Task Manager Pro — Personal Productivity Dashboard (Frontend-only)

Date

27 June 2025

Objective

Develop a frontend-only task management web application using **HTML**, **CSS (Bootstrap 5)**, and **Vanilla JavaScript**. The app will allow users to securely register, log in, and manage their personal task lists. All data must be stored in the browser via `localStorage` or `sessionStorage`, with isolated task data per user. The application should include real-time UI updates, responsive design, and export features.

Scope

In Scope

- Authentication (Sign-up, Login, Logout)
- Session management using local/session storage
- Task creation, editing, deletion, filtering, and sorting
- Data persistence per user via browser storage
- Responsive UI using Bootstrap 5
- GitHub-hosted deployment (via GitHub Pages)

Out of Scope

- Backend systems or APIs
- Frameworks like React, Vue, Angular
- Third-party authentication or cloud-based storage

Functional Requirements

1. Authentication

- **Signup Page (** `signup.html` **)**
- Register with unique username and password

- Validate against existing users in `localStorage`

- **Login Page (** `login.html` **)**

- Validate credentials

- "Remember Me" functionality:

  - If checked → session in `localStorage`
  - If unchecked → session in `sessionStorage`

- **Session Guard**

- `index.html` must be inaccessible without authentication

- **Logout**

- Clears session storage
- Redirects to `login.html`

2. Task Management (`index.html`)

- Each task must contain:
- Title
- Description
- Priority: Low / Medium / High
- Status: To Do / In Progress / Done
- Due Date

- Completed: true/false

- Tasks must be:

- Created, updated, and deleted by the user
- Stored under `tasks:<username>` in `localStorage`
- Hidden if due date is before today

UI/UX Requirements

- Use Bootstrap 5 for layout and styling
- Responsive grid layout for mobile and desktop
- Display tasks using Bootstrap cards
- UI indicators:
- ✅Checkmark when task is complete
- Strikethrough and opacity for completed tasks
- Priority and status badges
- Warning badge for tasks due today/tomorrow
- Include:
- Filter by priority
- Sort by due date or priority
- Mark as complete via checkbox
- Toast/alert feedback on actions
- Export all tasks to `.csv`

Non-Functional Requirements

Category	Specification
Storage	Use of `localStorage` and `sessionStorage` only
Deployment	Must be hosted via GitHub Pages
Frameworks	Plain HTML, Bootstrap, and JavaScript only
Performance	Efficient rendering with up to 100 tasks
Accessibility	Use semantic HTML and Bootstrap best practices
Code Quality	Modular, readable, well-commented JavaScript

Acceptance Criteria

#	Requirement
1	User can sign up and log in successfully
2	Each user's tasks are isolated and securely scoped
3	Tasks with past due dates are not shown
4	Tasks can be added, edited, deleted, and marked as completed
5	Completed tasks are styled (checkmark, strike-through, faded)
6	Tasks due today/tomorrow are visually flagged
7	Sorting and filtering update the UI in real time
8	Export to CSV provides a valid file with all user tasks
9	Toasts/alerts are displayed on add/edit/delete
10	Application is fully responsive and functional across modern browsers

Deliverables

File / Link	Description
`signup.html`	User registration with validation
`login.html`	Login with session and Remember Me
`index.html`	Task dashboard with full functionality
GitHub Repository	Public repo with clean code
GitHub Pages URL	Deployed live version of the app

Example:

- Repository: `https://github.com/yourusername/task-manager-pro`
- Live Link: `https://yourusername.github.io/task-manager-pro/`