**ReadMe**

**Flow**

* A main menu at the start of the program asks who are you an admin teacher or student.
* After that it validates Username and Password, which is clearly shown before the input is asked. So there’s no need to make a separate file where you can look that up.
* After the main menu, you are shown the respected menu in which you have logged in.
* You can select options or go back to the main menu.
* Please read the console instructions carefully about what information is asked of you to avoid any confusion.
* All the needed info to operate the program is given by the console clearly.

**Code**

* The code is written and designed from the ground up using Object Oriented Programming approach and using its concepts.
* There are mainly 4 classes, description of each is below

**FileHandling**

* + This class, as name suggests deals with handling files.
  + This class is made to ensure strict measures of Data protection, Encapsulation and Data hiding.
  + Only this class can open, close or edit any file. Simply only this class accesses files. No other class can do that.
  + This is done to ensure Data Hiding.
  + If Admin wants to change add or update a student, he won’t get access to the file of all students, and He will only get access to the relevant class or roll number. This approach can be seen throughout the Program.
  + To ensure data encapsulation, all the relevant stuff to file is done in this class.
  + The functions that are for internal File Processing are private so they can’t be called from outside the class in any way.
  + All the functions in this class are protected to ensure no file opening or closing authority is given in main.
  + Only after logging into your relevant class you can access the relevant functions
  + The class is made virtual to ensure that none of its object can be made, so now there is no way to access this class’ functions without inheriting it on another class.
  + To access it from any other class, you first need to login.
  + Memory has been given special care and there is no memory leak or dangling arrays.

**Admin, Teacher and Student**

* All these classes will give access to relevant functions only after you have logged in.