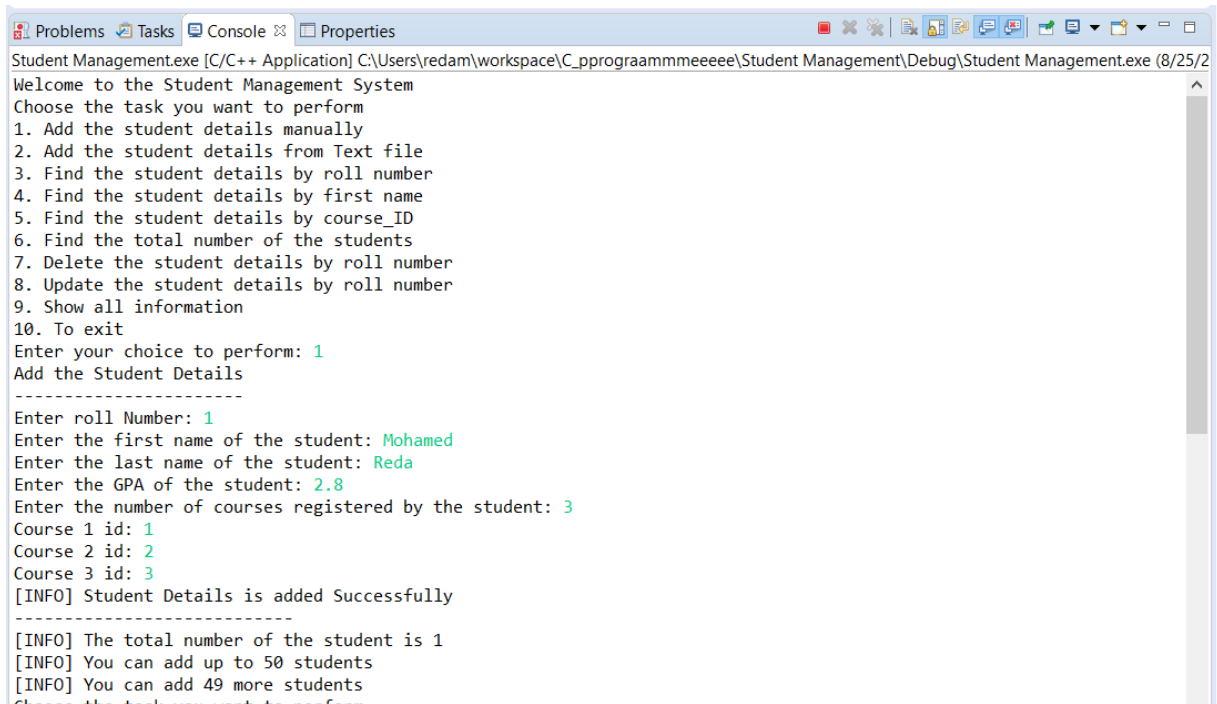# Learn-In-Depth

First Term Project

Student Management System

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1. Add students manually

- Normal case

```
Student Management.exe [C/C++ Application] C:\Users\redam\workspace\C_pprograammmeeeee\Student Management\Debug\Student Management.exe (8/25/2
Welcome to the Student Management System
Choose the task you want to perform
1. Add the student details manually
2. Add the student details from Text file
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 the students
7. Delete the student details by roll number
8. Update the student details by roll number
9. Show all information
10. To exit
Enter your choice to perform: 1
Add the Student Details
-----------------------
Enter roll Number: 1
Enter the first name of the student: Mohamed
Enter the last name of the student: Reda
Enter the GPA of the student: 2.8
Enter the number of courses registered by the student: 3
Course 1 id: 1
Course 2 id: 2
Course 3 id: 3
[INFO] Student Details is added Successfully
-----------------------------
[INFO] The total number of the student is 1
[INFO] You can add up to 50 students
[INFO] You can add 49 more students
```

```
Choose the task you want to perform
1. Add the student details manually
2. Add the student details from Text file
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 the students
7. Delete the student details by roll number
8. Update the student details by roll number
9. Show all information
10. To exit
Enter your choice to perform: 1
Add the Student Details
-----------------------
Enter roll Number: 2
Enter the first name of the student: Ahmed
Enter the last name of the student: Ali
Enter the GPA of the student: 2.6
Enter the number of courses registered by the student: 4
Course 1 id: 2
Course 2 id: 1
Course 3 id: 4
Course 4 id: 3
[INFO] Student Details is added Successfully
-----------------------------
[INFO] The total number of the student is 2
[INFO] You can add up to 50 students
[INFO] You can add 48 more students
```

- Special case: The roll number is already used

```
Choose the task you want to perform
1. Add the student details manually
2. Add the student details from Text file
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 the students
7. Delete the student details by roll number
8. Update the student details by roll number
9. Show all information
10. To exit
Enter your choice to perform: 1
Add the Student Details
-----------------------
Enter roll Number: 1
The roll is already used!.. Please try another roll number
Choose the task you want to perform
1  Add the student details manually
```

