Meeting 6

Avicena Yosanta Muchtar 24/536710/PA/22764

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Github: https://github.com/TheKurusUGM/Praktikum-Pemograman-UGM-

1 Question:

```
Question:
Create a program (by using arrays and structs) which asks the student data (nim,
UTS values and UAS value) of N inputs (N is determined by the users themselves,
maximum 50), then calculate the average value of each student.
For example :
enter the number of students : 1
enter the nim : 412
enter UTS value : 72
enter UAS value : 74
------
nim : 412
average : 73
```

Answer:

```cpp

#include <iostream>

using namespace std;
struct Student {
  int nim;
  float uts;
  float uas;
  float average;
};

int main() {
  int N;
```

```
14
15    cout << "Enter the number of students (max 50): ";
16    cin >> N;
17
18    if (N > 50) {
19      cout << "The maximum number of students is 50. Please try
        ↪  again." << endl;
20      return 1;
21    }
22
23    Student students[50];
24
25    for (int i = 0; i < N; i++) {
26      cout << "\nEnter data for student " << i + 1 << ":" << endl;
27
28      cout << "Enter NIM: ";
29      cin >> students[i].nim;
30
31      cout << "Enter UTS score: ";
32      cin >> students[i].uts;
33
34      cout << "Enter UAS score: ";
35      cin >> students[i].uas;
36
37      students[i].average = (students[i].uts + students[i].uas) /
        ↪  2;
38    }
39
40    cout << "\nStudent data and averages:" << endl;
41    for (int i = 0; i < N; i++) {
42      cout << "NIM: " << students[i].nim << endl;
43      cout << "Average: " << students[i].average << endl;
44    }
45
46    return 0;
47  }
```

Explanation:
A data struct holds the NIM, UTS, UAS, and average scores for each student data.

```
1   using namespace std;
2   struct Student {
3     int nim;
4     float uts;
5     float uas;
6     float average;
```

```
};

```

Students[50]: Holds up to 50 students data. The array size is made to contain 50 student but only a user inputted N entry are used.

```
students[i].average = (students[i].uts + students[i].uas) / 2;
  }

  cout << "\nStudent data and averages:" << endl;
  for (int i = 0; i < N; i++) {
    cout << "NIM: " << students[i].nim << endl;
    cout << "Average: " << students[i].average << endl;
  }
```

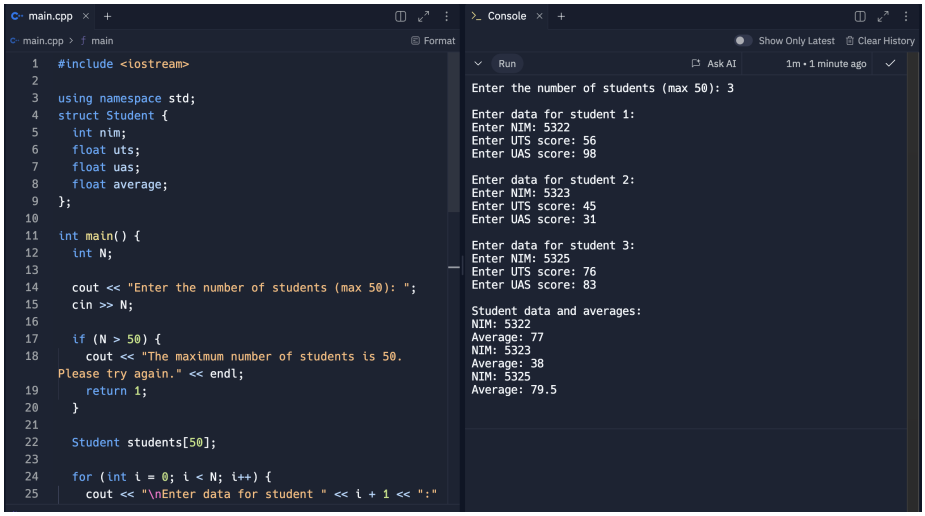

Figure 1: Example Output