Mastering Embedded System Online Diploma

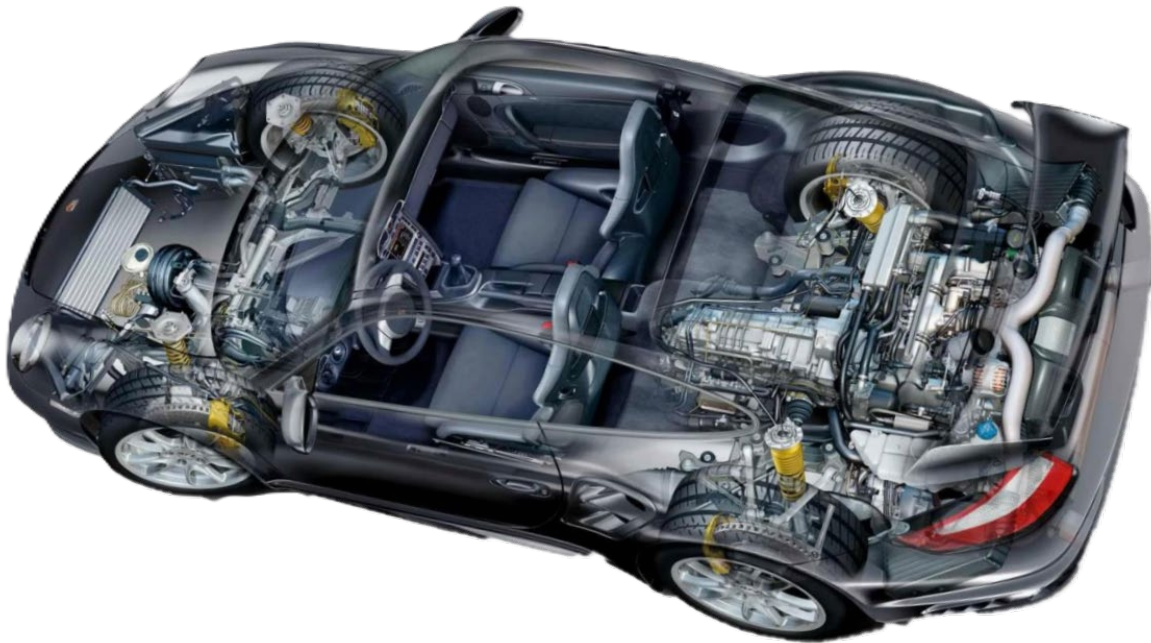http://www.learn-in-depth-store.com

STUDENT MANAGEMENT SYSTEM

Abstract

Program to Build a Simple Software for Student Information Management System which can Perform the Following Statement.

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GitHub Repo: https://github.com/Ayat237/Embedded_system_online_diploma.git

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  - Find Students Registered in a Course.
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  - Delete a Student from Queue List.
  - Update Student Data.
  - Show All Students in Our Queue.
  - Exit.

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2. Beginning The Program

- Wait until user choose from options

```
Student_Management_System.exe [C/C++ Application]  [pid: 9]
WELCOM TO STUDENT MANANGMENT SYSTEM
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Choose from of the one following options
Choose(1) : to add student details manually
Choose(2) : to add student details from text file
Choose(3) : to find student details using Id
Choose(4) : to find student details using first name
Choose(5) : to to find student details using course Id
Choose(6) : to Find the total number of students
Choose(7) : to Update student using Id
Choose(8) : to delete student using Id
Choose(9) : to view_all_students
Choose(10) : to Exit
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option :
```

3. Add Student Manually

- After choose the option to add student ,the user will enter the data ,this have many cases

1. Case-1 : Adding Id which not Exist in the list

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 1
Enter the student id :1
Enter The Student First Name :Ayat
Enter The Student Last Name :Mohamed
Enter the student GPA :3.6
Enter Course ID #1 : 100
Enter Course ID #2 : 105
Enter Course ID #3 : 106
Enter Course ID #4 : 109
Enter Course ID #5 : 200
The student Is Added Successfully:)
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 1
Enter the student id :2
Enter The Student First Name :Bassant
Enter The Student Last Name :Maher
Enter the student GPA :3.6
Enter Course ID #1 : 100
Enter Course ID #2 : 100
Enter Course ID #3 : 102
Enter Course ID #4 : 104
Enter Course ID #5 : 107
The student Is Added Successfully:)
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

2. Case-2 : Adding Id which Exist in the list

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 1
Enter the student id :1
[ERROR!!] This ID 1 is already Exist
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

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4. Add Student From File

- Get Data from File and Add Student to Our List. While Adding the Student to the List, Check for the uniqueness of ID Number.

