FIRST TERM PROJECT

Student management system| learn in depth| Mohamed Elgohary

First term project

- Final project 2

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- Project name: System Management System

Description

- A system that registers students in courses and save their information.

- The system has several features such adding, deleting, updating students.

Problem Statement

Writing a program that build a software for Student Information Management system that can perform following operations:

- Store the First name of the student

- Store the last name of the student

- Store the roll number for each student

- Store the GPA for the student

- Store the courses registered by the student

APPROACH

- Add student by file

- Add student Manually

- Find student by roll number

- Find student by first name

- Find students in course

- Count students

- Delete student

- Update student

Program implementation

- .c & .h Files
  - main.c
  - Fifo.c
  - Fifo.h
  - Functions.c
  - Functions.h

-for more info…List location or contact for specification (or other related documents)

Simulation

- Home Screen
  - System options

```
[INFO] fifo_init is done
======================Student Management System=======================
Choose one Option form below:-
1-Add student details from file
2-Add student details Manually
3-Find student by the roll number
4-Find student by the first name
5-Find the students registered in a course
6-Count of the students
7-Delete a student
8-Update student informations
9-Show all informations
10- Exit
Enter your choice: |
```
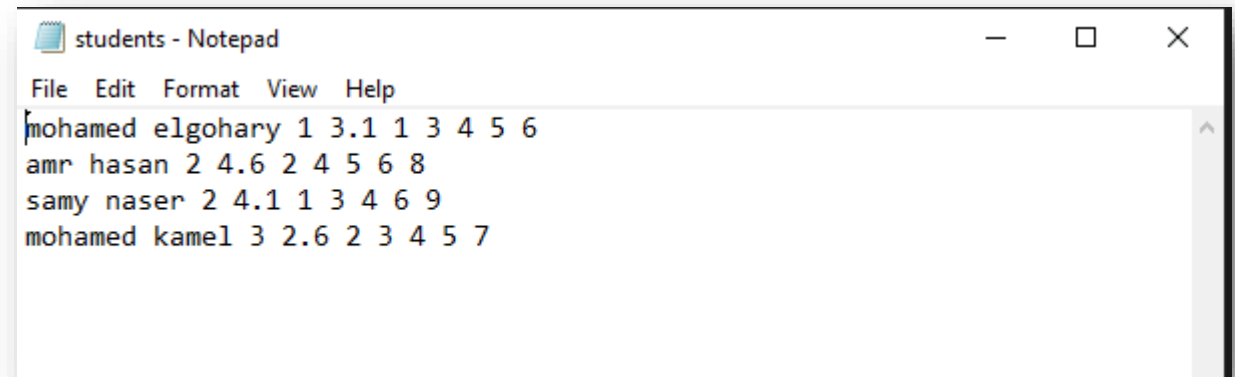
Simulation

- Add students from a file

```
Enter your choice:
1
[INFO] Roll number 1 saved successfully
[INFO] Roll number 2 saved successfully
[ERROR] Roll number 2 is already taken
[INFO] Roll number 3 saved successfully
```

students - Notepad

File   Edit   Format   View   Help

```
mohamed elgohary 1 3.1 1 3 4 5 6
amr hasan 2 4.6 2 4 5 6 8
samy naser 2 4.1 1 3 4 6 9
mohamed kamel 3 2.6 2 3 4 5 7
```

Simulation

- Add students from a file
  - Show students

```
Enter your choice:
9
[INFO]   student number 1
[INFO]   student first name: mohamed
[INFO]   student last name: elgohary
[INFO]   student GPA: 3.10
[INFO]   student roll number: 1
[INFO]   student course id:
[INFO]   Course id[1] = 1 Course id[2] = 3 Course id[3] = 4 Course id[4] = 5 Course id[5] = 6
[INFO]   student number 2
[INFO]   student first name: amr
[INFO]   student last name: hasan
[INFO]   student GPA: 4.60
[INFO]   student roll number: 2
[INFO]   student course id:
[INFO]   Course id[1] = 2 Course id[2] = 4 Course id[3] = 5 Course id[4] = 6 Course id[5] = 8
[INFO]   student number 3
[INFO]   student first name: mohamed
[INFO]   student last name: kamel
[INFO]   student GPA: 2.60
[INFO]   student roll number: 3
[INFO]   student course id:
[INFO]   Course id[1] = 2 Course id[2] = 3 Course id[3] = 4 Course id[4] = 5 Course id[5] = 7
```

Simulation

- Add students manually
  - Correct adding
  - Wrong adding

```
Enter your choice:
2
Enter first name: mostafa
Enter last name: samir
Enter roll number 2
Enter the gpa: 3.2
Enter course id [IDs available only from 0 to 9]
[WARNING] you must choose 5 courses
3
4
5
6
8
[ERROR] Roll number already token
```

```
Enter your choice:
2
Enter first name: tamer
Enter last name: saad
Enter roll number 4
Enter the gpa: 2.5
Enter course id [IDs available only from 0 to 9]
[WARNING] you must choose 5 courses
3
4
6
8
9
[INFO] Student Added Successfully
```

