Student Data Management System

A school or university is a base of knowledge and an educational institution that students can rely on. Therefore, a proper database of students must be maintained to keep all updated records and to be able to easily share information with students.

Most schools and colleges rely on sophisticated software tools known as "Student Information Systems (SIS)" which maintains all student files and administrative procedures including exams, attendance and other activities.

In recent years, the use of student management systems has improved the performance and efficiency of the education industry. The tool productively took over the administration department's workload with a well-organized, simple and reliable online school management software.
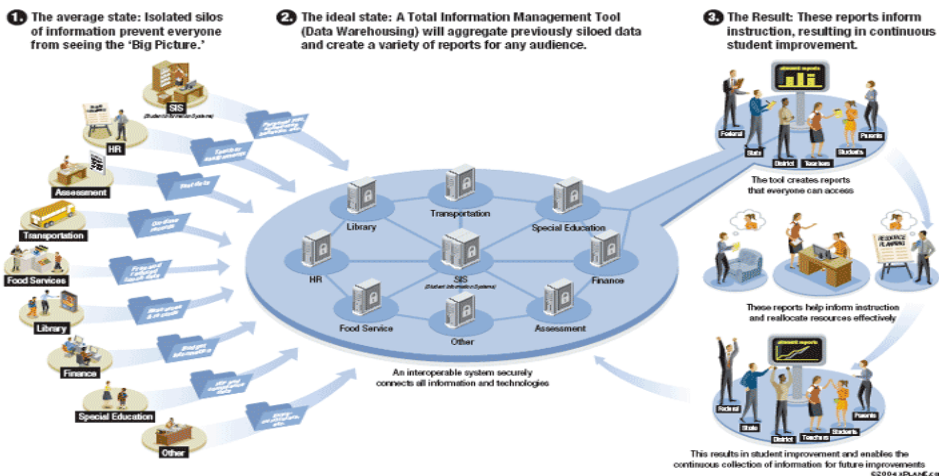
Benefits of using this system:

1. Better utilization of time and resources
2. Enhanced productivity
3. Centralized database
4. Improves student's success
5. Automatic updates and multiple backups
6. Better parental involvement

Improving achievement through Student Data Management   XPLANATIONS by XPLANE

About the project:

The student management system is based on the concept of student information management. Before the user can enter the main menu, it must be accessed via the login system. Users can then add, update, delete, view and search details to manage student information. This mini-project has limited functionality, but includes basic functionality.
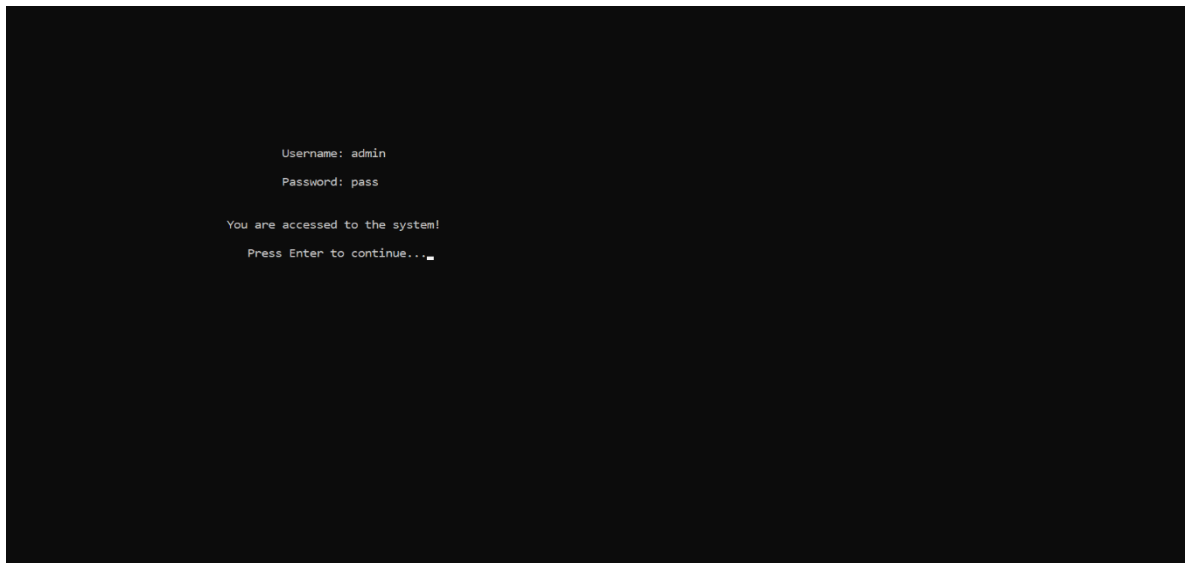
When it comes to student management system functionality, users can add various information about students. To do this, the user must provide his/her ID, full name, class, industry, address, email, role number, and contact details. Users can also easily modify all available records. Before changing a student's record, the user must enter an appropriate name that indicates the old available record. After that, the user can change all fields. It's very easy to delete the record here. The user simply enters the student's first and last name. To view a student's record, users must search for it. This is done by entering the student's full name. The system then displays all available details.

