Mastering Embedded System Online Diploma

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First Term (Final Project 2)

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Project 2

Student Mangement System

- **Abstract :**

  It is a system that could do different processes Like recording students data, search for students, Deleting students,show the number of students and update students data.

- **Implementation :**
  - ➢ **You can find all project codes in my github Repositorty**
    https://github.com/mostafahamedbesher/Embedded_Online_Diploma

  - ➢ **This System implementation based on circular queue**
  - ➢ **The System Main Functions are :**

    - ❖ **Adding a Student**
      This function is simply adding each student Data which is his first name, last name, Student roll number, student GPA and Registered coures ID and insert these data in the circular queue.

```
========================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 1


========================================
Enter Student First Name : mostafa
Enter Student Last Name : besher
Enter Student Roll Number : 1
Enter Student GPA : 3.3
Enter Course ID : 2
[info] Student Data Is Added Successfully...
----------------------------
[info] The Total Number Of Students is 1
[info] You Can Add Up To 50 Students
[info] You Can Add 49 More Students


========================================
```

```
========================================
Enter Student First Name : mostafa
Enter Student Last Name : besher
Enter Student Roll Number : 1
Enter Student GPA : 3.3
Enter Course ID : 2
[info] Student Data Is Added Successfully...
----------------------------
[info] The Total Number Of Students 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 Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 8

========================================
All Students Details Are :
Student First Name : mostafa
Student Last Name : besher
Student ID : 1
Student GPA : 3.30
Course ID : 2
----------------------------

========================================
```

```
========================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 1


========================================
Enter Student First Name : mohammed
Enter Student Last Name : hamed
Enter Student Roll Number : 2
Enter Student GPA : 2.5
Enter Course ID : 1
[info] Student Data Is Added Successfully...
----------------------------
[info] The Total Number Of Students is 2
[info] You Can Add Up To 50 Students
[info] You Can Add 48 More Students


========================================
```

```
========================================
========================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 8

========================================
All Students Details Are :
Student First Name : mostafa
Student Last Name : besher
Student ID : 1
Student GPA : 3.30
Course ID : 2
----------------------------
Student First Name : mohammed
Student Last Name : hamed
Student ID : 2
Student GPA : 2.50
Course ID : 1
----------------------------

========================================
```

❖ **Search Functions :**

- **Find Student Details By Roll Number**
- **Find Student Details By First Name**
- **Find Student Details By course Number**

I implemented all these functions depending on one search function and I switched between them using Macros.

```
//search macros
#define first_nam        0
#define id               1
#define gpa              2
#define c_id             3
#define id_s             4
```

1- Find Student Details by Roll Number

```
========================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 8


========================================
All Students Details Are :
Student First Name : mostafa
Student Last Name : besher
Student ID : 1
Student GPA : 3.30
Course ID : 2
----------------------------
Student First Name : mohammed
Student Last Name : hamed
Student ID : 2
Student GPA : 2.50
Course ID : 1
----------------------------


====================================
--------------------------------------
```

```
========================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 2


========================================
Enter Roll Number of Student : 2
Student Details Are :
Student First Name : mohammed
Student Last Name : hamed
Student ID : 2
Student GPA : 2.50
Course ID : 1
----------------------------


========================================
```

2- Find Student Details By First Name

```
======================================
All Students Details Are :
Student First Name : mostafa
Student Last Name : besher
Student ID : 1
Student GPA : 3.30
Course ID : 2
----------------------------

Student First Name : mohammed
Student Last Name : hamed
Student ID : 2
Student GPA : 2.50
Course ID : 1
----------------------------

Student First Name : mohammed
Student Last Name : ahmed
Student ID : 3
Student GPA : 4.00
Course ID : 2
----------------------------


======================================
----------------------------------------
```

```
======================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 3

======================================
Enter Student First Name : mohammed
Student Details Are :
Student First Name : mohammed
Student Last Name : hamed
Student ID : 2
Student GPA : 2.50
Course ID : 1
----------------------------
Student Details Are :
Student First Name : mohammed
Student Last Name : ahmed
Student ID : 3
Student GPA : 4.00
Course ID : 2
----------------------------


======================================
```

3- Find Student Details by Course ID

```
======================================
All Students Details Are :
Student First Name : mostafa
Student Last Name : besher
Student ID : 1
Student GPA : 3.30
Course ID : 2
----------------------------
Student First Name : mohammed
Student Last Name : hamed
Student ID : 2
Student GPA : 2.50
Course ID : 1
----------------------------
Student First Name : mohammed
Student Last Name : ahmed
Student ID : 3
Student GPA : 4.00
Course ID : 2
----------------------------

======================================
--------------------------------------
```

```
======================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 4

======================================
Enter Course ID : 2
Student Details Are :
Student First Name : mostafa
Student Last Name : besher
Student ID : 1
Student GPA : 3.30
Course ID : 2
----------------------------
Student Details Are :
Student First Name : mohammed
Student Last Name : ahmed
Student ID : 3
Student GPA : 4.00
Course ID : 2
----------------------------

======================================
```

