



PROJECT2: STUDENT INFO SYSTEM

Eng. Ali Mohamed Taima

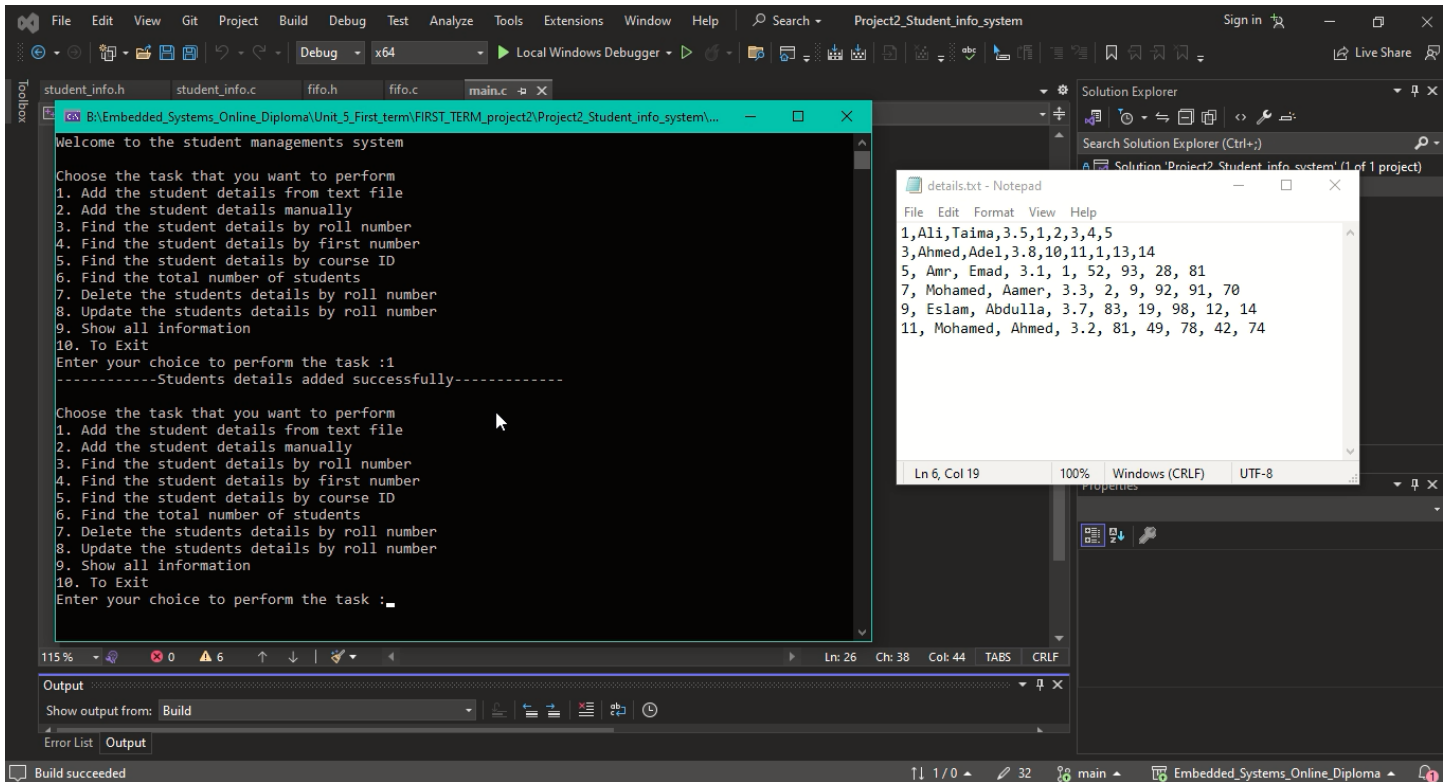


LEARN IN DEPTH

MASTERING EMBEDDED SYSTEM ONLINE DIPLOMA

Eng. Keroles

1. Add the student details from text file



```
student_info.h student_info.c fifo.h fifo.c main.c
```

```
Welcome to the student managements system

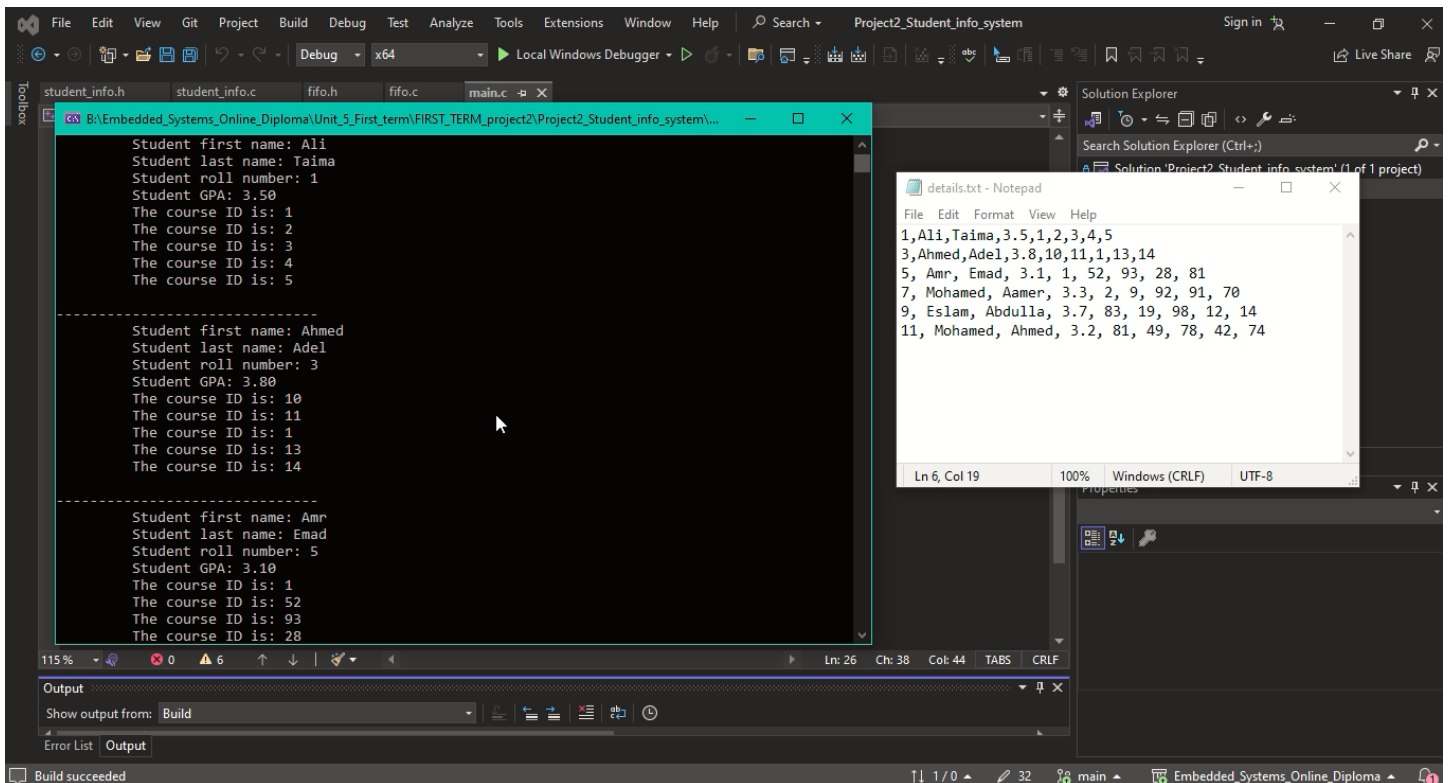
Choose the task that you want to perform
1. Add the student details from text file
2. Add the student details manually
3. Find the student details by roll number
4. Find the student details by first number
5. Find the student details by course ID
6. Find the total number of students
7. Delete the students details by roll number
8. Update the students details by roll number
9. Show all information
10. To Exit
Enter your choice to perform the task :1
-----Students details added successfully-----

Choose the task that you want to perform
1. Add the student details from text file
2. Add the student details manually
3. Find the student details by roll number
4. Find the student details by first number
5. Find the student details by course ID
6. Find the total number of students
7. Delete the students details by roll number
8. Update the students details by roll number
9. Show all information
10. To Exit
Enter your choice to perform the task :
```

```
details.txt - Notepad
File Edit Format View Help
1,Ali,Taima,3.5,1,2,3,4,5
3,Ahmed,Adel,3.8,10,11,1,13,14
5, Amr, Emad, 3.1, 1, 52, 93, 28, 81
7, Mohamed, Aamer, 3.3, 2, 9, 92, 91, 70
9, Eslam, Abdulla, 3.7, 83, 19, 98, 12, 14
11, Mohamed, Ahmed, 3.2, 81, 49, 78, 42, 74
```

