

Project 1: Simple Student Record System

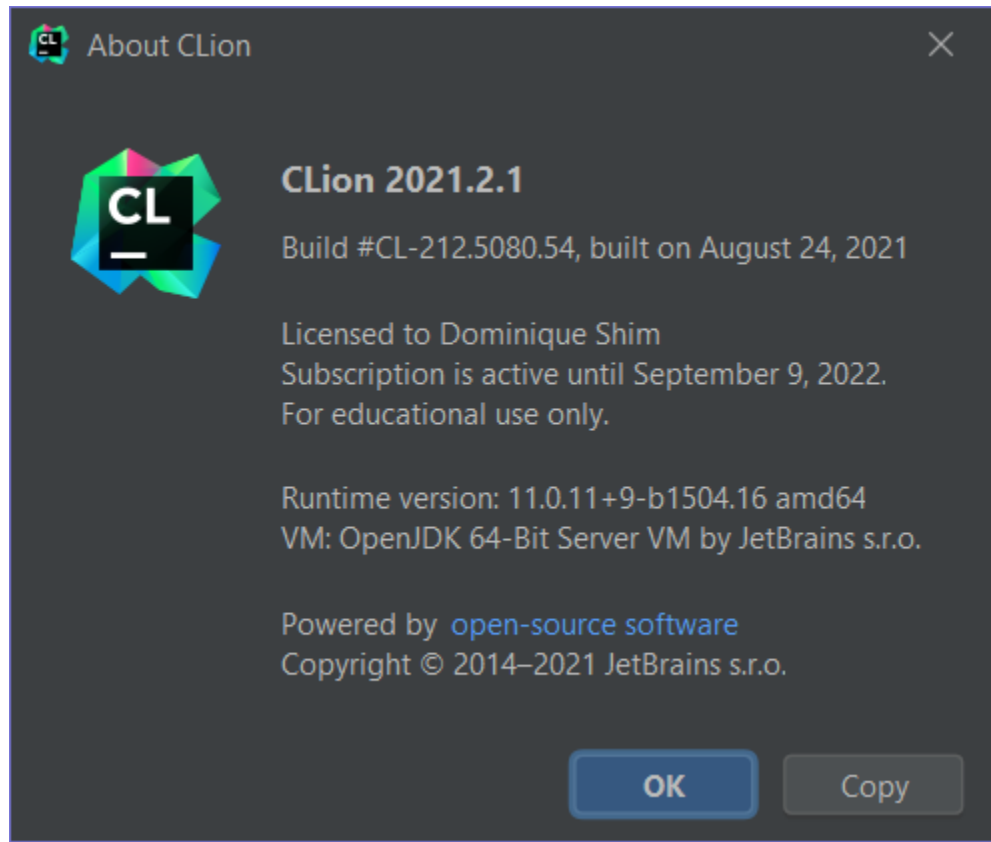
Name: Dominique Shim

Section: 02

IDE Used

IDE: CLion

IDE Version: 2021.2.1



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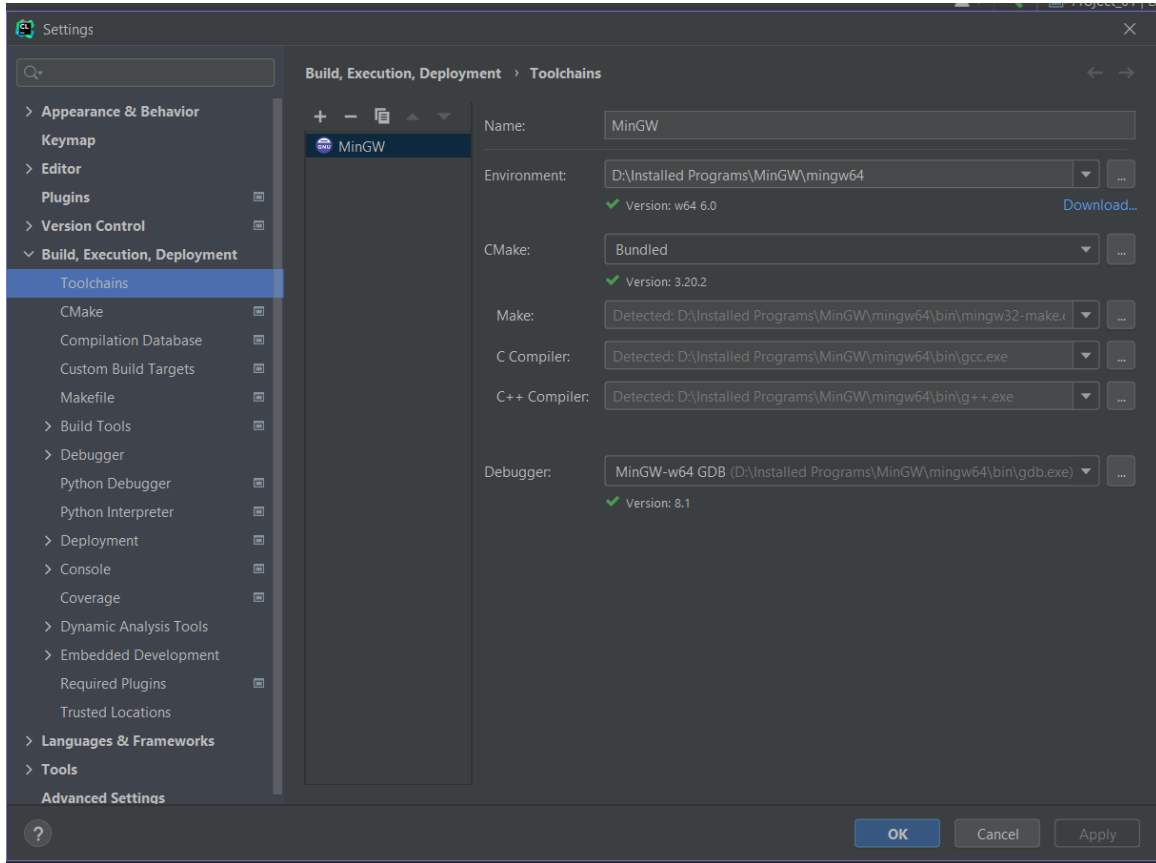
Name: Dominique Shim

