

Web Development

Edo Scheduler

Task Scheduler

Batch No:

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Abstract

The Task Scheduler web application is designed to assist users in managing their daily tasks, notes, and habits efficiently. It aims to provide an intuitive and seamless user experience through a combination of modern web technologies such as HTML, CSS, JavaScript, and FullCalendar. This application allows users to add, edit, and delete tasks with different priority levels, making it easier to prioritize and organize their workload. Additionally, the notes feature enables users to capture important information, while the habit tracker helps monitor and develop new habits over time.

The calendar view, powered by FullCalendar, offers a visual representation of tasks and notes, ensuring users never miss a deadline. The responsive design guarantees usability across various devices, including desktops, tablets, and smartphones, ensuring flexibility and convenience. By focusing on a minimalistic and visually appealing interface, the Task Scheduler aims to enhance productivity and streamline task management for individuals and teams. This project embodies the integration of functionality and design to provide a practical solution for everyday organizational needs.

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1. Introduction

Effective task management is essential for achieving personal and professional productivity. In today's fast-paced world, individuals and teams require robust tools to organize their tasks, track progress, and manage deadlines. The Task Scheduler web application addresses these needs by providing a unified platform that integrates task management, note-taking, and habit tracking into a seamless user experience. The application is designed with a focus on minimalism and modern aesthetics, ensuring it is visually appealing and easy to navigate.

With features such as task prioritization, users can set the importance of each task, helping them focus on what matters most. The note-taking feature allows for the recording of important information and ideas, ensuring that nothing is forgotten. The habit tracker helps users build and maintain good habits by monitoring their consistency over time. Additionally, the calendar view offers a visual overview of all tasks and notes, making it easier to plan and manage schedules.

By leveraging technologies like HTML, CSS, JavaScript, and FullCalendar, the Task Scheduler provides a responsive and interactive experience across various devices. This application aims to enhance productivity by offering a comprehensive, user-friendly tool for effective task and time management.

2. Project Overview

Objectives

- To create a web-based task scheduler that allows users to add, edit, and delete tasks.
- To provide features like task prioritization, due dates, and notifications.
- To ensure the application is responsive and accessible across different devices.

Scope

- Included: Task creation, editing, deletion, prioritization, and notifications.
- Out of Scope: Integration with external calendar services, complex user authentication, and data persistence beyond the current session.

Target Audience

- Individuals seeking to improve their personal productivity.
- Small teams needing a simple task management solution.

3. Features and Functionality

Tasks

Users can create, edit, and delete tasks with details such as title, description, due date, and priority level.

To-Do List

A simple to-do list feature where users can add items that need to be completed. Items can be checked off as they are done.

Notes

Users can add notes to tasks for additional details or instructions. Notes can be edited or deleted as needed.

Team or Project Works

Allows for task assignment and tracking within teams or projects. Each task can be assigned to a specific team member with roles and responsibilities.

Habit Tracker

Tracks daily habits and goals. Users can mark habits as complete and monitor their progress over time.

Calendar to Display Notes

An integrated calendar view that displays tasks and notes based on their due dates. This helps users see their schedule at a glance and manage their time effectively.

Task Creation

Users can add new tasks with details such as title, description, due date, and priority level.

Task Editing and Deletion

Users can edit the details of existing tasks or delete tasks that are no longer needed.

Task Prioritization

Tasks can be assigned priority levels (e.g., High, Medium, Low) to help users focus on the most important tasks first.

Notifications

The application can provide notifications for upcoming deadlines or overdue tasks.

4. Technologies Used

- **HTML:** Used for structuring the content and layout of the web pages, enhancing accessibility and SEO.
- **CSS:** Styles the content, creating a visually appealing and responsive user interface with a minimalistic design.
- **JavaScript:** Adds interactivity and dynamic features, handling task management logic such as adding, editing, and deleting tasks, notes, and habits.
- **LocalStorage:** Persists task data across sessions, ensuring user data remains intact even when the browser is closed.
- **Bootstrap:** Helps create a responsive design with pre-styled components, speeding up development and ensuring consistency.
- **Moment.js:** Manages and manipulates dates, handling the dates of tasks and notes for accurate scheduling and deadlines.
- **FullCalendar:** An interactive calendar library that displays tasks and notes based on their due dates, providing a visual representation of the user's schedule.
- **FontAwesome:** Enhances the user interface with a library of icons, used for task priority indicators, action buttons, and other UI elements, making the application more intuitive and visually appealing.

5. Implementation Details

Architecture

The Task Scheduler project follows a client-side architecture using HTML, CSS, and JavaScript. Here's how each feature is implemented:

1. Tasks and To-Do List

- **HTML and CSS:** Structured forms and lists for task input and display. Styled using CSS for layout and visual elements with a minimal and futuristic design approach.
- **JavaScript:** Manages task creation, editing, deletion, and updates UI dynamically. Utilizes LocalStorage for data persistence.

2. Notes

- **HTML:** Includes textarea elements within task items for adding and displaying notes.
- **JavaScript:** Handles note creation, editing, and deletion functionalities. Updates task details and UI interactions accordingly.

3. Team or Project Works

- **HTML and JavaScript:** Implements task assignment features with dropdowns or checkboxes for team members. Updates task data structure to include team assignments.

4. Habit Tracker

- **JavaScript:** Tracks daily habits with checkboxes or progress bars. Stores habit completion status in LocalStorage for persistence.

5. Calendar to Display Notes

- **FullCalendar Integration:** Integrates FullCalendar plugin to display tasks and notes based on due dates. Utilizes Moment.js for date manipulation and formatting.

6. Challenges and Solutions

Challenges and Solutions

- **Challenge:** Managing complex task dependencies and team assignments.
 - ✓ **Solution:** Implemented task data structures with properties for team assignments and utilized dropdowns or checkboxes for team member selection.
- **Challenge:** Ensuring responsive design and cross-browser compatibility.
 - ✓ **Solution:** Utilized Bootstrap for responsive layout and tested extensively across different browsers and devices.

8. Future Enhancements

- **User Authentication:** Implement user accounts with login functionality to secure data and personalize user experience.
- **Real-time Collaboration:** Enable real-time updates and notifications for team members collaborating on tasks.
- **Advanced Reporting:** Introduce analytics and reporting features to track productivity metrics and task completion rates.
- **Mobile App Integration:** Develop a mobile app version for on-the-go task management and synchronization with the web platform.
- **Integration with External Tools:** Integrate with popular productivity tools such as Slack, Google Calendar, and Trello for seamless data exchange and workflow management.

9. References

- MDN Web Docs for HTML, CSS, and JavaScript reference:
<https://developer.mozilla.org>
- Bootstrap documentation for responsive design components:
<https://getbootstrap.com/docs>
- FullCalendar documentation for integrating calendar functionalities:
<https://fullcalendar.io/docs>
- Moment.js documentation for date manipulation:
<https://momentjs.com/docs>

7. Conclusion

The Task Scheduler project successfully leverages modern web technologies—HTML, CSS, and JavaScript—to create a robust application for task management. With a focus on user experience and functionality, the project aims to streamline task organization and enhance productivity. By implementing features like task creation, notes, team collaboration, habit tracking, and a calendar view, the application provides a comprehensive solution for individuals and teams alike