**Software Requirements for Student Management System**

**1. Student Data Storage**  
 The system must store details for 58 students, with every student having these information:

◦ Name  
 ◦ USN (exactly 10 characters)  
 ◦ Gender ('M' for Male or 'F' for Female)  
 ◦ Date of Birth (DD/MM/YYYY format)  
 ◦ Mobile Number (Exactly 10 digits)

**2.Rules**

* The system should make sure that no two students have the same USN.
* Data should be in correct format (ex: 10-character USN, correct gender format, etc.).
* The system should handle incorrect input or missing information.
* All student information should be saved to make sure that the data is not lost when the system is closed.
* It should be easy-to-use.

**3. Features**

### [1] **Adding a Student**

When you choose to add a student:

* The system will prompt you to enter the student's **ID**, **name**, **age**, **grade and mobile number**.
* This information is stored in memory (for example, in an array or a list of students).
* Each student will have a unique ID to differentiate them from others.

### [2] **Deleting a Student**

When you want to delete a student:

* The system will ask for the **ID** of the student you want to remove.
* It will search through the list of students to find a match.
* If the student with the given ID is found, their record will be deleted by removing their entry from the list.
* The remaining student records will shift to fill the gap left by the deleted student.

### [3] **Displaying Students**

When you choose to display students:

* The system will show a list of all students currently stored.
* For each student, it will display their **ID**, **name**, **age**, and **grade**.
* If there are no students in the system, it will notify you that the list is empty.

### [4] **Updating a Student**

When you want to update a student's information:

* The system will ask for the **ID** of the student you wish to update.
* It will search the list to find the student with the matching ID.
* Once found, it will prompt you to enter new details such as the student's name, age, or grade.
* The student’s information will be updated with the new data you provide.

### [5] **Exiting the Program**

When you choose to exit:

* The system will stop accepting input and close the program.
* Before exiting, it can optionally save the data to a file, so that any updates or added students are not lost when you reopen the program.