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Environment

Environment: MinGW

Compile: G++

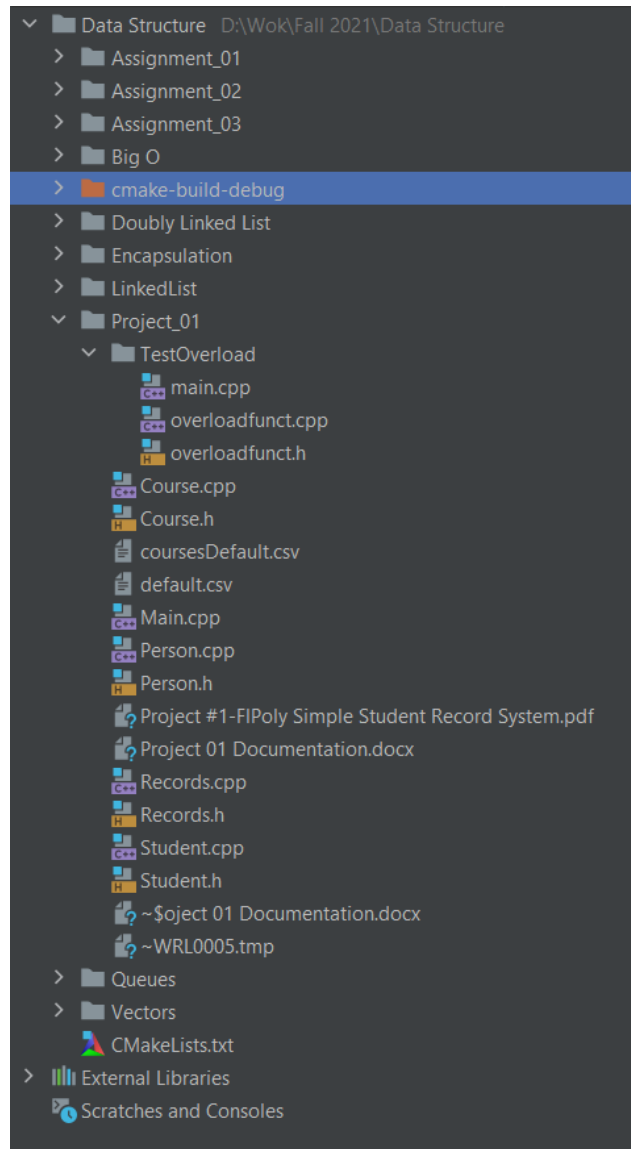


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File Directory



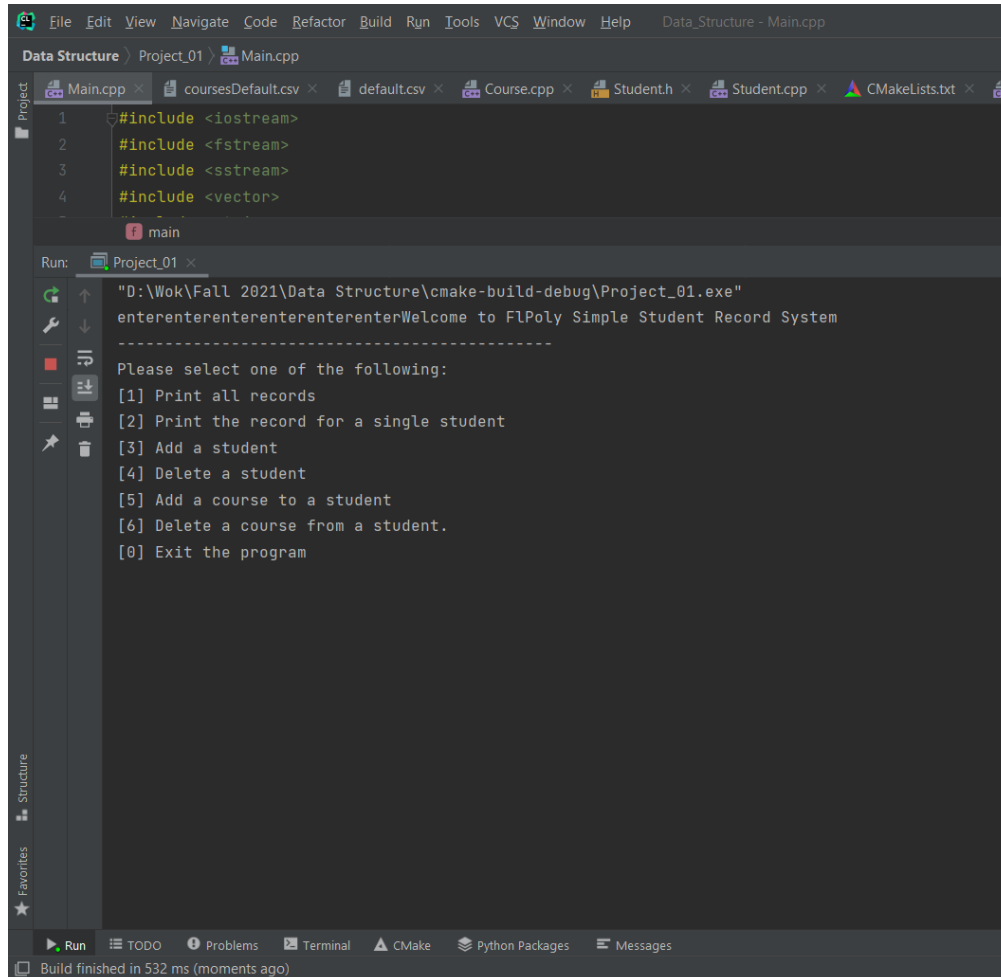
Note the file called “cmake-build-debug”. To load the CSV file, relative location is used from the cmake file to the CSV file must be listed.

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Testing



```
#include <iostream>
#include <fstream>
#include <sstream>
#include <vector>

main

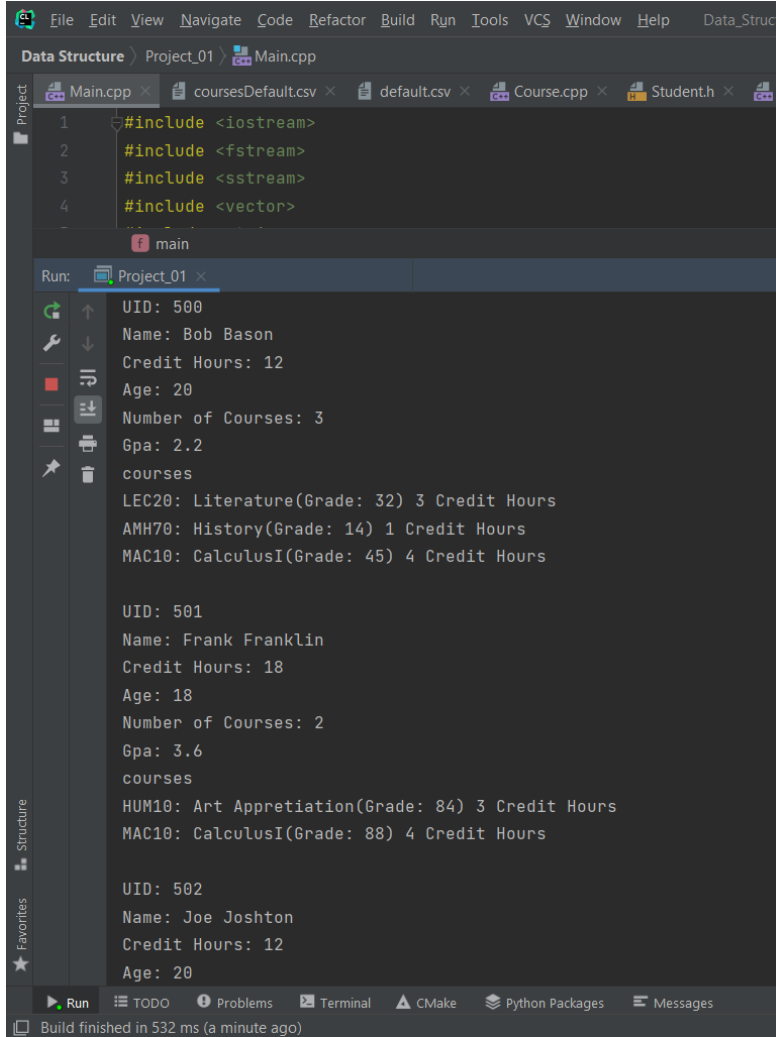
Run: Project_01 x
"D:\Wok\Fall 2021\Data Structure\cmake-build-debug\Project_01.exe"
enterenterenterenterenterenterWelcome to FLPoly Simple Student Record System
-----
Please select one of the following:
[1] Print all records
[2] Print the record for a single student
[3] Add a student
[4] Delete a student
[5] Add a course to a student
[6] Delete a course from a student.
[0] Exit the program
```

Showing the startup of the program. It reads the CSV file and creates an object called “universityRecord”, which has five students already defined with courses.

