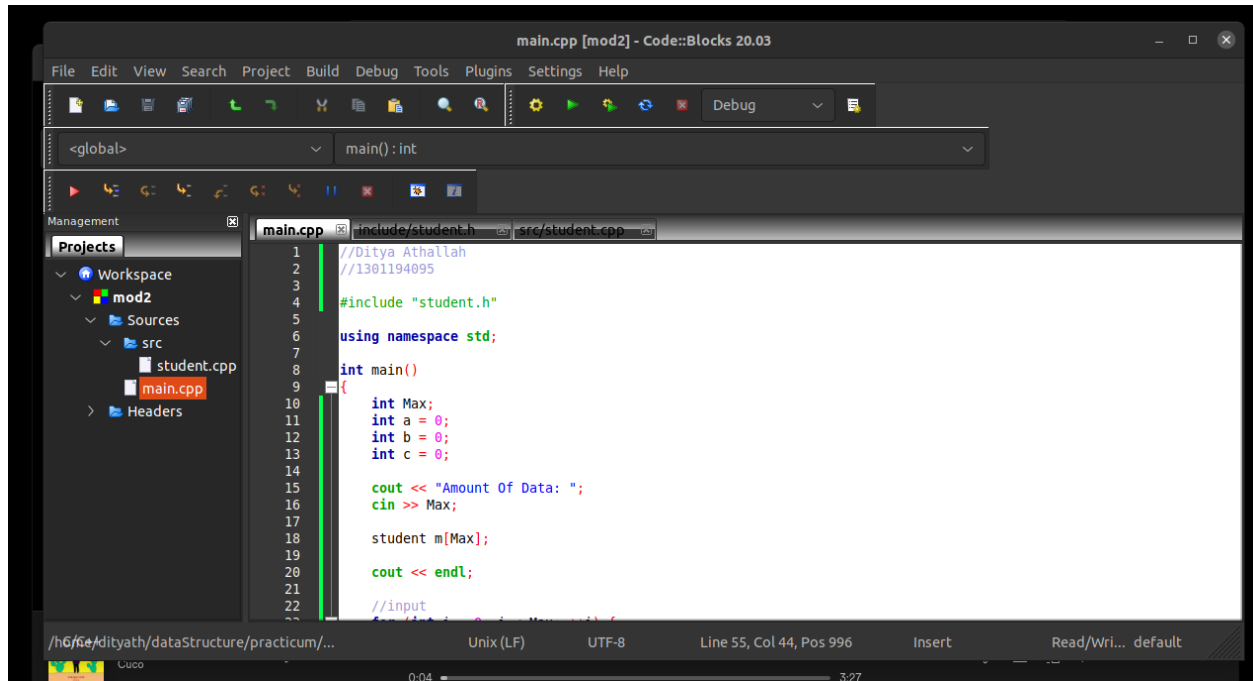


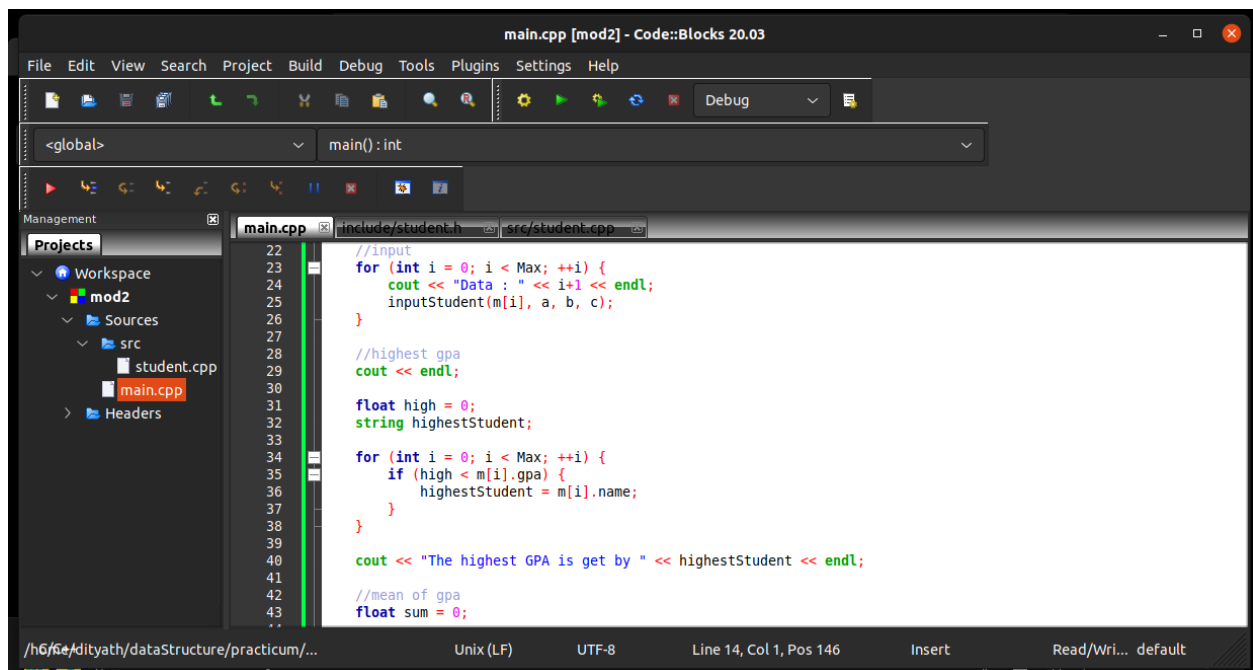
Ditya Athallah

My code:

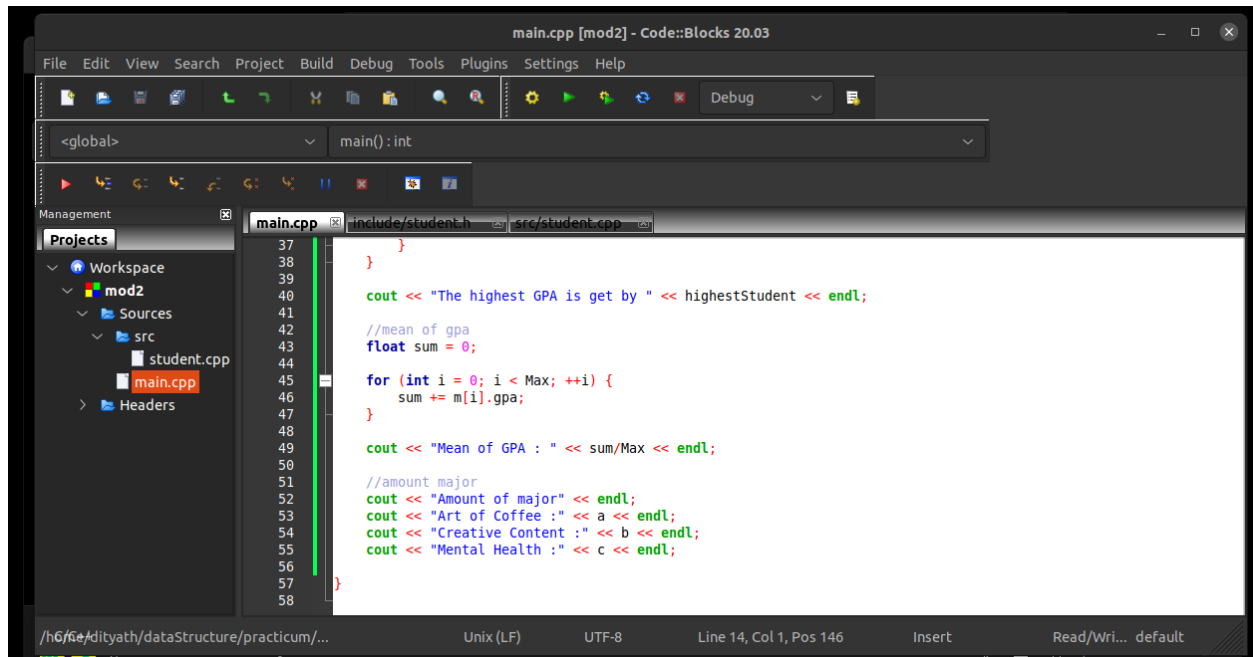
main.cpp



```
1 //Ditya Athallah
2 //1301194095
3
4 #include "student.h"
5
6 using namespace std;
7
8 int main()
9 {
10     int Max;
11     int a = 0;
12     int b = 0;
13     int c = 0;
14
15     cout << "Amount Of Data: ";
16     cin >> Max;
17
18     student m[Max];
19
20     cout << endl;
21
22     //input
```



