FIRST TERM
PROJECT 2
STUDENTS MANAGEMENT SYSTEM

ENG : Hazem Mohamed ELNashar

My Profile :
https://www.learn-in-depth.com/online-diploma/hazemmohamed30010@gmail.com

GitHub Repository:
https://github.com/hazem31/Embedded-Assignments

Problem Statement:

It is required to build a simple SW for student information management system which can perform the following operation:
- Store Student's First name.
- Store Student's Last name.
- Store Student's ID.
- Store Student's GPA.
- Store Student's Registered Courses.

Approach:

Design the following Functions (APIs):
- Add Student Details Manually.
- Add Student Details from File.
- Find Student by the given ID.
- Find Student by the given First name.
- Find Students registered in a course.
- Count of Students.
- Delete a Student with ID.
- Update a Student.
- View All Students.
- Exit

RESULTS :

Add Manually :

```
Enter your choice to perform task: 1
---------------------------------------
Add the Student Details
---------------------------------------
Enter the Roll Number: 5
Enter the First Name of the Student: hazem
Enter the Last Name of the Student: ashraf
Enter the GPA you obtained: 3.8
ENTER COURCES ID (to exit enter 0 instead of ID)
Course 1 ID: 45
Course 2 ID: 23
Course 3 ID: 45
```

Add by File:

```
Enter your choice to perform task: 2
[INFO] Roll Number 1 saved successfully
[INFO] Roll Number 2 saved successfully
[INFO] Roll Number 3 saved successfully
[INFO] Roll Number 4 saved successfully
[INFO] Students Details is added successfully
---------------------------------------------------------------
```

```
1 1 Hazem ELNahsar 3.5 1 2 3 4 5
2 2 Ashraf ELGamed 2.9 40 50 90 45 36
3 3 Moataz Monieb 3.7 90 80 60 80
4 4 Ahmed Alaa 3.2 70 80 90 45
```

Find Student By Roll

```
Enter your choice to perform task: 3
-----------------------------------
Enter the Roll number of the Student: 4
The Student Details are:
The First Name is: Ahmed
The Last Name is: Alaa
The GPA is: 3.200000
Enrolled Courses are:
Course 1 ID is: 70
Course 1 ID is: 80
Course 1 ID is: 90
Course 1 ID is: 45
-------------------------------
```

Find Student by First name:

```
Enter your choice to perform task: 4
--------------------------------------
Enter First name: Hazem
All Possible Matches
--------------------------------------
The Student Details are:
The First Name is: Hazem
The Last Name is: ELNahsar
The GPA is: 3.500000
Enrolled Courses are:
Course 1 ID is: 1
Course 1 ID is: 2
Course 1 ID is: 3
Course 1 ID is: 4
Course 1 ID is: 5
-------------------------------------
```

Find Students By Course ID:

```
Enter your choice to perform task: 5
-------------------------------------
Enter Course ID: 90
All Possible Matches
-------------------------------------
The Student Details are:
The First Name is: Ashraf
The Last Name is: ELGamed
The GPA is: 2.900000
Enrolled Courses are:
Course 1 ID is: 40
Course 1 ID is: 50
Course 1 ID is: 90
Course 1 ID is: 45
Course 1 ID is: 36
-------------------------------------
The Student Details are:
The First Name is: Moataz
The Last Name is: Monieb
The GPA is: 3.700000
Enrolled Courses are:
Course 1 ID is: 90
Course 1 ID is: 80
Course 1 ID is: 60
Course 1 ID is: 80
-------------------------------------
```

Students Count :

```
Enter your choice to perform task: 6
[INFO] the total number of students is 4
[INFO] you can add up to 50 students
[INFO] you can add 46 more students
```

Delete Student:

```
Enter your choice to perform task: 7
----------------------------------
Enter the Roll number of the Student: 1
[INFO] Student with Roll Number 1 Deleted
```

Show Students:

```
Enter your choice to perform task: 8
|-----------------------------------------
Student First name : Ashraf
Student Last name : ELGamed
Student Roll Number : 2
Student GPA  Number : 2.900000
The Course ID is 40
The Course ID is 50
The Course ID is 90
The Course ID is 45
The Course ID is 36
-----------------------------------------
Student First name : Moataz
Student Last name : Monieb
Student Roll Number : 3
Student GPA  Number : 3.700000
The Course ID is 90
The Course ID is 80
The Course ID is 60
The Course ID is 80
-----------------------------------------
Student First name : Ahmed
Student Last name : Alaa
Student Roll Number : 4
Student GPA  Number : 3.200000
The Course ID is 70
```