2. Add students from a file

```
Student Management.exe [C/C++ Application] C:\Users\redam\wo
Welcome to the Student Management System
Choose the task you want to perform
1. Add the student details manually
2. Add the student details from Text file
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 the students
7. Delete the student details by roll number
8. Update the student details by roll number
9. Show all information
10. To exit
Enter your choice to perform: 2
[INFO] Roll number 1 is saved successfully
[INFO] Roll number 2 is saved successfully
[INFO] Roll number 3 is saved successfully
[ERROR] Roll number 3 is already used
[INFO] Roll number 4 is saved successfully
[INFO] Roll number 5 is saved successfully
[INFO] Roll number 6 is saved successfully
[INFO] Roll number 7 is saved successfully
-------------------------
```

```
1 Mohamed Reda 3.5 1 2 3 4 5
2 Ahmed Ali 3 1 2 3 4 5
3 Ziad Tarek 2.8 1 2 4 6 5
3 Rami Ahmed 3.6 2 7 3 1 6
4 Omar Kamal 2.4 1 2 3 4 5
5 Nada Reda 2.4 1 2 3 4 5
6 Mahmoud Sayed 2.4 1 2 3 4 5
7 Mohamed Gamal 3.2 1 2 3 4 5
```

3. Find the student details by roll number

- Normal case

```
-----------------------------
Choose the task you want to perform
1. Add the student details manually
2. Add the student details from Text file
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 the students
7. Delete the student details by roll number
8. Update the student details by roll number
9. Show all information
10. To exit
Enter your choice to perform: 3
Enter the roll number of the student: 2
The Student Details are
-----------------------------
The first name is Ahmed
The last name is Ali
The GPA is 3.00
The courses that the student registered are
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
-----------------------------
Choose the task you want to perform
```

- Special case: the roll number is not existed

```
-------------------------
Choose the task you want to perform
1. Add the student details manually
2. Add the student details from Text file
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 the students
7. Delete the student details by roll number
8. Update the student details by roll number
9. Show all information
10. To exit
Enter your choice to perform: 3
Enter the roll number of the student: 8
Roll number 8 not found
-----------------------------
Choose the task you want to perform
```

4. Find the student details by first name

- Normal case

```
Student Management.exe [C/C++ Application] C:\Users\redam\wo
Choose the task you want to perform
1. Add the student details manually
2. Add the student details from Text file
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 the students
7. Delete the student details by roll number
8. Update the student details by roll number
9. Show all information
10. To exit
Enter your choice to perform: 4
Enter the first name of the student: Mohamed
The Student Details are
---------------------------
The first name is Mohamed
The last name is Reda
The GPA is 3.50
The courses that the student registered are
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
---------------------------
The Student Details are
---------------------------
The first name is Mohamed
The last name is Gamal
The GPA is 3.20
The courses that the student registered are
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
```

- Special case: The first name is not existed

```
Choose the task you want to perform
1. Add the student details manually
2. Add the student details from Text file
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 the students
7. Delete the student details by roll number
8. Update the student details by roll number
9. Show all information
10. To exit
Enter your choice to perform: 4
Enter the first name of the student: Gamal
First name Gamal not found
---------------------------
Choose the task you want to perform
```

5. Find the student details by course_ID

- Normal case

```
Enter your choice to perform: 5
Enter the course ID: 2
The student Details are
---------------------------
The first name is Mohamed
The last name is Reda
The GPA is 3.50
---------------------------
The student Details are
---------------------------
The first name is Ahmed
The last name is Ali
The GPA is 3.00
---------------------------
The student Details are
---------------------------
The first name is Ziad
The last name is Tarek
The GPA is 2.80
---------------------------
The student Details are
---------------------------
The first name is Omar
The last name is Kamal
The GPA is 2.40
---------------------------
The student Details are
---------------------------
```

```
---------------------------
The student Details are
---------------------------
The first name is Nada
The last name is Reda
The GPA is 2.40
---------------------------
The student Details are
---------------------------
The first name is Mahmoud
The last name is Sayed
The GPA is 2.40
---------------------------
The student Details are
---------------------------
The first name is Mohamed
The last name is Gamal
The GPA is 3.20
---------------------------
[INFO] The total number of students enrolled : 7
---------------------------
Choose the task you want to perform
```

- Special case

```
----------------------------
Choose the task you want to perform
1. Add the student details manually
2. Add the student details from Text file
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 the students
7. Delete the student details by roll number
8. Update the student details by roll number
9. Show all information
10. To exit
Enter your choice to perform: 5
Enter the course ID: 9
Course ID 9 not found
----------------------------
```

6. Find the total number of the students

```
Choose the task you want to perform
1. Add the student details manually
2. Add the student details from Text file
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 the students
7. Delete the student details by roll number
8. Update the student details by roll number
9. Show all information
10. To exit
Enter your choice to perform: 6
[INFO] The total number of the student is 7
[INFO] You can add up to 50 students
[INFO] You can add 43 more students
----------------------
```

