

**JURNAL PRAKTIKUM**  
**PRAKTIKUM ALGORITMA DAN PEMECAHAN MASALAH**  
**MODUL 4**  
**JUDUL MODUL : LARIK/ARRAY**



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**PADANG**  
**2023**

# TUGAS PRAKTIKUM

## 3.1 Tugas 1

The screenshot shows a Visual Studio Code editor with a C++ file named `tugas1.cpp`. The code implements a program that asks the user for the number of elements (n), then reads n numbers into an array. It then iterates through the array to find the maximum and minimum values and calculates the average. The output window shows the results for n=10.

```
1 int n;
2
3 cout << "Masukan jumlah bilangan : ";
4 cin >> n;
5
6 int data[n];
7
8 for (int i = 0; i < n; i++) {
9     cout << "Masukan data ke-" << i + 1 << " : ";
10    cin >> data[i];
11}
12
13 int maks = data[0];
14 int min = data[0];
15 float total = data[0];
16
17 for (int i = 1; i < n; i++) {
18     if (data[i] > maks) {
19         maks = data[i];
20     }
21     if (data[i] < min) {
22         min = data[i];
23     }
24     total += data[i];
25 }
26
27 float rataRata = total/n;
28
29 cout << "Nilai Maksimum : " << maks << endl;
30 cout << "Nilai Minimum : " << min << endl;
31 cout << "Rata-rata : " << rataRata << endl;
```

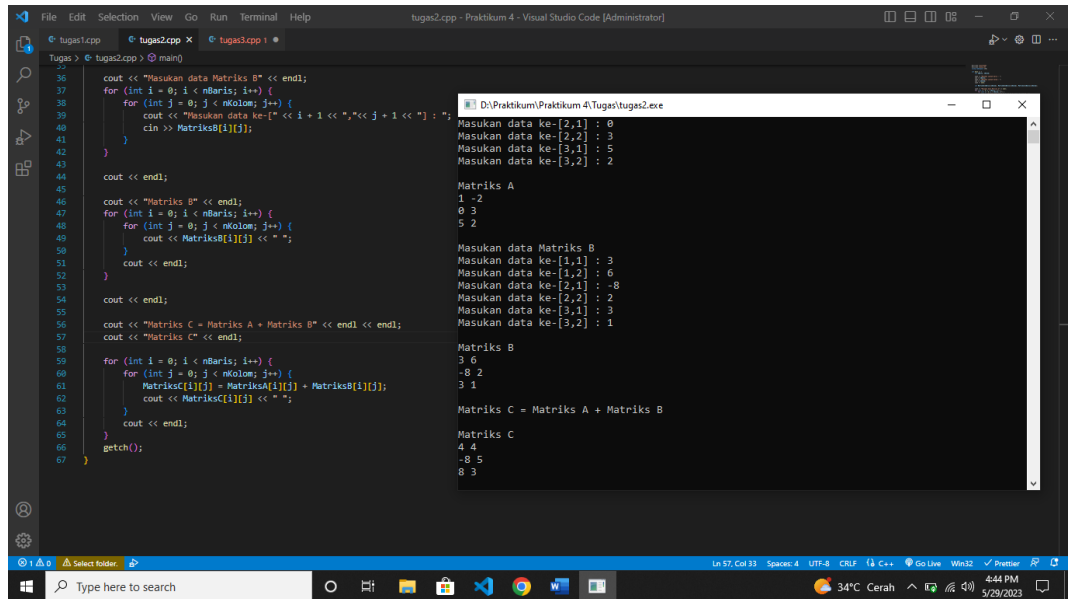
Output window results:

```
Masukan jumlah bilangan : 10
Masukan data ke-1 : 11
Masukan data ke-2 : 12
Masukan data ke-3 : 13
Masukan data ke-4 : 14
Masukan data ke-5 : 15
Masukan data ke-6 : 16
Masukan data ke-7 : 17
Masukan data ke-8 : 18
Masukan data ke-9 : 19
Masukan data ke-10 : 20
Nilai Maksimum : 20
Nilai Minimum : 11
Rata-rata : 15.5
```