Ln 6, Col 19 100% Windows (CRLF) UTF-8

Build succeeded



```
student_info.h student_info.c fifo.h fifo.c main.c
```

```
Student first name: Ali
Student last name: Taima
Student roll number: 1
Student GPA: 3.50
The course ID is: 1
The course ID is: 2
The course ID is: 3
The course ID is: 4
The course ID is: 5

-----

Student first name: Ahmed
Student last name: Adel
Student roll number: 3
Student GPA: 3.80
The course ID is: 10
The course ID is: 11
The course ID is: 1
The course ID is: 13
The course ID is: 14

-----

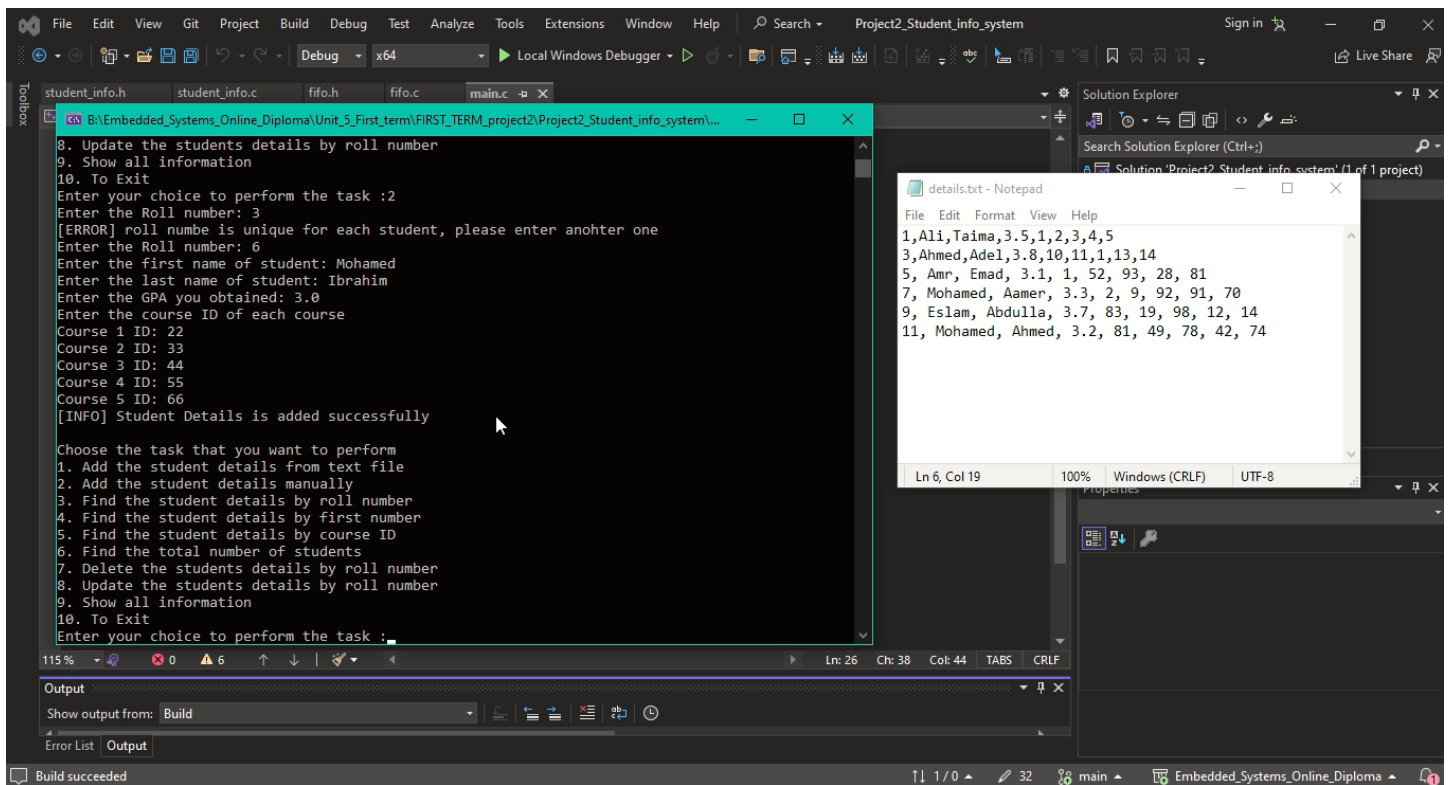
Student first name: Amr
Student last name: Emad
Student roll number: 5
Student GPA: 3.10
The course ID is: 1
The course ID is: 52
The course ID is: 93
The course ID is: 28
```

```
details.txt - Notepad
File Edit Format View Help
1,Ali,Taima,3.5,1,2,3,4,5
3,Ahmed,Adel,3.8,10,11,1,13,14
5, Amr, Emad, 3.1, 1, 52, 93, 28, 81
7, Mohamed, Aamer, 3.3, 2, 9, 92, 91, 70
9, Eslam, Abdulla, 3.7, 83, 19, 98, 12, 14
11, Mohamed, Ahmed, 3.2, 81, 49, 78, 42, 74
```

Ln 6, Col 19 100% Windows (CRLF) UTF-8

Build succeeded

2. Add the student detail manually



The screenshot shows the Visual Studio Code interface with the 'Project2_Student_info_system' project. The console window displays the following output:

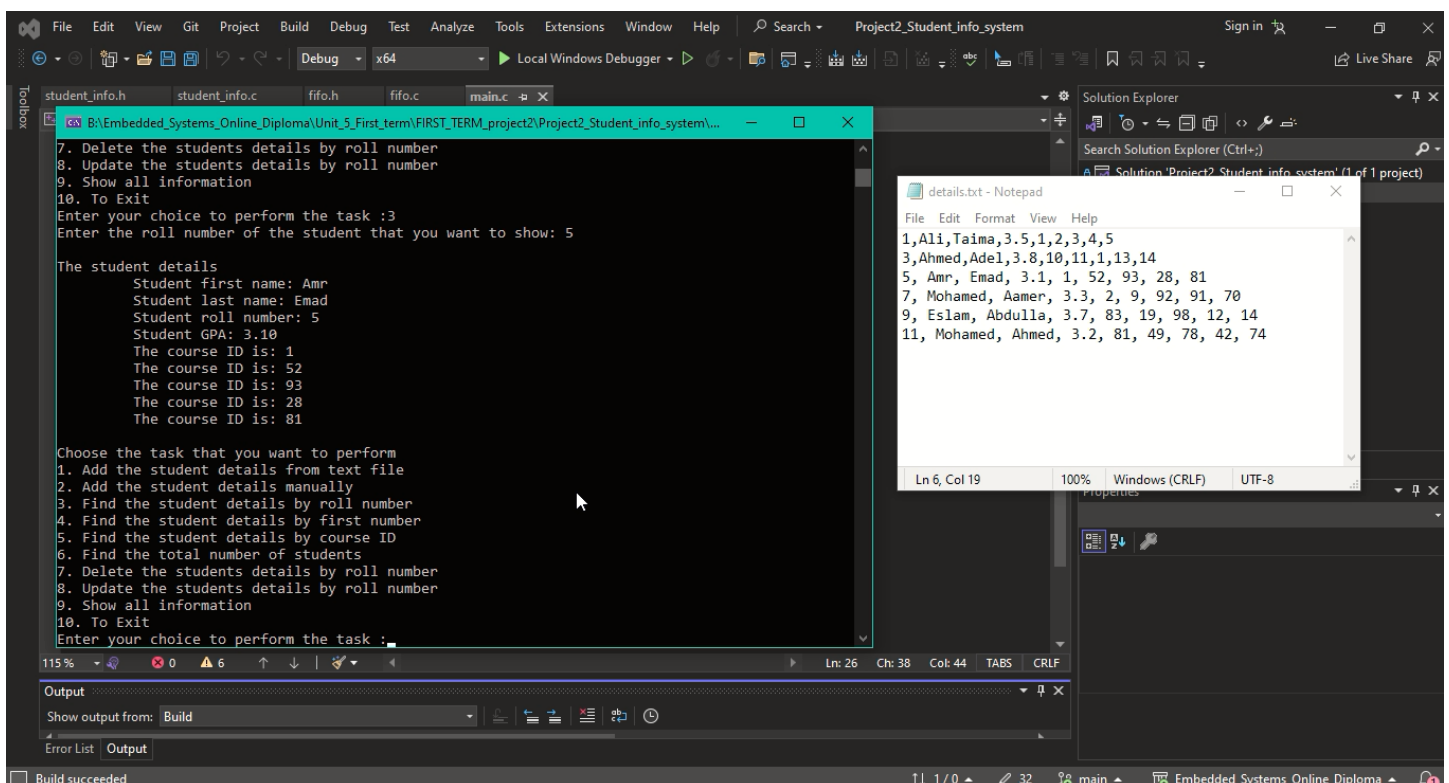
```
8. Update the students details by roll number
9. Show all information
10. To Exit
Enter your choice to perform the task :2
Enter the Roll number: 3
[ERROR] roll numbe is unique for each student, please enter anohter one
Enter the Roll number: 6
Enter the first name of student: Mohamed
Enter the last name of student: Ibrahim
Enter the GPA you obtained: 3.0
Enter the course ID of each course
Course 1 ID: 22
Course 2 ID: 33
Course 3 ID: 44
Course 4 ID: 55
Course 5 ID: 66
[INFO] Student Details is added successfully

Choose the task that you want to perform
1. Add the student details from text file
2. Add the student details manually
3. Find the student details by roll number
4. Find the student details by first number
5. Find the student details by course ID
6. Find the total number of students
7. Delete the students details by roll number
8. Update the students details by roll number
9. Show all information
10. To Exit
Enter your choice to perform the task :_
```

The Notepad window shows the contents of details.txt:

```
1,Ali,Taima,3.5,1,2,3,4,5
3,Ahmed,Adel,3.8,10,11,1,13,14
5, Amr, Emad, 3.1, 1, 52, 93, 28, 81
7, Mohamed, Aamer, 3.3, 2, 9, 92, 91, 70
9, Eslam, Abdulla, 3.7, 83, 19, 98, 12, 14
11, Mohamed, Ahmed, 3.2, 81, 49, 78, 42, 74
```