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```
#include <iostream>
#include <fstream>
#include <sstream>
#include <vector>

main
```

Run: Project_01

```
UID: 500
Name: Bob Bason
Credit Hours: 12
Age: 20
Number of Courses: 3
Gpa: 2.2
courses
LEC20: Literature(Grade: 32) 3 Credit Hours
AMH70: History(Grade: 14) 1 Credit Hours
MAC10: CalculusI(Grade: 45) 4 Credit Hours

UID: 501
Name: Frank Franklin
Credit Hours: 18
Age: 18
Number of Courses: 2
Gpa: 3.6
courses
HUM10: Art Appretiation(Grade: 84) 3 Credit Hours
MAC10: CalculusI(Grade: 88) 4 Credit Hours

UID: 502
Name: Joe Joshton
Credit Hours: 12
Age: 20
```

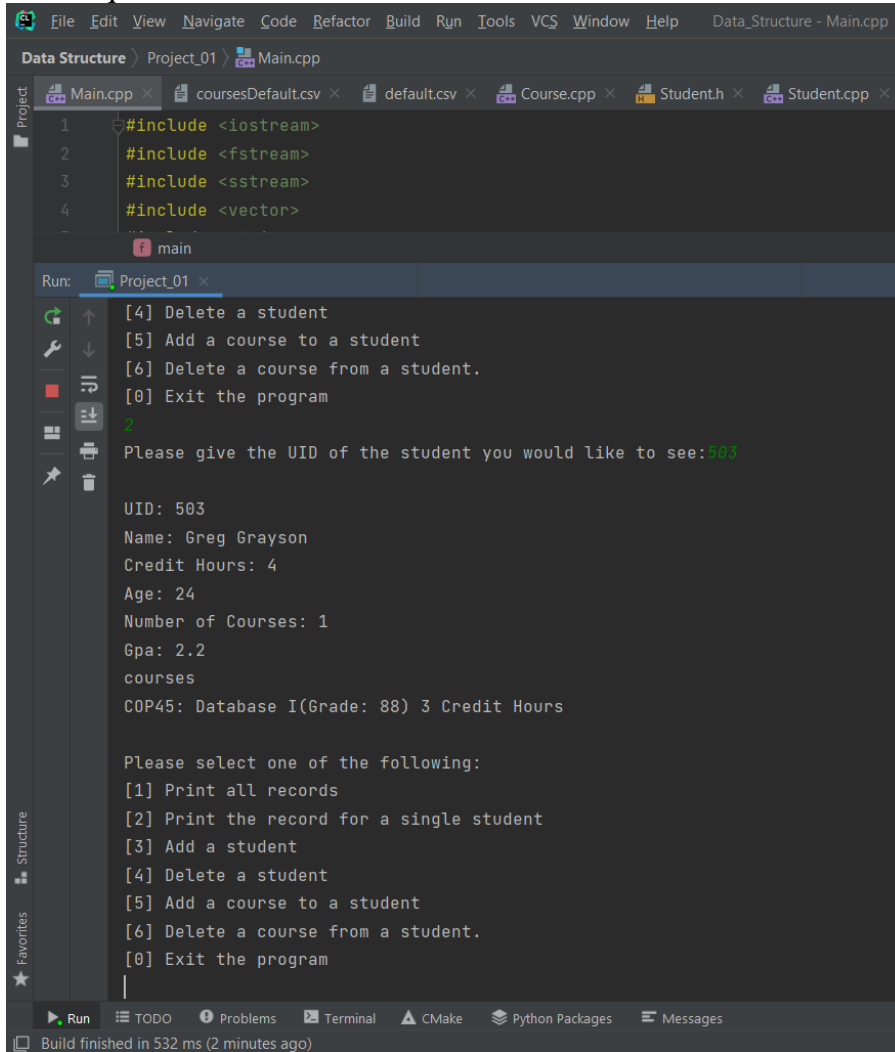
Build finished in 532 ms (a minute ago)

Performing the first option in the program, printing all the records of the students. All five students that were taken from the CSV file was printed along with the courses they take.

