Student Management System Overview

1. **Purpose:**

   The system allows users to add, edit, and delete student details such as name, ID, email, contact number, and course. All data is stored persistently in the browser using **localStorage**.

2. **Core Features:**

   - **Add Student**: Users can add student details by filling form.
   - **Edit Student:** Users can edit student details by selecting an edit option.
   - **Delete Student**: Users can delete student details by clicking on delete.
   - **Data Storage**: All data stored in local storage so data show after the page refreshed.

3. **Validation:**
   - **Student Name:** Accepts only letters and space.
   - **Student ID:** Accepts only numeric values.
   - **Email:** Accepts only valid email format (e.g., sandeepjobs03@gmail.com).
   - **Contact Number: Accepts only numeric values.**
   - **Course: Accepts any non-empty value.**

4. **Flow of Operations:**
   - **Add Details:**
     - When the user clicks the "Add Student" button, the system validates the form fields.
     - If any field is empty or contains invalid data (like an invalid email or non-numeric student ID), the system alerts the user and prevents the student from being added.
     - If the form is valid, a new student object is created and added to the list stored in localStorage.
   - **Edit Student:**
     - When the user clicks the "Edit" button next to a student's details, the student's data is pre-populated in the input fields..
     - The user can modify the details, and once they save, the changes are updated in localStorage.

- The previous student entry is deleted from the list before updating it With new data.

- **Delete Student:**
    - When the user clicks the "Delete" button next to a student's record, that student's entry is removed from localStorage.
    - The user can modify the details, and once they save, the changes are updated in localStorage.
    - The list is then re-rendered to reflect the updated data.

5. Data Heandling:

- **localStorage** is used to store the student data. The system retrieves the data from **localStorage** whenever the page is loaded, ensuring that all previously added students are displayed.
- **Array Operations** are used to manage the list of students:
    - push() to add a new student..
    - splice() to remove a student.
    - The data is stored in JSON format, using JSON.stringify() when saving and JSON.parse() when retrieving.

6. User Interface:

- The system provides a user-friendly interface where users can see a list of all students and interact with their data through **Add**, **Edit**, and **Delete** buttons.
- The form is designed to be responsive and guides the user with appropriate field validations.

7. Error Handling:

- The system provides feedback to the user for invalid inputs via alert messages.
- It also handles empty or incorrect data gracefully by preventing

5. Summary of Key Concepts

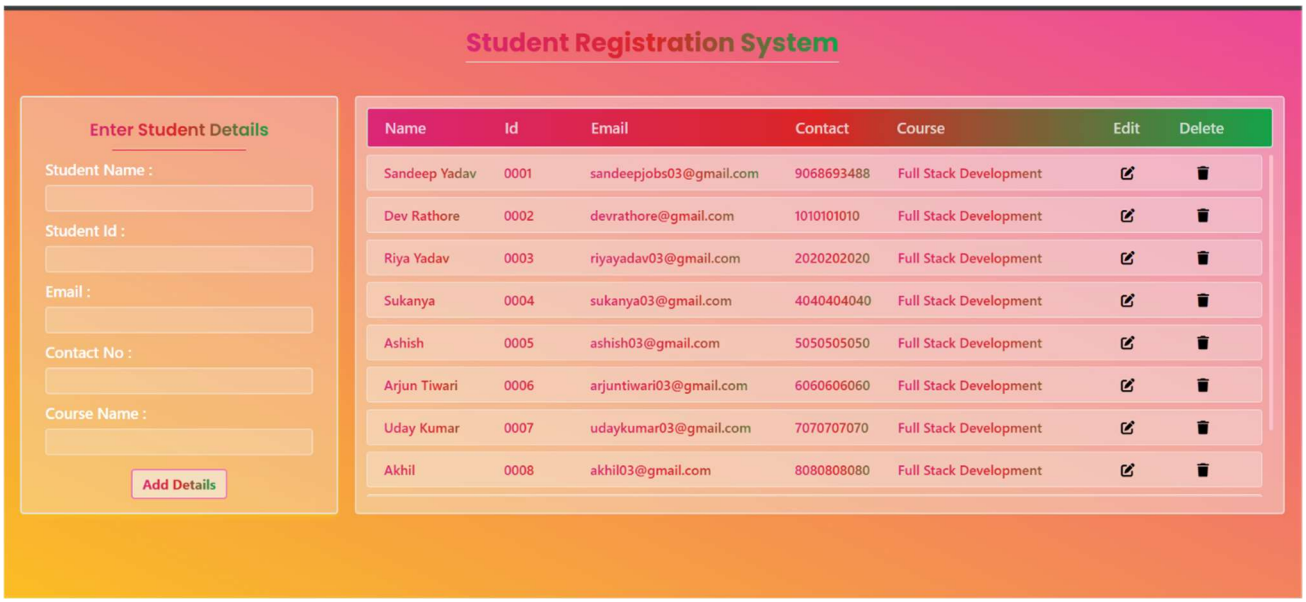
1. **localStorage:** Used for storing data across browser sessions.
2. **Form Validation**: Ensures correct data types and values are entered by the user.
3. **CRUD Operations:**
    - **Create**: Add new student records.
    - **Read**: Display stored student records.
    - **Update**: Edit existing student records.
    - **Delete**: Remove student records.
4. **Data Flow**: User input is validated, processed, stored in localStorage, and displayed dynamically on the UI.
5. **User Interaction**: The system allows users to interact with the data through buttons to add, edit, and delete student details.

Conclusion

This project is a simple but effective application for managing student data. It highlights fundamental web development concepts, including DOM manipulation, localStorage, form validation, and CRUD operations.

Note: This App is not Fully Responsive, please open in large devices for better experience.

GitHub Link: https://github.com/SandyBhai03/Internshala-Assignments/tree/main/Assignment-Course4/DOM%20JS


Student Registration System
Enter Student Details
Student Name :
Student Id :
Email :
Contact No :
Course Name :
Add Details
Name Id Email Contact Course Edit Delete
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