3. Find the student details by roll number



The screenshot shows the Visual Studio Code interface with the 'Project2_Student_info_system' project. The console window displays the following output:

```
7. Delete the students details by roll number
8. Update the students details by roll number
9. Show all information
10. To Exit
Enter your choice to perform the task :3
Enter the roll number of the student that you want to show: 5

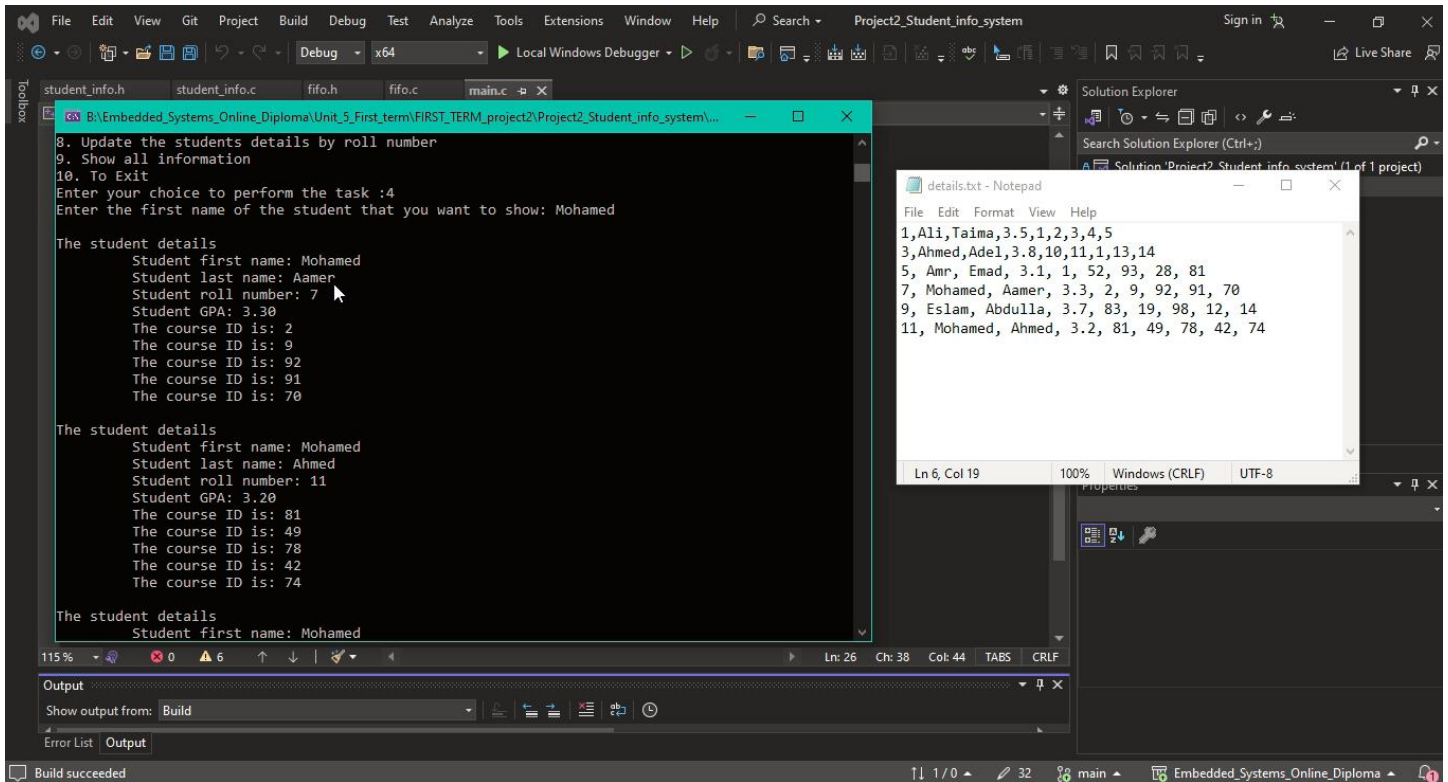
The student details
    Student first name: Amr
    Student last name: Emad
    Student roll number: 5
    Student GPA: 3.10
    The course ID is: 1
    The course ID is: 52
    The course ID is: 93
    The course ID is: 28
    The course ID is: 81

Choose the task that you want to perform
1. Add the student details from text file
2. Add the student details manually
3. Find the student details by roll number
4. Find the student details by first number
5. Find the student details by course ID
6. Find the total number of students
7. Delete the students details by roll number
8. Update the students details by roll number
9. Show all information
10. To Exit
Enter your choice to perform the task :_
```

The Notepad window shows the contents of details.txt:

```
1,Ali,Taima,3.5,1,2,3,4,5
3,Ahmed,Adel,3.8,10,11,1,13,14
5, Amr, Emad, 3.1, 1, 52, 93, 28, 81
7, Mohamed, Aamer, 3.3, 2, 9, 92, 91, 70
9, Eslam, Abdulla, 3.7, 83, 19, 98, 12, 14
11, Mohamed, Ahmed, 3.2, 81, 49, 78, 42, 74
```

4. Find the student details by first number



```
8. Update the students details by roll number
9. Show all information
10. To Exit
Enter your choice to perform the task :4
Enter the first name of the student that you want to show: Mohamed

The student details
  Student first name: Mohamed
  Student last name: Aamer
  Student roll number: 7
  Student GPA: 3.30
  The course ID is: 2
  The course ID is: 9
  The course ID is: 92
  The course ID is: 91
  The course ID is: 70

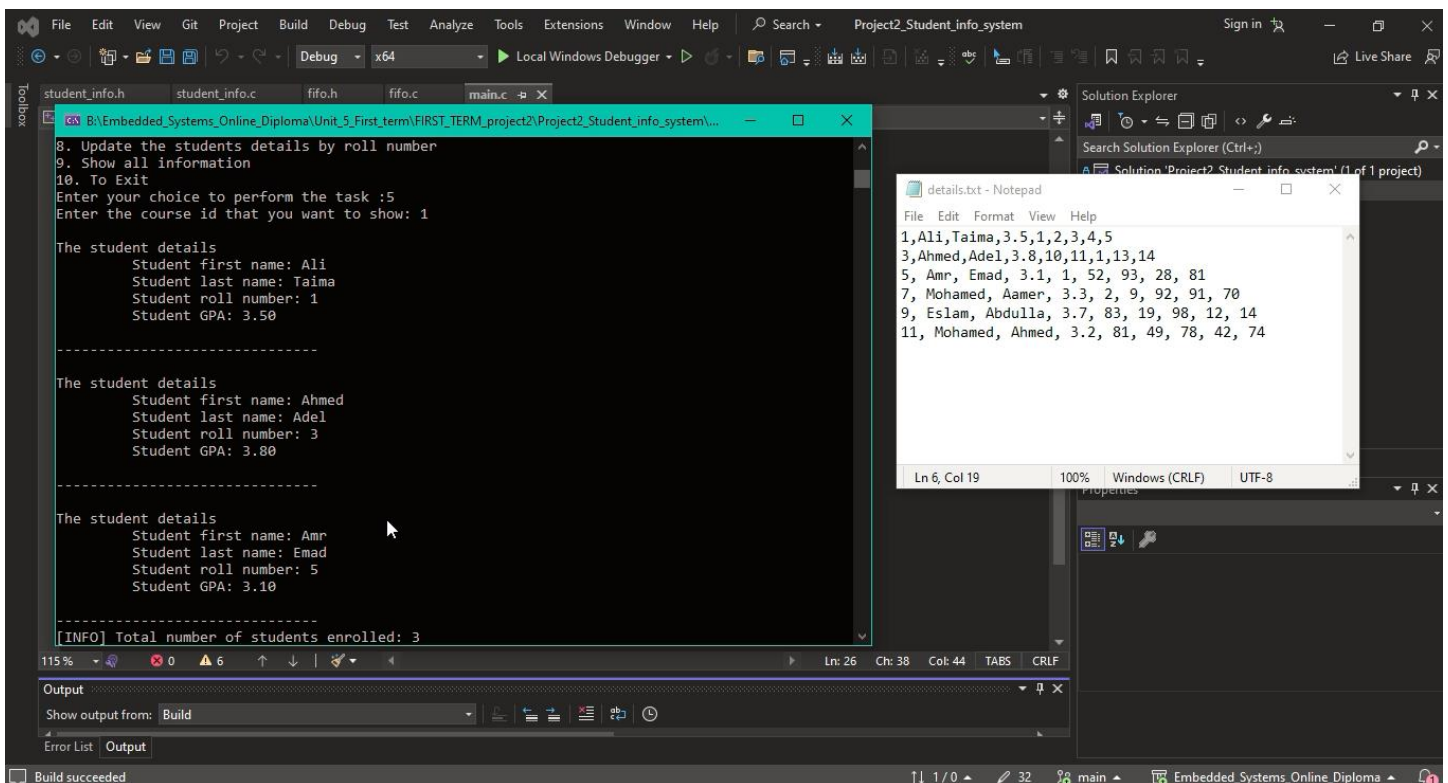
The student details
  Student first name: Mohamed
  Student last name: Ahmed
  Student roll number: 11
  Student GPA: 3.20
  The course ID is: 81
  The course ID is: 49
  The course ID is: 78
  The course ID is: 42
  The course ID is: 74

The student details
  Student first name: Mohamed
```

details.txt - Notepad

```
File Edit Format View Help
1,Ali,Taima,3.5,1,2,3,4,5
3,Ahmed,Adel,3.8,10,11,1,13,14
5, Amr, Emad, 3.1, 1, 52, 93, 28, 81
7, Mohamed, Aamer, 3.3, 2, 9, 92, 91, 70
9, Eslam, Abdulla, 3.7, 83, 19, 98, 12, 14
11, Mohamed, Ahmed, 3.2, 81, 49, 78, 42, 74
```