- File :

```
File    Edit    View

4 John Doe 3.75 101 102 103 104 105
5 Jane Smith 3.85 201 202 203 204 205
```

1. Case-1 : Adding Id which not Exist in the list

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 2
Student with ID 4 added successfully
Student with ID 5 added successfully
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

2. Case-2 : Adding Id which Exist in the list

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 2
[ERROR!!] This ID 4 already exists
[ERROR!!] This ID 5 already exists
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

```
Student_Management_System.exe [C/C++ Application]  [pid: 11]
Enter your option : 1
Enter the student id :4
Enter The Student First Name :Ayat
Enter The Student Last Name :Mohamed
Enter the student GPA :3.6
Enter Course ID #1 : 100
Enter Course ID #2 : 300
Enter Course ID #3 : 107
Enter Course ID #4 : 109
Enter Course ID #5 : 103
The student Is Added Successfully:)
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Choose from of the one following options
Choose(1)  : to add student details manually
Choose(2)  : to add student details from text file
Choose(3)  : to find student details using Id
Choose(4)  : to find student details using first name
Choose(5)  : to to find student details using course Id
Choose(6)  : to Find the total number of students
Choose(7)  : to Update student using Id
Choose(8)  : to delete student using Id
Choose(9)  : to view_all_students
Choose(10) : to Exit
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 2
[ERROR!!] This ID 4 already exists
Student with ID 5 added successfully
```

5. Find Student Details from ID

- It Find the Student Record for the given ID Number and Print Student Details.

1. Case-1 : Adding Id which Exist in the list

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 3
Enter the student id :1
First Name : Ayat
Last Name : Mohamed
ID : 1
GPA : 3.60
Course ID #1 : 100
Course ID #2 : 105
Course ID #3 : 106
Course ID #4 : 109
Course ID #5 : 200
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

2. Case-2 : Adding Id which Not Exist in the list

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 3
Enter the student id :7
[ERROR!!] This ID 7 is not exists
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

6. Search By First Name

- It Find the Student Record for the given First Name and Print Student Details.

1. Case-1 : Adding First Name which Exist in the list

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 4
Enter the student first name :Ayat
First Name : Ayat
Last Name : Mohamed
ID : 1
GPA : 3.60
Course ID #1 : 100
Course ID #2 : 105
Course ID #3 : 106
Course ID #4 : 109
Course ID #5 : 200
>>>>>>>>>>>>><<<<<<<<<<<<<<<
Students with Frist name Ayat  founded successfully
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

2. Case-2 : Adding First Name which Not Exist in the list

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 4
Enter the student first name :hala
[ERROR!!] This student with first name hala is not exists
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

7. Search By Course-ID

- It Find the Student Record for the given First Name and Print Student Details.
1. Case-1 : Adding CourseID which Exist in the list

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 5
Enter the course id :102
First Name : Bassant
Last Name : Maher
ID : 2
GPA : 3.60
>>>>>>>>>>>>>><<<<<<<<<<<<<<
First Name : John
Last Name : Doe
ID : 4
GPA : 3.75
>>>>>>>>>>>>><<<<<<<<<<<<<<
[INFO] Total number of students enrolled : 2
>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

8. Print Total Student Number

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 6
[INFO] Total number of students : 4
[INFO] You can add up to 55 students
[INFO] You can add 51 more students
>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