❖ Find Count

```
=====================================
All Students Details Are :
Student First Name : mostafa
Student Last Name : besher
Student ID : 1
Student GPA : 3.30
Course ID : 2
-----------------------------
Student First Name : mohammed
Student Last Name : hamed
Student ID : 2
Student GPA : 2.50
Course ID : 1
-----------------------------
Student First Name : mohammed
Student Last Name : ahmed
Student ID : 3
Student GPA : 4.00
Course ID : 2
-----------------------------

=====================================
-------------------------------------


=====================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 5

=====================================
[info] The Total Number Of Students is 3
[info] You Can Add Up To 50 Students
[info] You Can Add 47 More Students
=====================================
```

❖Delete Student by id

```
====================================
All Students Details Are :
Student First Name : mostafa
Student Last Name : besher
Student ID : 1
Student GPA : 3.30
Course ID : 2
----------------------------
Student First Name : mohammed
Student Last Name : hamed
Student ID : 2
Student GPA : 2.50
Course ID : 1
----------------------------
Student First Name : mohammed
Student Last Name : ahmed
Student ID : 3
Student GPA : 4.00
Course ID : 2
----------------------------

====================================
------------------------------------
```

```
====================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 6

====================================
Enter Roll Number of Student : 2
[info] Student Data Is Deleted Successfully...
====================================
```

```
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 8

====================================
All Students Details Are :
Student First Name : mostafa
Student Last Name : besher
Student ID : 1
Student GPA : 3.30
Course ID : 2
----------------------------
Student First Name : mohammed
Student Last Name : ahmed
Student ID : 3
Student GPA : 4.00
Course ID : 2
----------------------------
```

❖ Update Student Data

➢ **In this function you can update one field of data like Updating student first name or id ….**

- **Update first name**

```
=====================================
All Students Details Are :
Student First Name : mostafa
Student Last Name : besher
Student ID : 1
Student GPA : 3.30
Course ID : 2
----------------------------
Student First Name : mohammed
Student Last Name : ahmed
Student ID : 3
Student GPA : 4.00
Course ID : 2
----------------------------


=====================================
```

```
=====================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 7

=====================================
Choose Data You Want To Update :
1. First Name
2. Last Name
3. Roll Number
4. GPA
5. Course ID
Enter Roll Number of Student : 3
Enter Option Number : 1
Enter New First Name : mahmoud
[info] Student Data Updated Successfully

=====================================
```

```
=====================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 8

=====================================
All Students Details Are :
Student First Name : mostafa
Student Last Name : besher
Student ID : 1
Student GPA : 3.30
Course ID : 2
----------------------------
Student First Name : mahmoud
Student Last Name : ahmed
Student ID : 3
Student GPA : 4.00
Course ID : 2
----------------------------

=====================================
```

- **Update ID**

```
========================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 7

========================================
Choose Data You Want To Update :
1. First Name
2. Last Name
3. Roll Number
4. GPA
5. Course ID
Enter Roll Number of Student : 3
Enter Option Number : 3
Enter New Student ID : 2
[info] Student Data Updated Successfully

========================================

========================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 8

========================================
All Students Details Are :
Student First Name : mostafa
Student Last Name : besher
Student ID : 1
Student GPA : 3.30
Course ID : 2
---------------------------
Student First Name : mahmoud
Student Last Name : ahmed
Student ID : 2
Student GPA : 4.00
Course ID : 2
---------------------------

========================================
```

- **Update last name**

```
=====================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 7

=====================================
Choose Data You Want To Update :
1. First Name
2. Last Name
3. Roll Number
4. GPA
5. Course ID
Enter Roll Number of Student : 2
Enter Option Number : 2
Enter New Last Name : sami
[info] Student Data Updated Successfully

=====================================
```

```
=====================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 8

=====================================
All Students Details Are :
Student First Name : mostafa
Student Last Name : besher
Student ID : 1
Student GPA : 3.30
Course ID : 1
----------------------------
Student First Name : mohammed
Student Last Name : sami
Student ID : 2
Student GPA : 2.50
Course ID : 2
----------------------------

=====================================
```

- **Update GPA**

```
========================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 7


========================================
Choose Data You Want To Update :
1. First Name
2. Last Name
3. Roll Number
4. GPA
5. Course ID
Enter Roll Number of Student : 2
Enter Option Number : 4
Enter New GPA : 4
[info] Student Data Updated Successfully


========================================
```

```
========================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 8


========================================
All Students Details Are :
Student First Name : mostafa
Student Last Name : besher
Student ID : 1
Student GPA : 3.30
Course ID : 1
----------------------------
Student First Name : mohammed
Student Last Name : sami
Student ID : 2
Student GPA : 4.00
Course ID : 2
----------------------------

========================================
```

