School Management System

Ahmed Alaa Eldin

Description

This program is used to store and manipulate students data.
The student data is (Name , ID , Address , Phone number , Math degree , Science degree).
The program provides multiple functionalities will be discussed later.
The program can read initial database from a CSV file to start with(The data have to be formatted in the right way).

Functionalities

Main menu

In this the program shows options for the user to choose from.

```
Main Menu
Insert the number of the operation :
1 Add new student
2 Delete student
3 List students
4 Edit student data
5 List students according to a subject
6 Update students scores
7 Print student data
0 EXIT
```

Add new student

This allows the user to add a new student to the students database.

```
Name : Abdulrahman Khaled
Date of birth : 27th of october 2000
Phone number : 01245787878
Address : Helwan
ID : 12
Math grade : 15
Science grade : 15
```

Delete Student

This allows the user to delete a student from the data base by entering the student's ID.

List Students

This allows the user to print all of students data in alphabetical order.

```
Name : Abdulrahman Khaled ,Date of birth : 7th of october 2000 ,ID : 12 ,Math grade : 15 ,Science grade : 15 , Address : Helwan , Phone number : 01245787878
Name : Ahmed Alaa ,Date of birth : 24th November 2000 ,ID : 1 ,Math grade : 15 ,Science grade : 16 , Address : Helwan , Phone number : 0151245315
Name : Hassan Labib ,Date of birth : 12th August ,ID : 3 ,Math grade : 15 ,Science grade : 12 , Address : 6th of October , Phone number : 01245315122
Name : Mohamed Hamdy ,Date of birth : 10th October 1999 ,ID : 2 ,Math grade : 17 ,Science grade : 16 , Address : Maadi , Phone number : 0151432456
```

Edit student data

This allows the user to edit the data of any student but he need to provide the student's ID first then choose which data he wants to edit.

```
4
Enter the ID of the student : 1
Enter what you want to change :
1- Name.
2- ID.
3- Math grade.
4- Science grade.
5- Address.
6- Date of birth.
7- Phone number.
0- Done.
3
Enter new Math grade : 10
```

Printing students data according to a certain grade

This prints a menu to choose how to sort the data.

```
5
Choose the subject
3 Math
4 Science
4
Name : Mohamed Hamdy ,Date of birth : 10th October 1999 ,ID : 2 ,Math grade : 17 ,Science grade : 16 , Address : Maadi , Phone number : 0151432456
Name : Ahmed Alaa ,Date of birth : 24th November 2000 ,ID : 1 ,Math grade : 15 ,Science grade : 16 , Address : Helwan , Phone number : 0151245315
Name : Hassan Labib ,Date of birth : 12th August ,ID : 3 ,Math grade : 15 ,Science grade : 12 , Address : 6th of October , Phone number : 01245315122
```

Update students scores

This allows the user to update students scores in a certain subject but the user must enter the scores with respect to students IDs.

```
6
Enter the subject
3 MATH
4 Science
3
Enter the score with respect to Students ID (Ascending)
18 20 19
```

We print the data after updating :

```
Name : Mohamed Hamdy ,Date of birth : 10th October 1999 ,ID : 2 ,Math grade : 20 ,Science grade : 16 , Address : Maadi , Phone number : 0151432456
Name : Hassan Labib ,Date of birth : 12th August ,ID : 3 ,Math grade : 19 ,Science grade : 12 , Address : 6th of October , Phone number : 01245315122
Name : Ahmed Alaa ,Date of birth : 24th November 2000 ,ID : 1 ,Math grade : 18 ,Science grade : 16 , Address : Helwan , Phone number : 0151245315
```

Print student data

This allows the user to print a student data by entering the student's ID.

```
7
Enter student's ID : 1
Name : Ahmed Alaa ,Date of birth : 24th November 2000 ,ID : 1 ,Math grade : 15 ,Science grade : 16 , Address : Helwan , Phone number : 0151245315
```

CSV file structre

The CSV file contains the initial database of the school and this is an example of such file.

```
1   Ahmed Alaa,24th November 2000,Helwan,1,0151245315,15,16
2   Mohamed Hamdy,10th October 1999,Maadi,2,0151432456,17,16
3   Hassan Labib,12th August,6th of October,3,01245315122,15,12
```