9. Update Student With ID Number

1. Case-1 : Update First Name

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 7
Enter the student id you to update :2
1.First name
2.Last name
3.ID number
4.GPA
5.Courses
Enter the number you to update :1
Enter The New First Name :Alaa
[INFO] The first name is updated successfully
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

2. Case-2 : Update Last Name

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 7
Enter the student id you to update :2
1.First name
2.Last name
3.ID number
4.GPA
5.Courses
Enter the number you to update :2
Enter The New Last Name :Mohamed
[INFO] The last name is updated successfully
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

3. Case-3 : Update ID Number

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 7
Enter the student id you to update :2
1.First name
2.Last name
3.ID number
4.GPA
5.Courses
Enter the number you to update :3
Enter the New ID :8
[INFO] The ID is updated successfully
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

4. Case-4 : Update GPA

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 7
Enter the student id you to update :2
1.First name
2.Last name
3.ID number
4.GPA
5.Courses
Enter the number you to update :4
Enter the New GPA :3.5
[INFO] The GPA is updated successfully
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

5. Case-5: Update Courses

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 7
Enter the student id you to update :2
1.First name
2.Last name
3.ID number
4.GPA
5.Courses
Enter the number you to update :5
Enter The New Course ID #1 : 100
Enter The New Course ID #2 : 200
Enter The New Course ID #3 : 250
Enter The New Course ID #4 : 102
Enter The New Course ID #5 : 109
[INFO] The courses is updated successfully
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

6. Case-6: Update Courses

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 7
Enter the student id you to update :0
[ERROR!!] This ID 0 is not exist
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

10.Delete Student With ID Number

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 8
Enter the student id :2
Student with ID 2 deleted successfully
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

11.Show All Students

1. Case-1: Before Deleting

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 9
>>>>>>>>>>Students<<<<<<<<<<<
Student No 1 :
First Name : John
Last Name : Doe
ID : 4
GPA : 3.75
Course ID #1 : 101
Course ID #2 : 102
Course ID #3 : 103
Course ID #4 : 104
Course ID #5 : 105
>>>>>>>>>>>>>><<<<<<<<<<<<<<<
Student No 2 :
First Name : Jane
Last Name : Smith
ID : 5
GPA : 3.85
Course ID #1 : 201
Course ID #2 : 202
Course ID #3 : 203
Course ID #4 : 204
Course ID #5 : 205
>>>>>>>>>>>>>><<<<<<<<<<<<<<<
Student No 3 :
First Name : Ayat
Last Name : Mohamed
ID : 1
GPA : 3.60
Course ID #1 : 100
Course ID #2 : 103
Course ID #3 : 107
Course ID #4 : 109
Course ID #5 : 200
>>>>>>>>>>>>>><<<<<<<<<<<<<<<
Student No 4 :
First Name : Alaa
Last Name : Mohamed
ID : 8
GPA : 3.50
Course ID #1 : 100
Course ID #2 : 200
Course ID #3 : 250
Course ID #4 : 102
Course ID #5 : 109
>>>>>>>>>>>>>><<<<<<<<<<<<<<<
>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

2. Case-2: After Deleting

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 9
>>>>>>>>>>Students<<<<<<<<<<
Student No 1 :
First Name : John
Last Name : Doe
ID : 4
GPA : 3.75
Course ID #1 : 101
Course ID #2 : 102
Course ID #3 : 103
Course ID #4 : 104
Course ID #5 : 105
>>>>>>>>>>>>>><<<<<<<<<<<<<<
Student No 2 :
First Name : Jane
Last Name : Smith
ID : 5
GPA : 3.85
Course ID #1 : 201
Course ID #2 : 202
Course ID #3 : 203
Course ID #4 : 204
Course ID #5 : 205
>>>>>>>>>>>>>><<<<<<<<<<<<<<
Student No 3 :
First Name : Ayat
Last Name : Mohamed
ID : 1
GPA : 3.60
Course ID #1 : 100
```

- Total Numbers After Deleting

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 6
[INFO] Total number of students : 3
[INFO] You can add up to 55 students
[INFO] You can add 52 more students
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<
```

12. Exit

```
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<
Enter your option : 10
thanks
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<
```