5. Find the student details by course ID



```
8. Update the students details by roll number
9. Show all information
10. To Exit
Enter your choice to perform the task :5
Enter the course id that you want to show: 1

The student details
  Student first name: Ali
  Student last name: Taima
  Student roll number: 1
  Student GPA: 3.50

-----

The student details
  Student first name: Ahmed
  Student last name: Adel
  Student roll number: 3
  Student GPA: 3.80

-----

The student details
  Student first name: Amr
  Student last name: Emad
  Student roll number: 5
  Student GPA: 3.10

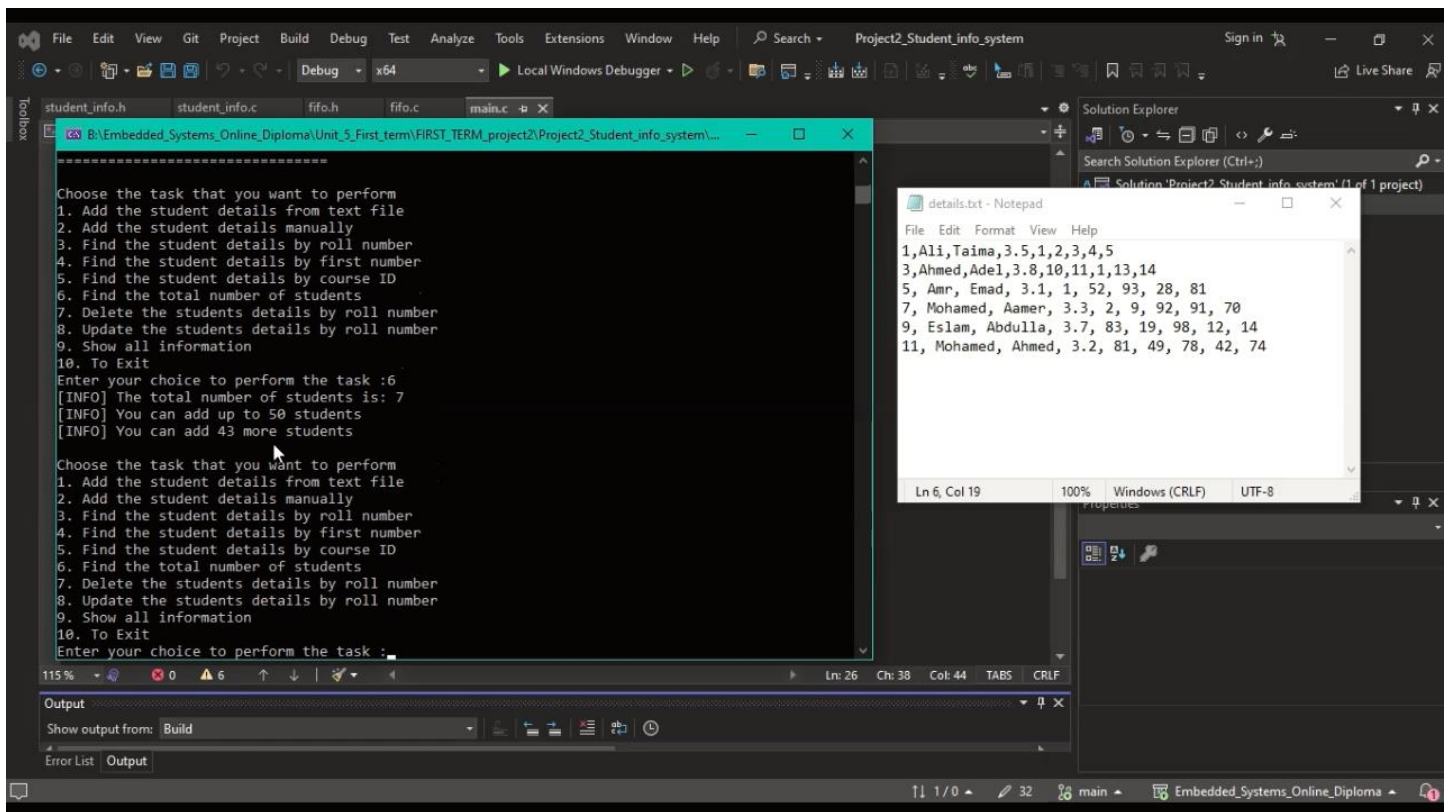
-----

[INFO] Total number of students enrolled: 3
```

details.txt - Notepad

```
File Edit Format View Help
1,Ali,Taima,3.5,1,2,3,4,5
3,Ahmed,Adel,3.8,10,11,1,13,14
5, Amr, Emad, 3.1, 1, 52, 93, 28, 81
7, Mohamed, Aamer, 3.3, 2, 9, 92, 91, 70
9, Eslam, Abdulla, 3.7, 83, 19, 98, 12, 14
11, Mohamed, Ahmed, 3.2, 81, 49, 78, 42, 74
```


