INTRODUCTION:

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Project Report: To-Do List Application

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1. Introduction

The To-Do List application is a simple yet powerful task management tool designed to help users organize their daily tasks and enhance productivity. By allowing users to create, update, delete, and track tasks, this project aims to simplify task management and improve users' daily workflow. The application targets users who need an efficient way to keep track of personal and work-related tasks.

2. Objectives

The primary goals of the To-Do List project are:

- To create a functional, user-friendly To-Do List application where users can manage their tasks.
- To implement data storage that enables tasks to be saved and accessible even after the application is closed.
- To provide an option to **categorize tasks by priority** for task organization.

3. Scope of the Project

The scope of this project includes:

- Development of a **To-Do List application** that supports features like: adding, editing, deleting, and marking tasks.
- Integrating **categories and priority levels** (e.g., High, Medium, Low) to help users organize tasks based on significance.
- Data storage to ensure persistence data.

4. Methodology

The development process for the project followed a **Waterfall methodology** with the following stages:

1. **Requirement Analysis**: Identified key features, user requirements, and data storage needs.

2. **System Design**: Created a blueprint of the UI and database structure to support task management with priority and category.
3. **Implementation**: Developed the To-Do List application, focusing on individual features one at a time.
4. **Testing**: Conducted testing on each feature and overall functionality.
5. **Deployment**: Released the application for user feedback.

5. Design & Implementation

- **Technology Stack**: The application was developed using **JavaScript** for a web-based application, for database storage to handle task data.
- **Core Features**:
    - **Add Task**: Allows users to add tasks with details such as name, description, priority, and category.
    - **Edit Task**: Users can modify any task information, including priority or category.
    - **Delete Task**: A delete option enables task removal from the list.
    - **Mark as Complete**: Users can mark tasks as completed, with completed tasks appearing in a separate section.
    - **Category Filter**: Users can filter tasks by categories (e.g., Work, Personal, Shopping).

6. Testing

- **Unit Testing**: Each feature, such as task addition and editing, was tested individually to ensure they function correctly.
- **Integration Testing**: Verified that the UI components interact smoothly.
- **User Acceptance Testing**: Received feedback from test users, resulting in minor improvements to the task categorization and priority feature.

7. Challenges Faced

- **Priority Sorting**: Implementing sorting based on task priority while maintaining smooth UI operation required performance tuning.
- **User Feedback**: Initial feedback highlighted the need for better task categorization, leading to the implementation of additional filter options.

8. Conclusion

The To-Do List application successfully met its objectives by providing a practical task management solution that is intuitive and adaptable to users' needs. The additional features of task prioritization and categorization enhance the utility of the application. This project also provided valuable experience in **JavaScript,HTML,CSS integration**. Future enhancements could include **due dates for tasks**, **notification reminders**, and **customizable categories**.

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