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```
1 #include <iostream>
2 #include <fstream>
3 #include <sstream>
4 #include <vector>
...
f main
Run: Project_01 x
[4] Delete a student
[5] Add a course to a student
[6] Delete a course from a student.
[0] Exit the program
?
Please give the UID of the student you would like to see: 503

UID: 503
Name: Greg Grayson
Credit Hours: 4
Age: 24
Number of Courses: 1
Gpa: 2.2
courses
COP45: Database I(Grade: 88) 3 Credit Hours

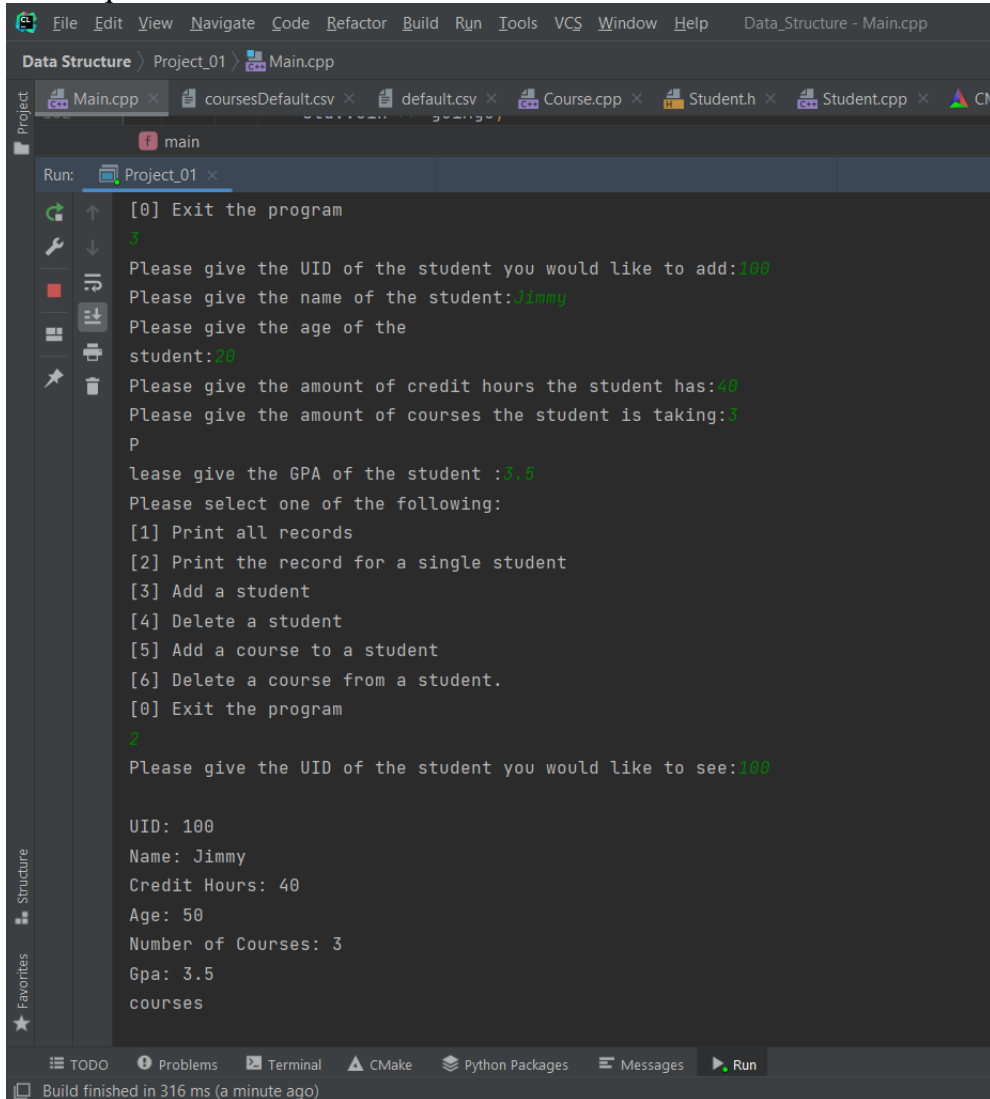
Please select one of the following:
[1] Print all records
[2] Print the record for a single student
[3] Add a student
[4] Delete a student
[5] Add a course to a student
[6] Delete a course from a student.
[0] Exit the program
|
Build finished in 532 ms (2 minutes ago)
```