6. Find the total number of students



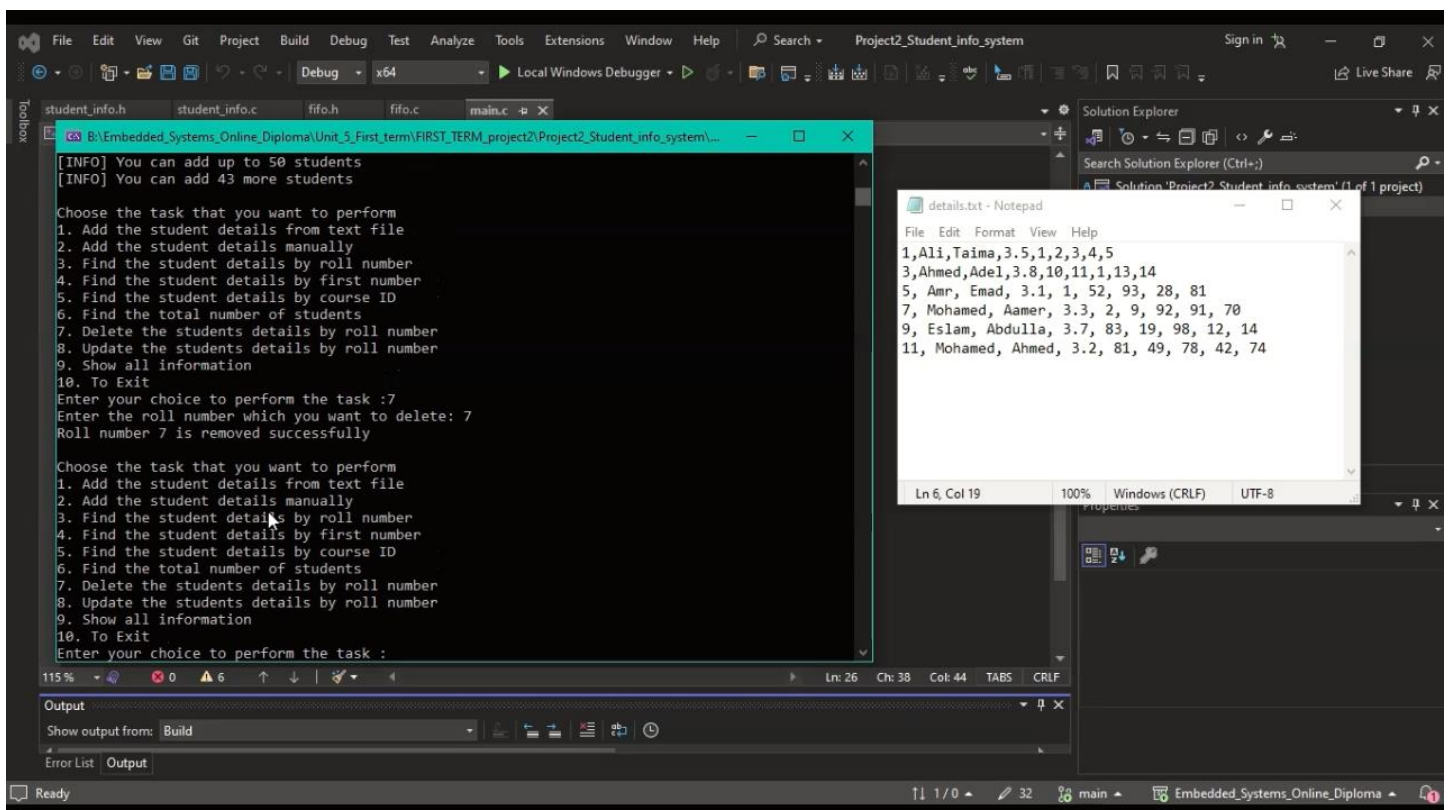
The screenshot shows the Visual Studio IDE with the 'Project2_Student_info_system' project. The console window displays the following output:

```
Choose the task that you want to perform
1. Add the student details from text file
2. Add the student details manually
3. Find the student details by roll number
4. Find the student details by first number
5. Find the student details by course ID
6. Find the total number of students
7. Delete the students details by roll number
8. Update the students details by roll number
9. Show all information
10. To Exit
Enter your choice to perform the task :6
[INFO] The total number of students is: 7
[INFO] You can add up to 50 students
[INFO] You can add 43 more students
```

The Notepad window shows the contents of 'details.txt':

```
1,Ali,Taima,3.5,1,2,3,4,5
3,Ahmed,Adel,3.8,10,11,1,13,14
5, Amr, Emad, 3.1, 1, 52, 93, 28, 81
7, Mohamed, Aamer, 3.3, 2, 9, 92, 91, 70
9, Eslam, Abdulla, 3.7, 83, 19, 98, 12, 14
11, Mohamed, Ahmed, 3.2, 81, 49, 78, 42, 74
```

7. Delete the students details by roll number



The screenshot shows the Visual Studio IDE with the 'Project2_Student_info_system' project. The console window displays the following output:

```
[INFO] You can add up to 50 students
[INFO] You can add 43 more students

Choose the task that you want to perform
1. Add the student details from text file
2. Add the student details manually
3. Find the student details by roll number
4. Find the student details by first number
5. Find the student details by course ID
6. Find the total number of students
7. Delete the students details by roll number
8. Update the students details by roll number
9. Show all information
10. To Exit
Enter your choice to perform the task :7
Enter the roll number which you want to delete: 7
Roll number 7 is removed successfully
```

The Notepad window shows the contents of 'details.txt':

```
1,Ali,Taima,3.5,1,2,3,4,5
3,Ahmed,Adel,3.8,10,11,1,13,14
5, Amr, Emad, 3.1, 1, 52, 93, 28, 81
7, Mohamed, Aamer, 3.3, 2, 9, 92, 91, 70
9, Eslam, Abdulla, 3.7, 83, 19, 98, 12, 14
11, Mohamed, Ahmed, 3.2, 81, 49, 78, 42, 74
```

GPA

The screenshot shows the Visual Studio Code interface with the following components:

- Main Editor:** Displays the output of the C program. The program prompts the user to choose a task from a menu. The user has selected task 6, "Find the total number of students", and the program outputs "The total number of students is: 6". The user has also selected task 8, "Update the students details by roll number", and entered the roll number 5. The program outputs "The new GPA you obtained: 3.9".
- Notepad Window:** A window titled "details.txt - Notepad" is open, displaying the contents of the text file. It lists 11 students with their names, roll numbers, and GPAs, separated by commas.
- Output Window:** The bottom panel shows the "Output" window, which displays the program's output. The "Show output from:" dropdown is set to "Build".

Program Output:

```

8. Update the students details by roll number
9. Show all information
10. To Exit
Enter your choice to perform the task :6
[INFO] The total number of students is: 6
[INFO] You can add up to 50 students
[INFO] You can add 44 more students

Choose the task that you want to perform
1. Add the student details from text file
2. Add the student details manually
3. Find the student details by roll number
4. Find the student details by first name
5. Find the student details by course ID
6. Find the total number of students
7. Delete the students details by roll number
8. Update the students details by roll number
9. Show all information
10. To Exit
Enter your choice to perform the task :8
Enter the roll number which you want to update: 5

Choose what you want to update
1. First name
2. Second name
3. roll number
4. GPA
5. Courses
Enter your choice: 4
Enter the new GPA you obtained: 3.9
  
```

Notepad Content (details.txt):

```

1,Ali,Taima,3.5,1,2,3,4,5
3,Ahmed,Adel,3.8,10,11,1,13,14
5, Amr, Emad, 3.1, 1, 52, 93, 28, 81
7, Mohamed, Aamer, 3.3, 2, 9, 92, 91, 70
9, Eslam, Abdulla, 3.7, 83, 19, 98, 12, 14
11, Mohamed, Ahmed, 3.2, 81, 49, 78, 42, 74
  
```

First Name

The screenshot displays a Windows IDE environment with the following components:

- Menu Bar:** File, Edit, View, Git, Project, Build, Debug, Test, Analyze, Tools, Extensions, Window, Help.
- Toolbar:** Includes icons for file operations, debugging, and search.
- Project Explorer:** Shows the project structure with files like `student_info.h`, `student_info.c`, `fifo.h`, `fifo.c`, and `main.c`.
- Code Editor:** Displays the `main.c` file with the following content:


```

Student roll number: 5
Student GPA: 3.90
The course ID is: 1
The course ID is: 52
The course ID is: 93
The course ID is: 28
The course ID is: 81

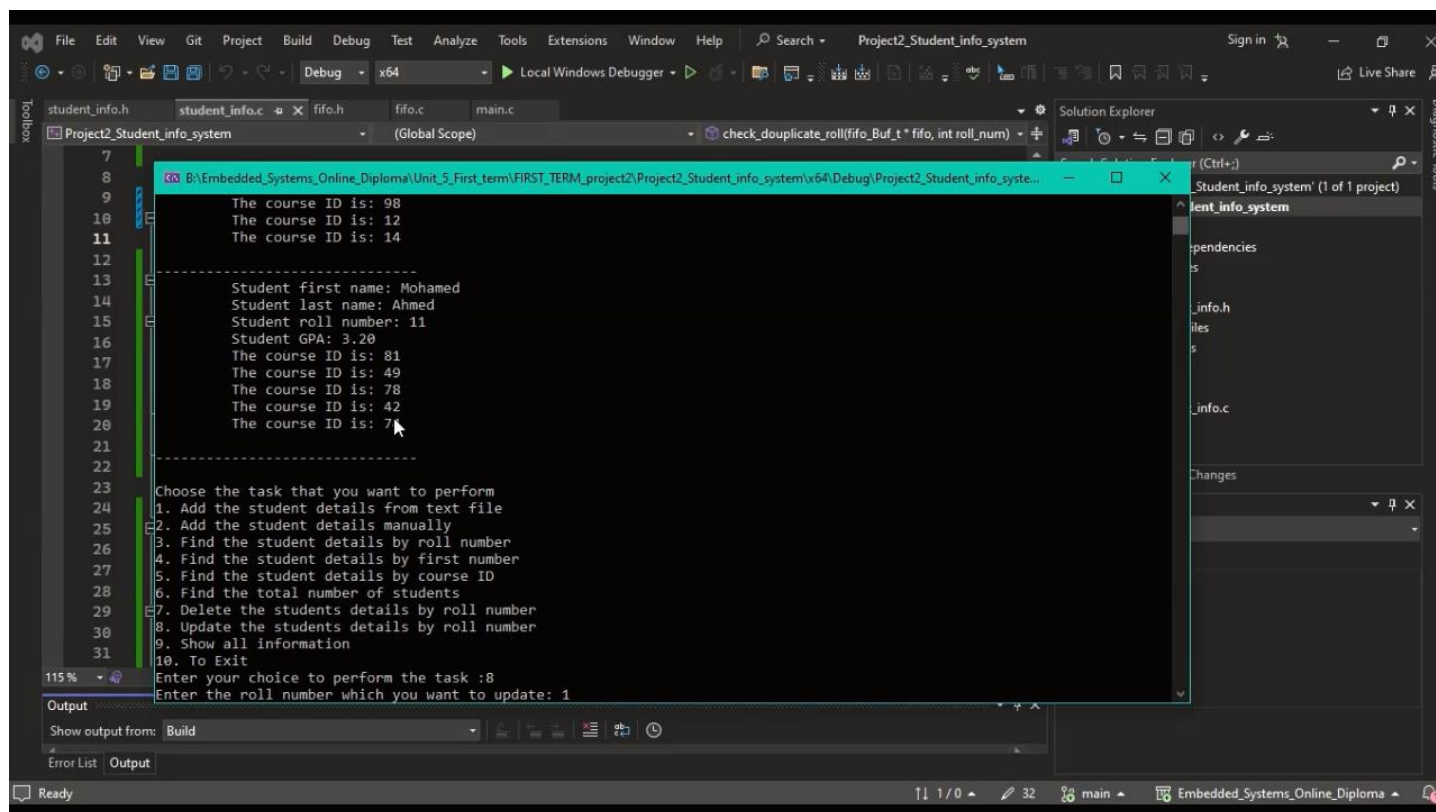
Choose the task that you want to perform
1. Add the student details from text file
2. Add the student details manually
3. Find the student details by roll number
4. Find the student details by first number
5. Find the student details by course ID
6. Find the total number of students
7. Delete the students details by roll number
8. Update the students details by roll number
9. Show all information
10. To Exit
Enter your choice to perform the task :8
Enter the roll number which you want to update: 1

Choose what you want to update
1. First name
2. Second name
3. roll number
4. GPA
5. Courses
Enter your choice: 1
Enter the new first name of the student: Mohamed
      
```
- Notepad Window:** A window titled `details.txt - Notepad` shows a list of student data:


```

1,Ali,Taima,3.5,1,2,3,4,5
3,Ahmed,Adel,3.8,10,11,1,13,14
5, Amr, Emad, 3.1, 1, 52, 93, 28, 81
7, Mohamed, Aamer, 3.3, 2, 9, 92, 91, 70
9, Eslam, Abdulla, 3.7, 83, 19, 98, 12, 14
11, Mohamed, Ahmed, 3.2, 81, 49, 78, 42, 74
      
```
- Output Window:** Located at the bottom, it shows the output of the program, including the prompts and user input.
- Status Bar:** Displays the current file (`main.c`), line number (`Ln: 26`), column number (`Col: 44`), and tabs.

roll number



```
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
115 %
Output
Error List
```

