**To-Do List App**

**Project Title:** Responsive To‑Do List Application  
**Submitted By:**  
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**Abstract**

This project focuses on designing and developing a colorful, responsive To‑Do List web application. The application allows users to manage daily tasks by adding, editing, deleting, and marking them as completed. Additionally, it provides task filtering (all, active, completed), priority levels (high, normal, low), and local storage persistence to retain data across sessions. The primary goal was to create an engaging, user‑friendly interface that works seamlessly across devices. Core technologies used include HTML5, CSS3, Bootstrap, JavaScript, and jQuery. The outcome is a practical task management tool that is visually appealing, interactive, and highly accessible, making it useful for students, professionals, and anyone who wants to manage tasks efficiently.

**Objectives**

* Design a user‑friendly interface with a colorful and engaging theme.
* Develop responsive layouts compatible with desktop, tablet, and mobile viewports using Bootstrap.
* Implement JavaScript and jQuery for interactivity (adding, editing, deleting, filtering tasks).
* Store tasks persistently using browser localStorage.
* Ensure accessibility, readability, and responsiveness across devices.

**Scope of the Project**

* Focused primarily on front‑end development.
* Implemented task management functionalities (add, edit, delete, mark completed).
* Included filters for active and completed tasks.
* Enhanced user experience with animations, priority labels, and colorful design.
* LocalStorage used for persistence but no server‑side or backend integration.
* Supports desktop, tablet, and mobile screens with a responsive layout.
* Built with only open‑source tools and libraries (Bootstrap, jQuery, Font Awesome).

**Tools & Technologies Used**

| **Tool/Technology** | **Purpose** |
| --- | --- |
| **HTML5** | Markup and content structure |
| **CSS3** | Styling, layout, responsiveness |
| **Bootstrap 5** | Responsive grid system, components |
| **jQuery** | Simplified DOM manipulation, event handling |
| **JavaScript** | Core interactivity and task logic |
| **Font Awesome** | Icons for better UI experience |
| **VS Code** | Code editor |
| **Chrome DevTools** | Testing and debugging |

**HTML Structure Overview**

* Used semantic HTML5 tags: <header>, <main>, <section>, <footer>.
* Organized into sections: Header/Branding, Task Input Area, Task List, Filters, and Footer.
* Navigation and task controls implemented using <button>, <ul>, and form inputs.
* Modal component used for editing tasks with Bootstrap’s modal feature.

**CSS Styling Strategy**

* External CSS embedded within the <style> tag in the HTML file.
* Styles structured with variables, reusable classes, and comments.
* Techniques used:
  + **Flexbox** and **Bootstrap Grid** for layout and alignment.
  + **Media Queries** to ensure responsiveness across devices.
  + **Animations & Transitions** for hover effects and task feedback.
  + **Colorful Gradients** and badges to highlight priorities.
* Card‑based design with rounded corners and shadows to make the UI engaging.