Simulation

- Add students manually
  - Show students

```
9
[INFO]    student number 1
[INFO]    student first name: mohamed
[INFO]    student last name: elgohary
[INFO]    student GPA: 3.10
[INFO]    student roll number: 1
[INFO]    student course id:
[INFO]    Course id[1] = 1 Course id[2] = 3 Course id[3] = 4 Course id[4] = 5 Course id[5] = 6
[INFO]    student number 2
[INFO]    student first name: amr
[INFO]    student last name: hasan
[INFO]    student GPA: 4.60
[INFO]    student roll number: 2
[INFO]    student course id:
[INFO]    Course id[1] = 2 Course id[2] = 4 Course id[3] = 5 Course id[4] = 6 Course id[5] = 8
[INFO]    student number 3
[INFO]    student first name: mohamed
[INFO]    student last name: kamel
[INFO]    student GPA: 2.60
[INFO]    student roll number: 3
[INFO]    student course id:
[INFO]    Course id[1] = 2 Course id[2] = 3 Course id[3] = 4 Course id[4] = 5 Course id[5] = 7
[INFO]    student number 4
[INFO]    student first name: tamer
[INFO]    student last name: saad
[INFO]    student GPA: 2.50
[INFO]    student roll number: 4
[INFO]    student course id:
[INFO]    Course id[1] = 3 Course id[2] = 4 Course id[3] = 6 Course id[4] = 8 Course id[5] = 9
```

Simulation

- Find a student by roll number

```
Enter your choice:
3
Enter student's roll number: 2
[INFO]   student first name: amr
[INFO]   student last name: hasan
[INFO]   student GPA: 4.60
[INFO]   student roll number: 2
[INFO]   student course id:
[INFO]   Course id[1] = 2 Course id[2] = 4 Course id[3] = 5 Course id[4] = 6 Course id[5] = 8
```

Simulation

- Find a student by first name

```
Enter your choice:
4
Enter student's first name: mohamed
[INFO]   student first name: mohamed
[INFO]   student last name: elgohary
[INFO]   student GPA: 3.10
[INFO]   student roll number: 1
[INFO]   student course id:
[INFO]   Course id[1] = 1 Course id[2] = 3 Course id[3] = 4 Course id[4] = 5 Course id[5] = 6
[INFO]   student first name: mohamed
[INFO]   student last name: kamel
[INFO]   student GPA: 2.60
[INFO]   student roll number: 3
[INFO]   student course id:
[INFO]   Course id[1] = 2 Course id[2] = 3 Course id[3] = 4 Course id[4] = 5 Course id[5] = 7
```

Simulation

- Count the number of students

```
Enter your choice:
6
[INFO]  Number of students = 4
[INFO]  You can add up to 50 students
[INFO]  You can add 46 more students
```

Simulation

- Delete a student from entering his roll number

```
Enter your choice:
7
Enter the roll number for the student to delete: 3
[INFO] Student deleted successfully
```

```
9
[INFO]    student number 1
[INFO]    student first name: mohamed
[INFO]    student last name: elgohary
[INFO]    student GPA: 3.10
[INFO]    student roll number: 1
[INFO]    student course id:
[INFO]    Course id[1] = 1 Course id[2] = 3 Course id[3] = 4 Course id[4] = 5 Course id[5] = 6
[INFO]    student number 2
[INFO]    student first name: amr
[INFO]    student last name: hasan
[INFO]    student GPA: 4.60
[INFO]    student roll number: 2
[INFO]    student course id:
[INFO]    Course id[1] = 2 Course id[2] = 4 Course id[3] = 5 Course id[4] = 6 Course id[5] = 8
[INFO]    student number 3
[INFO]    student first name: tamer
[INFO]    student last name: saad
[INFO]    student GPA: 2.50
[INFO]    student roll number: 4
[INFO]    student course id:
[INFO]    Course id[1] = 2 Course id[2] = 3 Course id[3] = 6 Course id[4] = 5 Course id[5] = 7
```

Simulation

- Find the students registered in a course

```
Enter your choice:
5
Enter the course ID: 2
[INFO]   student number 1: amr hasan
[INFO]   student number 2: tamer saad
```

Simulation

- Find a student by roll number

```
8
Enter student roll number to update: 1
Choose from below what you want to update:
1-first name
2-last name
3-GPA
4-roll number
5-courses
Enter your choice: 2
Enter the new last name: hany
[INFO] Update finished Successfully
```

```
Enter your choice:
3
Enter student's roll number: 1
[INFO]   student first name: mohamed
[INFO]   student last name: hany
[INFO]   student GPA: 3.10
[INFO]   student roll number: 1
[INFO]   student course id:
[INFO]   Course id[1] = 1 Course id[2] = 3 Course id[3] = 4 Course id[4] = 5 Course id[5] = 6
```