The system creates external files to permanently store user data. This program is mainly focused on her CRUD with search functionality. The student management system was developed using the C++ programming language and various variables (strings) were used in the development.
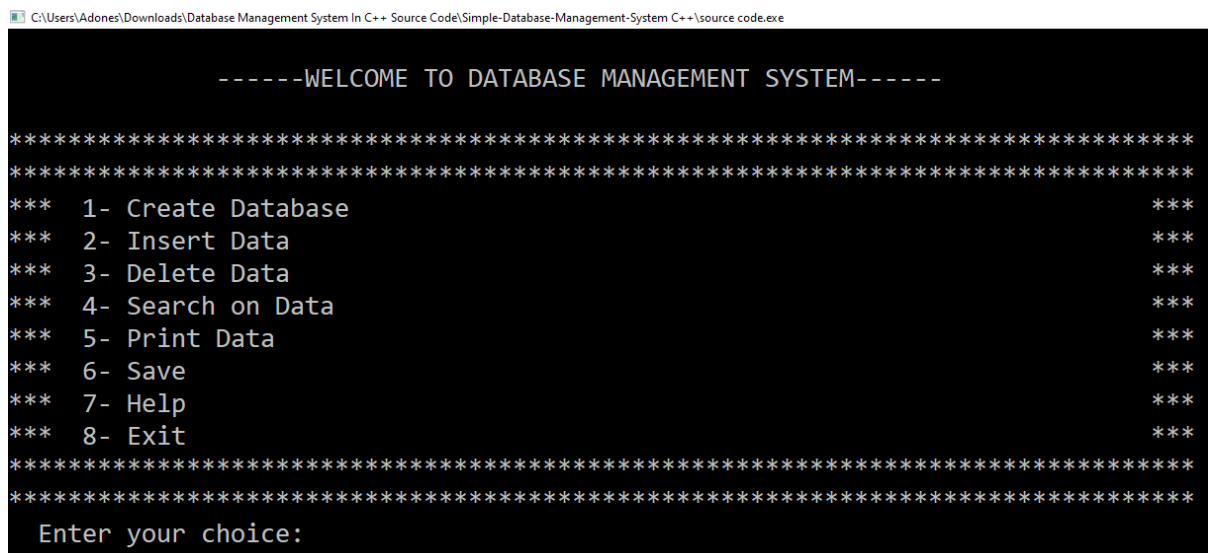
Features:
1. Login System
2. Add Students
3. Modify details
4. Remove students
5. Search students

Screen 1 (Login Window):


```
                    Username: admin
                    Password: pass

              You are accessed to the system!
                 Press Enter to continue..._
```

Screen 2 (Window for performing different operations):

When you start the project from any compiler or by double-clicking the executable.exe file, you'll see the image shown below is the main screen window and for system's key features.

```
        ------WELCOME TO DATABASE MANAGEMENT SYSTEM------

*************************************************************************
*************************************************************************
***   1- Create Database                                            ***
***   2- Insert Data                                                ***
***   3- Delete Data                                                ***
***   4- Search on Data                                             ***
***   5- Print Data                                                 ***
***   6- Save                                                       ***
***   7- Help                                                       ***
***   8- Exit                                                       ***
*************************************************************************
*************************************************************************
  Enter your choice:
```

Screen 3 (Database Creation):
In the image below is for creating a database name.

```
C:\Users\Adones\Downloads\Database Management System In C++ Source Code\Simple-Database-Management-System C++\source code.exe        —   □   ×
You chose 1 to create a database, Please enter the Name, ID and GPA of the student
pedro
1
1
  What type of database arrangement you want ?
  1-Name     2-ID
2
  Do you want to do another operation?
  1- Yes    2-No
```

Screen 4 (Insert Data):

To insert new data you need to press number 2 options. After you press number 2 the program will ask you to enter the name, ID and the GPA of the student.

```
C:\Users\Adones\Downloads\Database Management System In C++ Source Code\Simple-Database-Management-System C++\source code.exe        —   □   ×
  You chose 2 to insert data , Please enter number of students you want to save .
2
 Please enter name of student , Please enter the Name, ID and GPA of the student
Juan
1
1
 Please enter name of student , Please enter the Name, ID and GPA of the student
Pedro
2
2
  Do you want to do another operation?
  1- Yes    2-No
```

Screen 5 (When a record is to be searched):

To search student related data you need to press number 4 options. After you press number 4 the program will ask you to enter the number of ID you want to search after that they will display the student details.

```
C:\Users\Adones\Downloads\Database Management System In C++ Source Code\Simple-Database-Management-System C++\source code.exe        —   □   ×
You chose 4 to search on data,Please enter number of students you want to search on
1
 Please enter ID of student
1
Juan    1       1
  Do you want to do another operation?
  1- Yes    2-No
```

Screen 6 (Print Data):

To print data you need to press number 5 options. After you press number 5 the user has to enter the number of students you want to print.

```
    Name              ID         GPA

Juan      1          1
pedro     1          1
Pedro     2          2
  Do you want to do another operation?
  1- Yes    2-No
```

Screen 7 (Delete Data):

To delete class students data you need to press number 3 options. After you press number 3 the program will ask you to enter the number of students you want to delete.

```
You chose 3 to delete data, Please enter number of students you want to delete
1
Please enter ID of student
1
  Do you want to do another operation?
  1- Yes   2-No
```