
First Term (Final Project 2)

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Mastering Embedded System Online Diploma

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Description

A students' database management system based on the Linked List queue data structure.

System Operation

System Operation:

- 1- Add Students from text file.
- 2- Add student Manually.
- 3- Find Student by roll number.
- 4- Find Student by First Name.
- 5- Find students using enrolled course ID.
- 6- Find Total number of students.
- 7- Delete student by roll number.
- 8- Update student information.
- 9- Show all the information.

Screenshots

```
Problems Tasks Console Properties Debugger
<terminated> (exit value: -1,073,741,510) unit4-project2-test1.exe [C/C++ v
---FIFO initialize -> Done---
WELCOME TO THE STUDENT MANAGMENT 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 name
5. Find the student details by course ID
6. Find the total number of 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 the task:9

====fifo_print=====
Student 1
    Roll number : 2
    First name: Hesham
    Last name: Hm
    GPA: 2.400000
    Courses:
        Course 2: 5
-----
Student 2
    Roll number : 5
    First name: hg
    Last name: y8
    GPA: 2.800000
    Courses:
        Course 1: 5
        Course 2: 15
        Course 3: 18
-----
====print -> Done=====
=====
```

```
=====
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 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 the task:1

Roll Number 1 saved successfully

Roll Number 1 is already taken

Roll Number 3 saved successfully

Roll Number 4 saved 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 name
5. Find the student details by course ID
6. Find the total number of 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 the task:2
Please, Enter the roll number: 846
Please, Enter student first name: heba
Please, Enter student last name: Islam
Please, Enter student GPA: 4.0
Please, Enter Course ID of each course:
Course 1: 15
Course 2: 5
Course 3: 46
Course 4: 18
```

```
=====
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 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 the task:9
```

```
====fifo_print=====
Student 1
    Roll number : 2
    First name: Hesham
    Last name: Hm
    GPA: 2.400000
    Courses:
        Course 2: 5
-----
Student 2
    Roll number : 5
    First name: hg
    Last name: y8
    GPA: 2.800000
    Courses:
        Course 1: 5
        Course 2: 15
        Course 3: 18
-----
Student 3
    Roll number : 1
    First name: Reda
    Last name: AbdelAal
    GPA: 3.500000
    Courses:
        Course 1: 1
        Course 2: 2
        Course 3: 3
        Course 4: 4
```

```
-----
Student 4
    Roll number : 3
    First name: Pip
    Last name: Lobia
    GPA: 3.500000
    Courses:
        Course 1: 45
        Course 2: 21
        Course 3: 55
        Course 4: 18
        Course 5: 46
-----
Student 5
    Roll number : 4
    First name: Kerolos
    Last name: Gamal
    GPA: 3.600000
    Courses:
        Course 1: 45
        Course 2: 21
        Course 3: 55
        Course 4: 18
        Course 5: 46
-----
Student 6
    Roll number : 846
    First name: heba
    Last name: Islam
    GPA: 4.000000
    Courses:
        Course 1: 15
        Course 2: 5
        Course 3: 46
        Course 4: 18
        Course 5: 80
-----
====print -> Done=====
```

```

=====
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 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 the task:3
Enter the Roll Number of the student: 3
the Student Details is:
    First name: Pip
    Last name: Lobia
    Roll number: 3
    GPA: 3.500000
    Courses:
        Course 1: 45
        Course 2: 21
        Course 3: 55
        Course 4: 18
        Course 5: 46
-----

```

```

=====
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 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 the task:4
Enter the first name of the student: reda
-----
the Student Details is:
    First name: Reda
    Last name: AbdelAal
    Roll number: 1
    GPA: 3.500000
    Courses:
        Course 1: 1
        Course 2: 2
        Course 3: 3
        Course 4: 4
        Course 5: 5
-----

```

```

=====
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 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 the task:5
Enter the course ID: 46
-----
Student No.1 Details are:
    First name: Pip
    Last name: Lobia
    Roll number: 3
    GPA: 3.500000
-----
Student No.2 Details are:
    First name: Kerolos
    Last name: Gamal
    Roll number: 4
    GPA: 3.600000
-----
Student No.3 Details are:
    First name: heba
    Last name: Islam
    Roll number: 846
    GPA: 4.000000
-----

```

```

=====
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 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 the task:6
-----
The total number of Student is 6
You can add up to 50 students
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 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 the task:8
Enter the Roll Number to update the entry: 1
1. First name
2. Last name
3. GPA
4. Courses
Select the required section to be updated: 3
Please, Update student GPA: 3.9

```