To-Do List Project Report

1. Project Title

To-Do List Application

2. Introduction

The To-Do List application is a simple yet effective tool designed to help users manage their tasks efficiently. Users can add new tasks, edit existing ones, delete tasks, and mark tasks as completed. This project was developed as part of the MLSA internship requirements and aims to demonstrate my understanding of web development using HTML, CSS, and JavaScript.

3. Objectives

- To create a user-friendly interface for task management.
- To implement features for adding, editing, deleting, and marking tasks as completed.
- To utilize local storage for persistent data management across sessions.
- To enhance skills in front-end web development.

4. Technologies Used

- **HTML**: For the structure and layout of the application.
- **CSS**: For styling and improving the visual presentation of the app.
- **JavaScript**: For dynamic functionality and interactivity.
- **Local Storage**: For storing tasks persistently in the user's browser.

5. Features

5.1. User Interface

- An input field for entering new tasks.
- A button to add tasks.
- A display area showing the list of tasks with options to edit and delete.

5.2. Functionality

- **Add Task**: Users can enter a task and click the "Add" button to store it.

- **Edit Task**: Users can edit an existing task by clicking the edit button, which populates the input field for modifications.
- **Delete Task**: Each task has a delete button that removes it from the list and local storage.
- **Mark as Completed**: Users can click on a task to toggle its completion status.

6. Implementation Details

6.1. Code Structure

- **HTML**: Contains the main layout, including an input field and a display area for tasks.
- **CSS**: Styles the application for a clean and modern appearance.
- **JavaScript**: Manages the logic for task operations and handles local storage.

6.2. Local Storage

Tasks are stored in local storage with a unique key format. This allows the application to retrieve tasks even after the browser is closed, maintaining a persistent task list.

6.3. User Interaction

Event listeners are used to manage user interactions, such as clicking buttons to add, edit, or delete tasks. The UI updates dynamically based on user actions.

7. Challenges Faced

- Ensuring data consistency when editing and deleting tasks was initially challenging, requiring careful management of local storage.
- Implementing a responsive design that works well on different screen sizes.

8. Future Improvements

- Implementing a filtering feature to sort tasks by their completion status.
- Adding a search functionality to quickly find specific tasks.
- Enhancing the user interface with animations for a more engaging experience.

9. Conclusion

The To-Do List application successfully meets the project objectives, providing a practical tool for task management. This project has enhanced my skills in web development and deepened my understanding of JavaScript and local storage.

10. References

- MDN Web Docs
- W3Schools
- CSS Tricks