

# Project Title: Library Management

## 1. Overview

Library Management is a lightweight web application built only with **HTML**, **CSS** and **JavaScript**. It enables users to add, view, change and remove book entries directly in their browser. All information is stored locally in the browser's **localStorage**, so there is no need for an online database or server.

This is a small demonstration of a CRUD (Create, Read, Update, Delete) system. It's meant as a learning aid, a simple practice exercise or for maintaining small personal book lists.

## 2. Aim

This project's aim is to demonstrate, in a simple way, how to:

- Collect book details through a form
- Display those details in a structured table
- Allow users to modify or delete any entry
- Keep the list intact after the page reloads using localStorage

Because it is 100% client-side, it will still work offline once the files are downloaded.

## 3. Main Functions

- **Adding Books:** Users enter Title, Author, Year and ISBN and click "Add". The entry appears instantly in the list and is saved.
- **Viewing Books:** All stored records are shown in an organised table with all key details.
- **Editing Books:** Each row has an "Edit" button that opens quick prompts to change values.
- **Deleting Books:** "Delete" removes the chosen row after a confirmation.
- **Persistent Storage:** The browser keeps all data under the key `simple_lib_books_v1`, so it stays even after the window is closed.

## 4. Project Files

- `index.html` – contains the form, the table structure and links to style and script files.
- `styles.css` – provides the layout, colours, fonts and other design elements.

- `script.js` – holds the JavaScript code that manages input, output and `localStorage`.

All three should sit together in the same folder to work properly.

## 5. How the Data Works

Each book is stored as a simple object:

```
{  
  "title": "Book Styles",  
  "author": "Book Author Name",  
  "year": "2000",  
  "isbn": "123123456"  
}
```

The app keeps all these objects in an array and saves it as JSON in the browser.

## 6. Steps to Use

1. Create a folder on your computer.
2. Copy `index.html`, `styles.css` and `script.js` into it.
3. Open `index.html` with Chrome, Firefox or Edge.
4. Add some books — they'll appear in the table.
5. Close and reopen — your books remain.

## 7. Possible Improvements

- **Extra Fields:** Include genre, publisher, or other details in the form and table.
- **Better Editing Interface:** Replace prompt boxes with a small popup or inline form.
- **Server Storage:** Swap `localStorage` for API calls to allow multiple users.
- **New Design:** Adjust `styles.css` for different colours, fonts and layout.

## 8. Helpful Hints

- The list starts empty — add at least one book to see it.
- To erase everything: open browser developer tools → Application → Local Storage and delete `simple_lib_books_v1`.
- It's completely local, so you can experiment without harming any real data.

## 9. Short Description for Reports

“Library Management is a simple web app using HTML, CSS and JavaScript to demonstrate Create, Read, Update and Delete operations with browser `localStorage`. It lets users add, view, edit and delete book entries without needing a server. It's ideal for learning and small demonstrations.”

## 10. Final Note

This small project is an easy model of a CRUD application built purely on the front end. It helps newcomers learn about forms, tables, JavaScript code and browser storage. It can also act as a foundation for more advanced systems.