## 3.2 Tugas 2

The screenshot shows a Visual Studio Code editor with a C++ file named `tugas2.cpp`. The code implements a program that asks the user for the number of rows (nBaris) and columns (nKolom), then reads the elements of a matrix into a 2D array. It then displays the matrix.

```
1 #include <iostream>
2 #include <conio.h>
3 using namespace std;
4
5 int main () {
6     int nBaris, nKolom;
7
8     cout << "Masukan jumlah baris : ";
9     cin >> nBaris;
10    cout << "Masukan jumlah kolom : ";
11    cin >> nKolom;
12    cout << endl;
13
14    int MatriksA[nBaris][nKolom], MatriksB[nBaris][nKolom], MatriksC[nBaris][nKolom];
15
16    cout << "Masukan data Matriks A" << endl;
17    for (int i = 0; i < nBaris; i++) {
18        for (int j = 0; j < nKolom; j++) {
19            cout << "Masukan data ke-" << i + 1 << " , " << j + 1 << " : ";
20            cin >> MatriksA[i][j];
21        }
22    }
23
24    cout << endl;
25
26    cout << "Matriks A" << endl;
27    for (int i = 0; i < nBaris; i++) {
28        for (int j = 0; j < nKolom; j++) {
29            cout << MatriksA[i][j] << " ";
30        }
31        cout << endl;
32    }
33 }
```



```
File Edit Selection View Go Run Terminal Help
tugas2.cpp - Praktikum 4 - Visual Studio Code [Administrator]

tugas2.cpp
Tugas > C: \tugas2.cpp > @ main()

36 cout << "Masukan data Matriks B" << endl;
37 for (int i = 0; i < nbaris; i++) {
38     for (int j = 0; j < nkolom; j++) {
39         cout << "Masukan data ke-[" << i + 1 << ", " << j + 1 << " ] : ";
40         cin >> MatriksB[i][j];
41     }
42 }
43
44 cout << endl;
45
46 cout << "Matriks B" << endl;
47 for (int i = 0; i < nbaris; i++) {
48     for (int j = 0; j < nkolom; j++) {
49         cout << MatriksB[i][j] << " ";
50     }
51     cout << endl;
52 }
53
54 cout << endl;
55
56 cout << "Matriks C = Matriks A + Matriks B" << endl << endl;
57 cout << "Matriks C" << endl;
58
59 for (int i = 0; i < nbaris; i++) {
60     for (int j = 0; j < nkolom; j++) {
61         MatriksC[i][j] = MatriksA[i][j] + MatriksB[i][j];
62         cout << MatriksC[i][j] << " ";
63     }
64     cout << endl;
65 }
66 getch();
67 }
```

Masukan data ke-[2,1] : 0  
Masukan data ke-[2,2] : 3  
Masukan data ke-[3,1] : 5  
Masukan data ke-[3,2] : 2

Matriks A  
1 -2  
0 3  
5 2

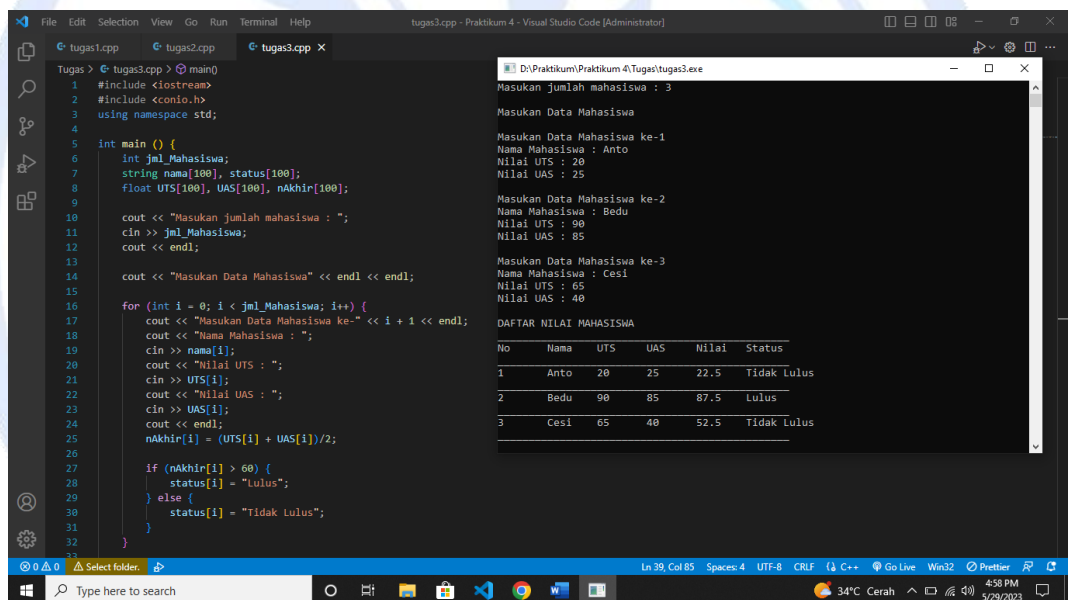
Masukan data Matriks B  
Masukan data ke-[1,1] : 3  
Masukan data ke-[1,2] : 6  
Masukan data ke-[2,1] : -8  
Masukan data ke-[2,2] : 2  
Masukan data ke-[3,1] : 3  
Masukan data ke-[3,2] : 1