7. Delete the student details by roll number

```
---------------------------
Choose the task you want to perform
1. Add the student details manually
2. Add the student details from Text file
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 the students
7. Delete the student details by roll number
8. Update the student details by roll number
9. Show all information
10. To exit
Enter your choice to perform: 7
Enter the roll number of the student to be deleted: 2
[INFO] The student number is removed successfully..
---------------------------
Choose the task you want to perform
1. Add the student details manually
2. Add the student details from Text file
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 the students
7. Delete the student details by roll number
8. Update the student details by roll number
9. Show all information
10. To exit
Enter your choice to perform: 3
Enter the roll number of the student: 2
Roll number 2 not found
---------------------------
```

8. Update the student details by roll number

- Normal case

The first name was "Mohamed" and update it to "Ahmed"

```
--------------------------
Choose the task you want to perform
1. Add the student details manually
2. Add the student details from Text file
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 the students
7. Delete the student details by roll number
8. Update the student details by roll number
9. Show all information
10. To exit
Enter your choice to perform: 8
Enter the roll number to be updated: 1
1. First name
2. Last name
3. Roll no.
4. GPA
5. Courses
1
Enter the new first name: Ahmed
[INFO] Updated Successfully
```

```
[INFO] Updated Successfully
Choose the task you want to perform
1. Add the student details manually
2. Add the student details from Text file
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 the students
7. Delete the student details by roll number
8. Update the student details by roll number
9. Show all information
10. To exit
Enter your choice to perform: 3
Enter the roll number of the student: 1
The Student Details are
--------------------------
The first name is Ahmed
The last name is Reda
The GPA is 3.50
The courses that the student registered are
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
--------------------------
```

- Special case: Update but the queue is empty

```
Student Management.exe [C/C++ Application] C:\Users\redam\workspace\\
Welcome to the Student Management System
Choose the task you want to perform
1. Add the student details manually
2. Add the student details from Text file
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 the students
7. Delete the student details by roll number
8. Update the student details by roll number
9. Show all information
10. To exit
Enter your choice to perform: 8
Queue is empty!..
```

9. Show all information

- Normal case

```
Student Management.exe [C/C++ Application] C:\Users\redam\wc
1. Add the student details manually
2. Add the student details from Text file
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 the students
7. Delete the student details by roll number
8. Update the student details by roll number
9. Show all information
10. To exit
Enter your choice to perform: 9
Student info
First name: Ahmed
Last name: Reda
Roll number: 1
GPA: 3.50
No. courses registered: 5
Course 1 ID: 1
Course 2 ID: 2
Course 3 ID: 3
Course 4 ID: 4
Course 5 ID: 5
------------------------------
Student info
First name: Ahmed
Last name: Ali
Roll number: 2
GPA: 3.00
No. courses registered: 5
Course 1 ID: 1
Course 2 ID: 2
Course 3 ID: 3
Course 4 ID: 4
Course 5 ID: 5
------------------------------
```

```
Student Management.exe [C/C++ Applica
Student info
First name: Ziad
Last name: Tarek
Roll number: 3
GPA: 2.80
No. courses registered: 5
Course 1 ID: 1
Course 2 ID: 2
Course 3 ID: 4
Course 4 ID: 6
Course 5 ID: 5
------------------------------
Student info
First name: Omar
Last name: Kamal
Roll number: 4
GPA: 2.40
No. courses registered: 5
Course 1 ID: 1
Course 2 ID: 2
Course 3 ID: 3
Course 4 ID: 4
Course 5 ID: 5
------------------------------
Student info
First name: Nada
Last name: Reda
Roll number: 5
GPA: 2.40
No. courses registered: 5
Course 1 ID: 1
Course 2 ID: 2
Course 3 ID: 3
Course 4 ID: 4
```

```
Course 1 ID: 1
Course 2 ID: 2
Course 3 ID: 3
Course 4 ID: 4
Course 5 ID: 5
-----------------------------
Student info
First name: Mahmoud
Last name: Sayed
Roll number: 6
GPA: 2.40
No. courses registered: 5
Course 1 ID: 1
Course 2 ID: 2
Course 3 ID: 3
Course 4 ID: 4
Course 5 ID: 5
-----------------------------
Student info
First name: Mohamed
Last name: Gamal
Roll number: 7
GPA: 3.20
No. courses registered: 5
Course 1 ID: 1
Course 2 ID: 2
Course 3 ID: 3
Course 4 ID: 4
Course 5 ID: 5
-----------------------------
```

- Special case: The queue is empty

```
Welcome to the Student Management System
Choose the task you want to perform
1. Add the student details manually
2. Add the student details from Text file
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 the students
7. Delete the student details by roll number
8. Update the student details by roll number
9. Show all information
10. To exit
Enter your choice to perform: 9
Queue is empty!..
---------------------
```