Print the record of the student with the UID of 503

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The screenshot shows a C++ IDE with a project named 'Data Structure'. The main.cpp file is open, and the program is running. The terminal output shows the following sequence of events:

```
[0] Exit the program
1
Please give the UID of the student you would like to add:100
Please give the name of the student:Jimmy
Please give the age of the student:50
Please give the amount of credit hours the student has:40
Please give the amount of courses the student is taking:3
P
Please give the GPA of the student :3.5
Please select one of the following:
[1] Print all records
[2] Print the record for a single student
[3] Add a student
[4] Delete a student
[5] Add a course to a student
[6] Delete a course from a student.
[0] Exit the program
2
Please give the UID of the student you would like to see:100

UID: 100
Name: Jimmy
Credit Hours: 40
Age: 50
Number of Courses: 3
Gpa: 3.5
courses
```

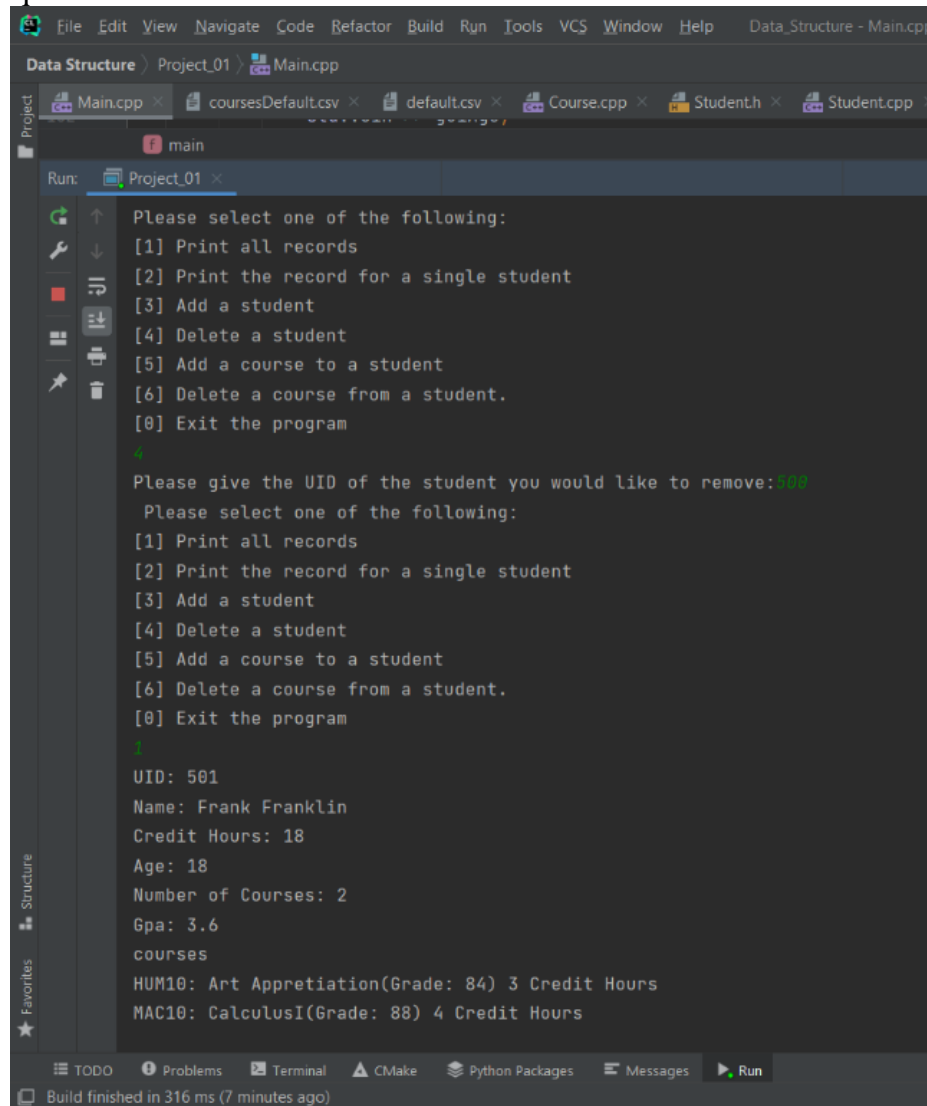
The IDE interface includes a menu bar (File, Edit, View, Navigate, Code, Refactor, Build, Run, Tools, VCS, Window, Help), a toolbar, and a sidebar with icons for Project, Structure, and Favorites. The bottom status bar indicates 'Build finished in 316 ms (a minute ago)'.

A student with the UID of 100 was created and added to records. Using function two, the record of the student was printed, note that no courses are listed as none were assigned to the student.