Matriks B  
3 6  
-8 2  
3 1

Matriks C = Matriks A + Matriks B

Matriks C  
4 4  
-8 5  
8 3

### 3.3 Tugas 3



```
File Edit Selection View Go Run Terminal Help
tugas3.cpp - Praktikum 4 - Visual Studio Code [Administrator]

tugas3.cpp
Tugas > C: \tugas3.cpp > @ main()

1 #include <iostream>
2 #include <conio.h>
3 using namespace std;
4
5 int main () {
6     int jml_Mahasiswa;
7     string nama[100], status[100];
8     float UTS[100], UAS[100], Nakhsir[100];
9
10    cout << "Masukan jumlah mahasiswa : ";
11    cin >> jml_Mahasiswa;
12    cout << endl;
13
14    cout << "Masukan Data Mahasiswa" << endl << endl;
15
16    for (int i = 0; i < jml_Mahasiswa; i++) {
17        cout << "Masukan Data Mahasiswa ke-" << i + 1 << endl;
18        cout << "Nama Mahasiswa : ";
19        cin >> nama[i];
20        cout << "Nilai UTS : ";
21        cin >> UTS[i];
22        cout << "Nilai UAS : ";
23        cin >> UAS[i];
24        cout << endl;
25        Nakhsir[i] = (UTS[i] + UAS[i])/2;
26
27        if (Nakhsir[i] > 60) {
28            status[i] = "Lulus";
29        } else {
30            status[i] = "Tidak Lulus";
31        }
32    }
33 }
```

Masukan jumlah mahasiswa : 3

Masukan Data Mahasiswa

Masukan Data Mahasiswa ke-1  
Nama Mahasiswa : Anto  
Nilai UTS : 20  
Nilai UAS : 25

Masukan Data Mahasiswa ke-2  
Nama Mahasiswa : Bedu  
Nilai UTS : 90  
Nilai UAS : 85

Masukan Data Mahasiswa ke-3  
Nama Mahasiswa : Cesi  
Nilai UTS : 65  
Nilai UAS : 40

DAFTAR NILAI MAHASISWA

No	Nama	UTS	UAS	Nilai	Status
1	Anto	20	25	22.5	Tidak Lulus
2	Bedu	90	85	87.5	Lulus
3	Cesi	65	40	52.5	Tidak Lulus

```
File Edit Selection View Go Run Terminal Help tugas3.cpp - Praktikum 4 - Visual Studio Code [Administrator]
tugas1.cpp tugas2.cpp tugas3.cpp x
Tugas > tugas3.cpp > main()
33 cout << "DAFTAR NILAI MAHASISWA" << endl;
34 cout << " " << endl;
35 cout << "No\t" << "Nama\t" << "UTS\t" << "UAS\t" << "Nilai\t" << "Status" << endl;
36 cout << " " << endl;
37 cout << " " << endl;
38 for (int i = 0; i < jml_Mahasiswa; i++) {
39     cout << i + 1 << "\t" << nama[i] << "\t" << UTS[i] << "\t" << UAS[i] << "\t" << nAkin[i] << "\t" << status[i] << endl;
40     cout << " " << endl;
41 }
42
43 getch();
44 }
```

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