- **Update course ID**

```
=====================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 7

=====================================
Choose Data You Want To Update :
1. First Name
2. Last Name
3. Roll Number
4. GPA
5. Course ID
Enter Roll Number of Student : 1
Enter Option Number : 5
Enter New Student Course ID : 2
[info] Student Data Updated Successfully

=====================================
```

```
=====================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 8

=====================================
All Students Details Are :
Student First Name : mostafa
Student Last Name : besher
Student ID : 1
Student GPA : 3.30
Course ID : 2
----------------------------
Student First Name : mohammed
Student Last Name : sami
Student ID : 2
Student GPA : 4.00
Course ID : 2
----------------------------

=====================================
```

- **Handling Exceptions Scenarios :**
  In this section I show how I could handle different User exception inputs

- **When user enters an option number not in the range of option number(from 0 to 9) or user enters a character or any something else**

```
=====================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 12


=====================================
Incorrect Option Number
=====================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : m


=====================================
Incorrect Option Number
=====================================
```

```
=====================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : %ff


=====================================
Incorrect Option Number
=====================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : -1


=====================================
Incorrect Option Number
=====================================
```

➢ **When user try to add new student and the entered id was already exists in FIFO**
That is forbidden because student id is unique

```
========================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 8


========================================
All Students Details Are :
Student First Name : mostafa
Student Last Name : besher
Student ID : 1
Student GPA : 3.30
Course ID : 2
----------------------------
Student First Name : mohammed
Student Last Name : hamed
Student ID : 2
Student GPA : 2.50
Course ID : 1
----------------------------


========================================
----------------------------------------
```

```
----------------------------------------
========================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 1


========================================
Enter Student First Name : ahmed
Enter Student Last Name : kamal
Enter Student Roll Number : 1
[Error]This ID Is Already Exist
Enter Student Roll Number : 2
[Error]This ID Is Already Exist
Enter Student Roll Number : 3
Enter Student GPA : 3
Enter Course ID : 2
[info] Student Data Is Added Successfully...
----------------------------
[info] The Total Number Of Students is 3
[info] You Can Add Up To 50 Students
[info] You Can Add 47 More Students

========================================
```

➢ When user tries to insert student GPA > 4

```
=====================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 1


=====================================
Enter Student First Name : karim
Enter Student Last Name : ahmed
Enter Student Roll Number : 4
Enter Student GPA : 5
[Error]GPA Should Not Exceed (4)
Enter Student GPA : 2
Enter Course ID : 1
[info] Student Data Is Added Successfully...
-----------------------------
[info] The Total Number Of Students is 4
[info] You Can Add Up To 50 Students
[info] You Can Add 46 More Students


=====================================
```

➢ When user searches for a student using roll number And user enters a roll number not found in FIFO

```
========================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 8


========================================
All Students Details Are :
Student First Name : mostafa
Student Last Name : besher
Student ID : 1
Student GPA : 3.30
Course ID : 2
-----------------------------
Student First Name : mohammed
Student Last Name : hamed
Student ID : 2
Student GPA : 2.50
Course ID : 1
-----------------------------


========================================
-----------------------------------------



========================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 2


========================================
Enter Roll Number of Student : 3
[Error] Roll Number (3) Not Found
========================================
```

➢ When user try to delete student but FIFO is empty

```
========================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 6

========================================
Students List Is Empty
========================================
```

➢ When user tries to show all Students data in FIFO But FIFO is empty

```
========================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 8

========================================
Students List Is Empty
========================================
```

> ➤ **When user tries to update student data and entres option number not in range or any thing else**

```
========================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 7


========================================
Choose Data You Want To Update :
1. First Name
2. Last Name
3. Roll Number
4. GPA
5. Course ID
Enter Roll Number of Student : 1
Enter Option Number : 7
[Error] Incorrect Option Number
========================================
```

➤ When user tries to update student data and enters roll number which not found in FIFO

```
========================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 8

========================================
All Students Details Are :
Student First Name : mostafa
Student Last Name : besher
Student ID : 1
Student GPA : 3.30
Course ID : 2
----------------------------
Student First Name : mohammed
Student Last Name : hamed
Student ID : 2
Student GPA : 2.50
Course ID : 1
----------------------------

========================================
----------------------------------------
```

```
========================================
Choose The Task You Want To Perform :
1. Add Student Data Manually
2. Find Student Details By Roll Number
3. Find Student Details By First Name
4. Find Student Details By Course ID
5. Find The Total Number Of Students
6. Delete Student Details By Roll Number
7. Update Student Details By Roll Number
8. Show All Information
9. Exit
Enter option number : 7

========================================
Choose Data You Want To Update :
1. First Name
2. Last Name
3. Roll Number
4. GPA
5. Course ID
Enter Roll Number of Student : 3
[Error] Roll Number (3) Not Found
```