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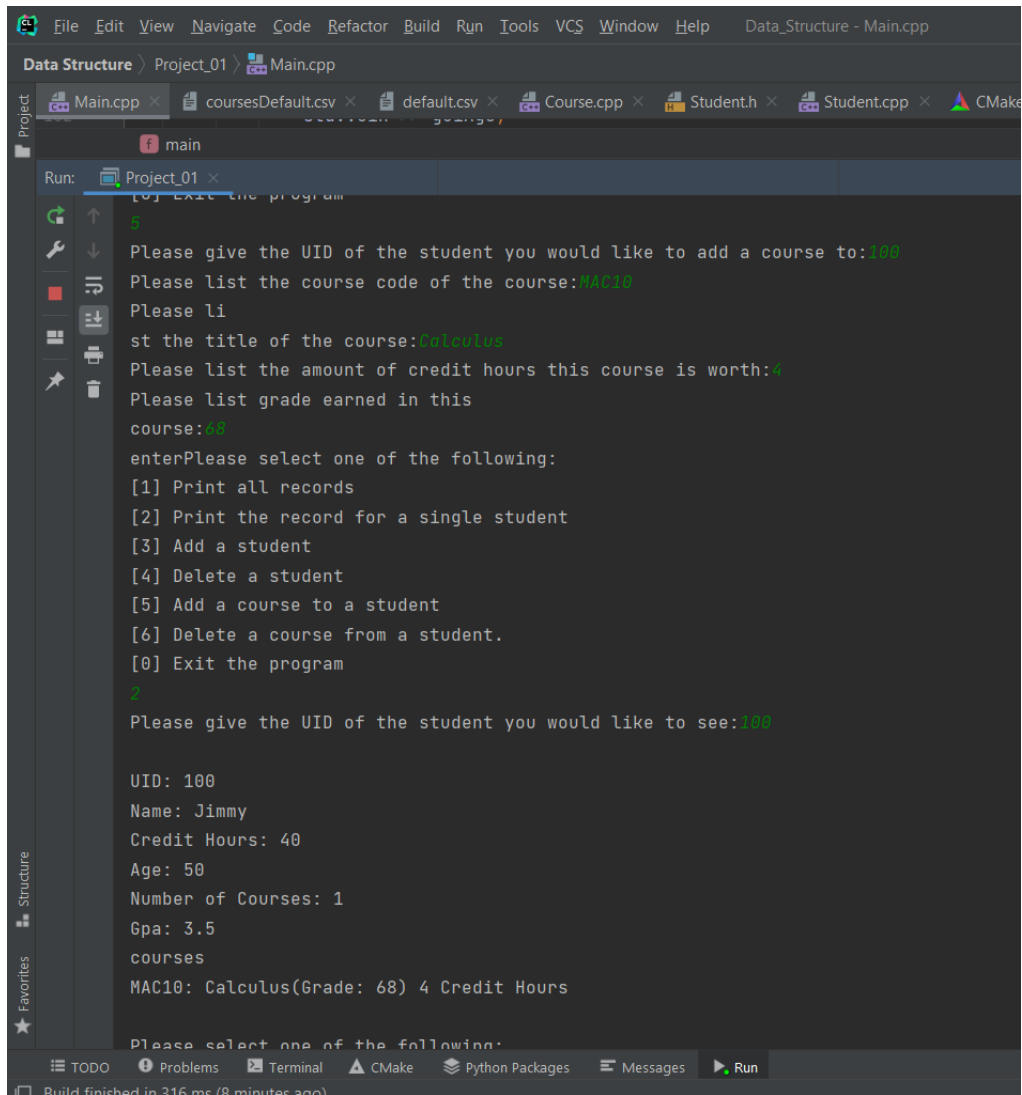
```
File Edit View Navigate Code Refactor Build Run Tools VCS Window Help Data_Structure - Main.cpp
Data_Structure > Project_01 > Main.cpp
Main.cpp coursesDefault.csv default.csv Course.cpp Student.h Student.cpp
main
Run: Project_01 x
Please select one of the following:
[1] Print all records
[2] Print the record for a single student
[3] Add a student
[4] Delete a student
[5] Add a course to a student
[6] Delete a course from a student.
[0] Exit the program
Please give the UID of the student you would like to remove:500
Please select one of the following:
[1] Print all records
[2] Print the record for a single student
[3] Add a student
[4] Delete a student
[5] Add a course to a student
[6] Delete a course from a student.
[0] Exit the program
UID: 501
Name: Frank Franklin
Credit Hours: 18
Age: 18
Number of Courses: 2
Gpa: 3.6
courses
HUM10: Art Appretiation(Grade: 84) 3 Credit Hours
MAC10: CalculusI(Grade: 88) 4 Credit Hours
Build finished in 316 ms (7 minutes ago)
```

Deleting the student with the UID of 500 and performing option one to print the records of all the existing students in the record.