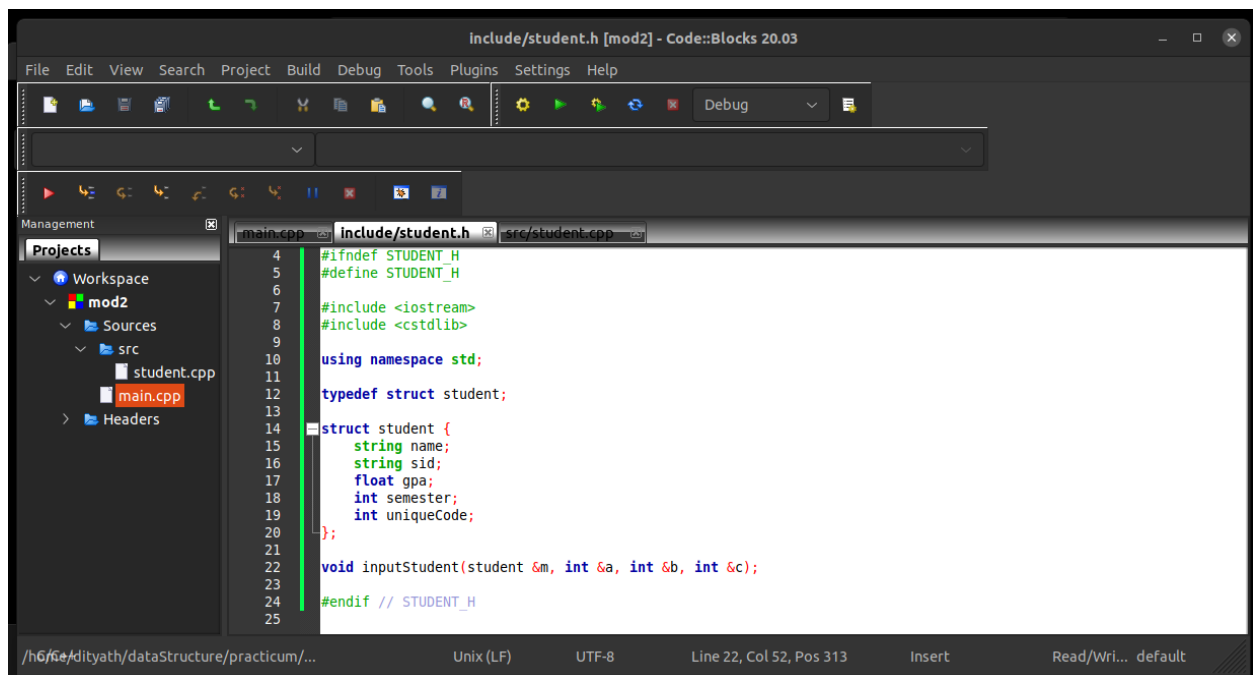
```
22 //input
23 for (int i = 0; i < Max; ++i) {
24     cout << "Data : " << i+1 << endl;
25     inputStudent(m[i], a, b, c);
26 }
27
28 //highest gpa
29 cout << endl;
30
31 float high = 0;
32 string highestStudent;
33
34 for (int i = 0; i < Max; ++i) {
35     if (high < m[i].gpa) {
36         highestStudent = m[i].name;
37     }
38 }
39
40 cout << "The highest GPA is get by " << highestStudent << endl;
41
42 //mean of gpa
43 float sum = 0;
```