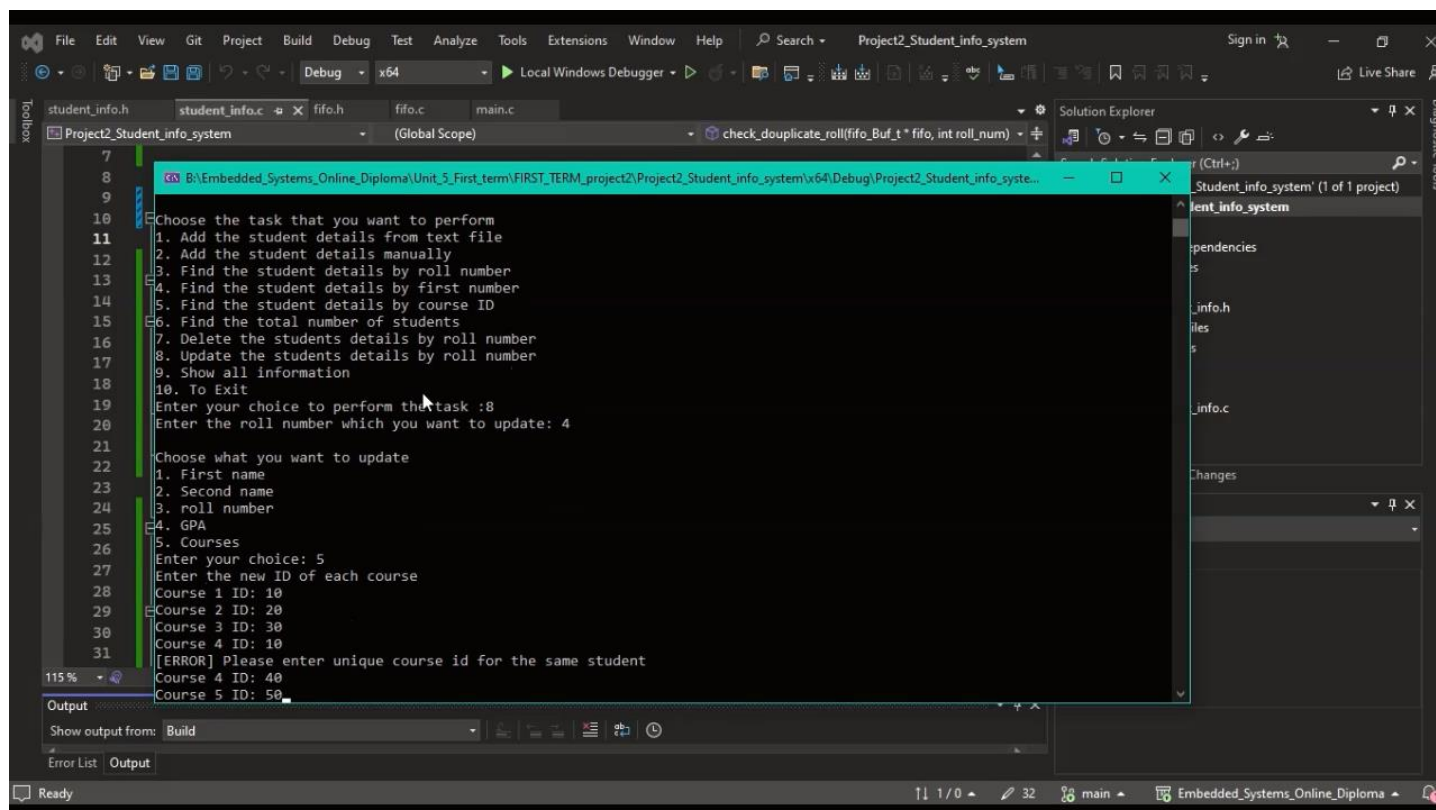
Student first name: Mohamed
Student last name: Ahmed
Student roll number: 11
Student GPA: 3.28
The course ID is: 81
The course ID is: 49
The course ID is: 78
The course ID is: 42
The course ID is: 7

Choose the task that you want to perform

1. Add the student details from text file
2. Add the student details manually
3. Find the student details by roll number
4. Find the student details by first number
5. Find the student details by course ID
6. Find the total number of students
7. Delete the students details by roll number
8. Update the students details by roll number
9. Show all information
10. To Exit

Enter your choice to perform the task :8
Enter the roll number which you want to update: 1

Courses



```
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
115 %
Output
Error List
```

Choose the task that you want to perform

1. Add the student details from text file
2. Add the student details manually
3. Find the student details by roll number
4. Find the student details by first number
5. Find the student details by course ID
6. Find the total number of students
7. Delete the students details by roll number
8. Update the students details by roll number
9. Show all information
10. To Exit

Enter your choice to perform the task :8
Enter the roll number which you want to update: 4

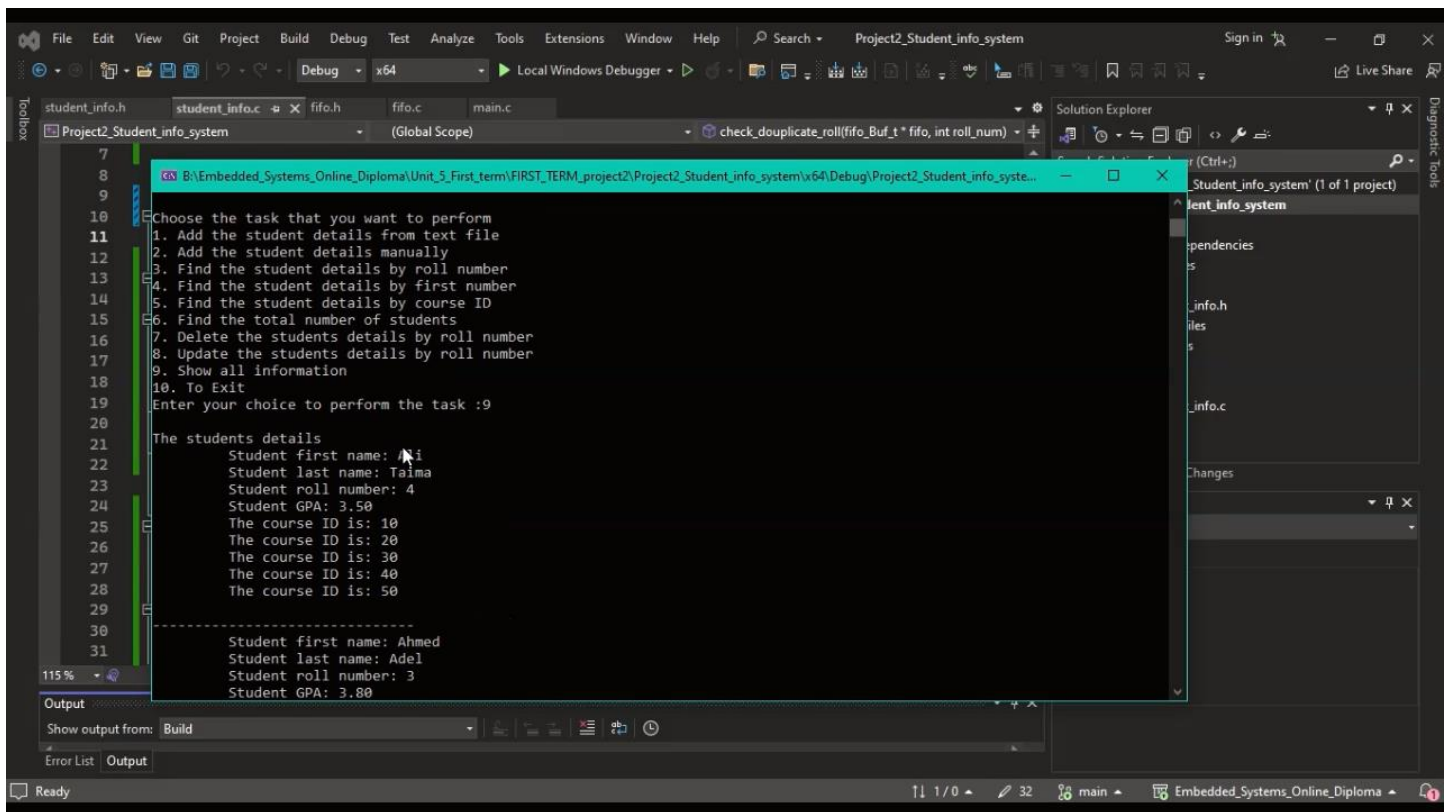
Choose what you want to update

1. First name
2. Second name
3. roll number
4. GPA
5. Courses

Enter your choice: 5
Enter the new ID of each course

Course 1 ID: 10
Course 2 ID: 30
Course 3 ID: 30
Course 4 ID: 10
Course 4 ID: 40
Course 5 ID: 50

9. Show all information



10. To Exit