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The screenshot shows a C++ IDE with a terminal window displaying the output of a program. The program is a simple student record system. The user has entered the following inputs: 100 (UID), MAC10 (course code), Calculus (course title), 4 (credit hours), 68 (grade), and 2 (menu option). The program has printed the following output: "Please give the UID of the student you would like to add a course to: 100", "Please list the course code of the course: MAC10", "Please list the title of the course: Calculus", "Please list the amount of credit hours this course is worth: 4", "Please list grade earned in this course: 68", "Please select one of the following:", "[1] Print all records", "[2] Print the record for a single student", "[3] Add a student", "[4] Delete a student", "[5] Add a course to a student", "[6] Delete a course from a student.", "[0] Exit the program", "2", "Please give the UID of the student you would like to see: 100", "UID: 100", "Name: Jimmy", "Credit Hours: 40", "Age: 50", "Number of Courses: 1", "Gpa: 3.5", "courses", "MAC10: Calculus(Grade: 68) 4 Credit Hours", "Please select one of the following:". The IDE interface includes a menu bar, a toolbar, a sidebar with project structure, and a bottom status bar.

```
File Edit View Navigate Code Refactor Build Run Tools VCS Window Help Data_Structure - Main.cpp
Data Structure > Project_01 > Main.cpp
Main.cpp x coursesDefault.csv x default.csv x Course.cpp x Student.h x Student.cpp x CMake
main
Run: Project_01 x
[0] Exit the program
1
Please give the UID of the student you would like to add a course to: 100
Please list the course code of the course: MAC10
Please list the title of the course: Calculus
Please list the amount of credit hours this course is worth: 4
Please list grade earned in this course: 68
Please select one of the following:
[1] Print all records
[2] Print the record for a single student
[3] Add a student
[4] Delete a student
[5] Add a course to a student
[6] Delete a course from a student.
[0] Exit the program
2
Please give the UID of the student you would like to see: 100

UID: 100
Name: Jimmy
Credit Hours: 40
Age: 50
Number of Courses: 1
Gpa: 3.5
courses
MAC10: Calculus(Grade: 68) 4 Credit Hours

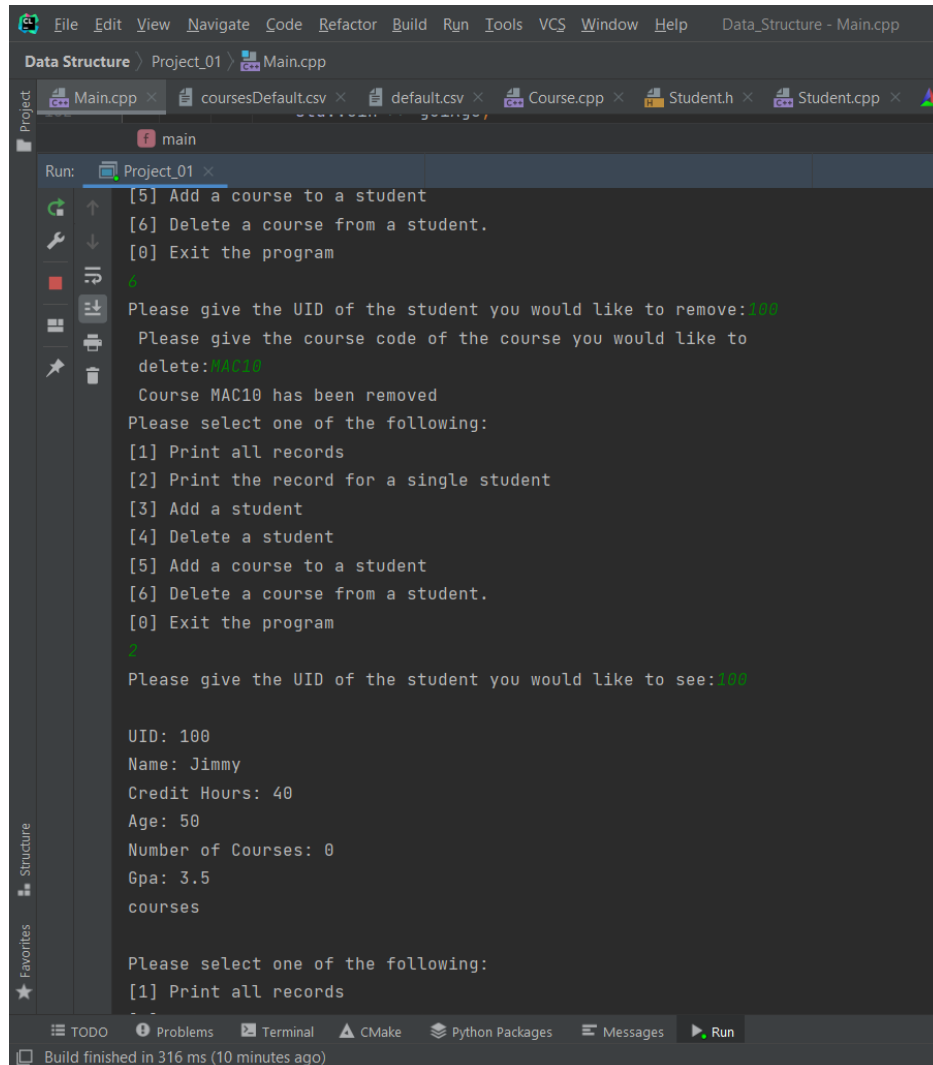
Please select one of the following:
[1] Print all records
[2] Print the record for a single student
[3] Add a student
[4] Delete a student
[5] Add a course to a student
[6] Delete a course from a student.
[0] Exit the program
```

Creating a course with a course code of MAC10 and giving it to the student that was previously made. Records of the student was then printed to show the newly added course.

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```
File Edit View Navigate Code Refactor Build Run Tools VCS Window Help Data_Structure - Main.cpp
Data_Structure > Project_01 > Main.cpp
Main.cpp x coursesDefault.csv x default.csv x Course.cpp x Student.h x Student.cpp x
main
Run: Project_01 x
[5] Add a course to a student
[6] Delete a course from a student.
[0] Exit the program
Please give the UID of the student you would like to remove:100
Please give the course code of the course you would like to delete:MAC10
Course MAC10 has been removed
Please select one of the following:
[1] Print all records
[2] Print the record for a single student
[3] Add a student
[4] Delete a student
[5] Add a course to a student
[6] Delete a course from a student.
[0] Exit the program
Please give the UID of the student you would like to see:100
UID: 100
Name: Jimmy
Credit Hours: 40
Age: 50
Number of Courses: 0
Gpa: 3.5
courses
Please select one of the following:
[1] Print all records
Build finished in 316 ms (10 minutes ago)
```

The course MAC10 that was previously added to the student with the UID of 100 was deleted. Option two was used to show the records of the student show the blank entry in courses for the student.