The screenshot shows the Code::Blocks 20.03 IDE with the file `main.cpp` open. The left sidebar shows a project named `mod2` with a source file `main.cpp` and a header file `student.h`. The main editor displays the following C++ code:

```
37 }
38
39
40 cout << "The highest GPA is get by " << highestStudent << endl;
41
42 //mean of gpa
43 float sum = 0;
44
45 for (int i = 0; i < Max; ++i) {
46     sum += m[i].gpa;
47 }
48
49 cout << "Mean of GPA : " << sum/Max << endl;
50
51 //amount major
52 cout << "Amount of major" << endl;
53 cout << "Art of Coffee : " << a << endl;
54 cout << "Creative Content : " << b << endl;
55 cout << "Mental Health : " << c << endl;
56
57
58 }
```

student.h



The screenshot shows the Code::Blocks 20.03 IDE with the file `include/student.h` open. The left sidebar shows the same project structure as the previous screenshot. The main editor displays the following C++ code:

```
4 #ifndef STUDENT_H
5 #define STUDENT_H
6
7 #include <iostream>
8 #include <cstdlib>
9
10 using namespace std;
11
12 typedef struct student;
13
14 struct student {
15     string name;
16     string sid;
17     float gpa;
18     int semester;
19     int uniqueCode;
20 };
21
22 void inputStudent(student &m, int &a, int &b, int &c);
23
24 #endif // STUDENT_H
25
```

student.cpp

src/student.cpp [mod2] - Code::Blocks 20.03

File Edit View Search Project Build Debug Tools Plugins Settings Help

<global> inputStudent(student& m, int& a, int& b, int& c) : void

Management

Projects

- Workspace
 - mod2
 - Sources
 - src
 - student.cpp
 - main.cpp
 - Headers

```
1 #include "student.h"
2
3 void inputStudent(student &m, int &a, int &b, int &c) {
4
5     cout << "Name: ";
6     cin >> m.name;
7
8     cout << "SID : ";
9     cin >> m.sid;
10
11     if (m.sid.substr(1, 1) == "1") {
12         cout << "Art of Coffee" << endl;
13         a++;
14     } else if (m.sid.substr(1, 1) == "2") {
15         cout << "Creative Content" << endl;
16         b++;
17     } else if (m.sid.substr(1, 1) == "3") {
18         cout << "Mental Health" << endl;
19         c++;
20     }
21
22     cout << "semester : ";
```

/h6/6e/dityath/dataStructure/practicum/... Unix (LF) UTF-8 Line 19, Col 13, Pos 451 Insert Read/Wri... default

src/student.cpp [mod2] - Code::Blocks 20.03

File Edit View Search Project Build Debug Tools Plugins Settings Help

<global> inputStudent(student& m, int& a, int& b, int& c) : void

Management

Projects

- Workspace
 - mod2
 - Sources
 - src
 - student.cpp
 - main.cpp
 - Headers

```
21
22     cout << "semester : ";
23     cin >> m.semester;
24
25     cout << "GPA : ";
26     cin >> m.gpa;
27
28     if (m.gpa > 3.5 && m.semester <= 8) {
29         cout << "CUMLAUDE" << endl;
30     }
31
32     cout << "Unique Code : ";
33     cin >> m.uniqueCode;
34
35     if (m.uniqueCode%2 == 1) {
36         cout << "OUTSTANDING STUDENTS";
37     }
38
39     cout << endl;
40
41 }
42
```

/h6/6e/dityath/dataStructure/practicum/... Unix (LF) UTF-8 Line 19, Col 13, Pos 451 Insert Read/Wri... default

```
mod2
Amount Of Data: 4
Data : 1
Name: Hafidz
SID : 12345
Creative Content
semester : 7
GPA : 3.57
CUMLAUDE
Unique Code : 11
OUTSTANDING STUDENTS
Data : 2
Name: Joni
SID : 21345
Art of Coffee
semester : 5
GPA : 3.1
Unique Code : 2222
Data : 3
Name: Ditya
SID : 234
Mental Health
semester : 2
GPA : 3.9
CUMLAUDE
Unique Code : 12415
OUTSTANDING STUDENTS
Data : 4
Name: Hey
SID : 1342
Mental Health
semester : 4
GPA : 3.2
Unique Code : 122
The highest GPA is get by Hey
Mean of GPA : 3.4425
Amount of major
Art of Coffee :1
Creative Content :1
Mental Health :2
Process returned 0 (0x0)   execution time : 75.127 s
Press ENTER to continue.
```