom, matriks x1)
{
    if (nBaris > 0 && nKolom > 0)
    {
        cout << "\nMasukkan isi matriks\n";

        for (int i = 0; i < nBaris; i++)
        {
            for (int j = 0 ; j < nKolom ; j++)
            {
                cout << "Baris " << i+1 << ", Kolom " << j+1 << " = "; cin >>
x1[i][j];
            }
            cout << endl;
        }
    }
}

void cetakMatriks(int nBaris, int nKolom, matriks x1)
{
    cout << "============================\n"
         << "Matriks:\n";

    for (int i = 0; i < nBaris; i++)
    {
        for (int j = 0; j < nKolom; j++)
        {
            cout << x1[i][j] << "\t";
```

```
        }
        cout << endl;
    }
}

void cariJumlahKolom(int nBaris, int nKolom, matriks x1)
{

    for (int j = 0; j < nKolom; j++)
    {
        int jb[j] = 0;

        for (int i = 0; i < nBaris; i++)
        {
            jb[i] += x1[i][j];
        }
    }
}

void cariJumlahBaris(int nBaris, int nKolom, matriks x1)
{
    int jb[10];
    for (int i = 0; i < nKolom; i++)
    {
        jb[i] = 0;

        for (int j = 0; j < nBaris; j++)
        {
            jb[j] += x1[i][j];
        }
    }
}

int main()
{
    matriks x1;
    int nBaris, nKolom;
    banyakData(nBaris, nKolom);
    isiMatriks(nBaris, nKolom,  x1);
    cetakMatriks(nBaris, nKolom,  x1);
    cariJumlahBaris(nBaris, nKolom,  x1);
    cariJumlahKolom(nBaris, nKolom,  x1);
}
```

Output:

2.

```
/*  Nama Program    : Quiz1_2
    Nama            : Prames Ray Lapian
    NPM             : 140810210059
    Tanggal Buat    : 14 Mar 2022
    Deskripsi       : Membuat list baru dan mencari 4 cara meng-outputkan
suatu pointer
    Lokasi File     : C:\Users\prame\Documents\PRAMES\PERKULIAHAN\SEMESTER
2\Struktur Data\TUGAS
**********************************************/
#include <iostream>
using namespace std;

struct ElmtList
{
    char info;
    ElmtList* next;
};

typedef ElmtList* pointerToElmtList;
typedef pointerToElmtList List;

main()
{
    pointerToElmtList p1, p2, p3, p4;
    List First;
    cout <<"Input : "<< endl;

    p1 = new ElmtList;
    cout << "info p1 = "; cin >> p1 -> info;
    p1 -> next = NULL;

    p2 = new ElmtList;
    cout << "info p2 = "; cin >> p2 -> info;
    p2 -> next = NULL;

    p3 = new ElmtList;
    cout << "info p3 = "; cin >> p3 -> info;
    p3 -> next = NULL;

    p4 = new ElmtList;
    cout << "info p4 = "; cin >> p4 -> info;
    p4 -> next = NULL;

    p1 -> next = p2;
    p2 -> next = p3;
    p3 -> next = p4;
```

```
    First = p1;

    cout << "Output : " << endl;
    cout << "info p1 : " << p1 -> info << endl;
    cout << "info p2 : " << p2 -> info << endl;
    cout << "info p3 : " << p3 -> info << endl;
    cout << "info p4 #1: " << p4 -> info << endl;
    cout << "info p4 #2: " << p3 -> next -> info << endl;
    cout << "info p4 #3: " << p2 -> next -> next -> info << endl;
    cout << "info p4 #4: " << p1 -> next -> next -> next -> info << endl;
}
```

Output:

```
Input :
info = A
info = B
info = C
info = D
Output :
info p1 : A
info p2 : B
info p3 : C
info p4 #1: D
info p4 #2: D
info p4 #3: D
info p4 #4: D
```