Countdown Timer

Problem statement-

In today’s fast-paced world, time management is crucial for both personal and professional success. Whether it's counting down to a significant event, managing time-sensitive tasks, or simply staying on track with daily routines, having an efficient countdown timer can be highly beneficial. Traditional countdown timers are often built into applications or devices that may not always be accessible. There is a need for a versatile, user-friendly web-based countdown timer that is readily available from any device with internet access.

Objective-

Develop a responsive countdown timer web application that allows users to set a specific date and time, start the countdown, and track the remaining time until the event occurs. The application should provide controls to start, stop, and reset the countdown, ensuring flexibility and ease of use.

Techniques used in App

HTML Structure

Semantic HTML Tags: The code uses semantic tags like <head>, <body>, <table>, <thead>, <tbody>, <tr>, <th>, <td>, <div>, <h1>, <p>, and <input> to structure the content logically.

Input Elements: <input type="date"> and <input type="time"> allow users to select a date and time, which are essential for calculating the countdown.

Buttons: Buttons with id attributes (calculate, stop, reset) are used to trigger JavaScript functions to start, stop, and reset the timer.

2. CSS Styling-

Custom Fonts and Colors: A Google Font (Poppins) is imported using @import for a clean, modern look, and a consistent color scheme with dark backgrounds and light text is applied for readability.

Responsive Design: Media queries are used to adjust styles based on the screen width, ensuring the countdown timer is usable on both desktop and mobile devices.

Visual Feedback: The buttons have hover and active states that change color and position to provide visual feedback to users.

3. JavaScript Functionality

Event Listeners: JavaScript window.onload initializes the event listeners for buttons. document.querySelector is used to select elements by id and attach event handlers.

Dynamic Countdown Calculation: The calculate() function computes the difference between the selected date and time and the current time, updating the countdown values (days, hours, minutes, seconds) every second using setInterval.

Resetting the Timer: The reset() function sets the countdown values back to zero, providing a reset functionality.

Time Calculation Logic: The calculateTime() function converts the time difference from milliseconds to days, hours, minutes, and seconds, and updates the display.

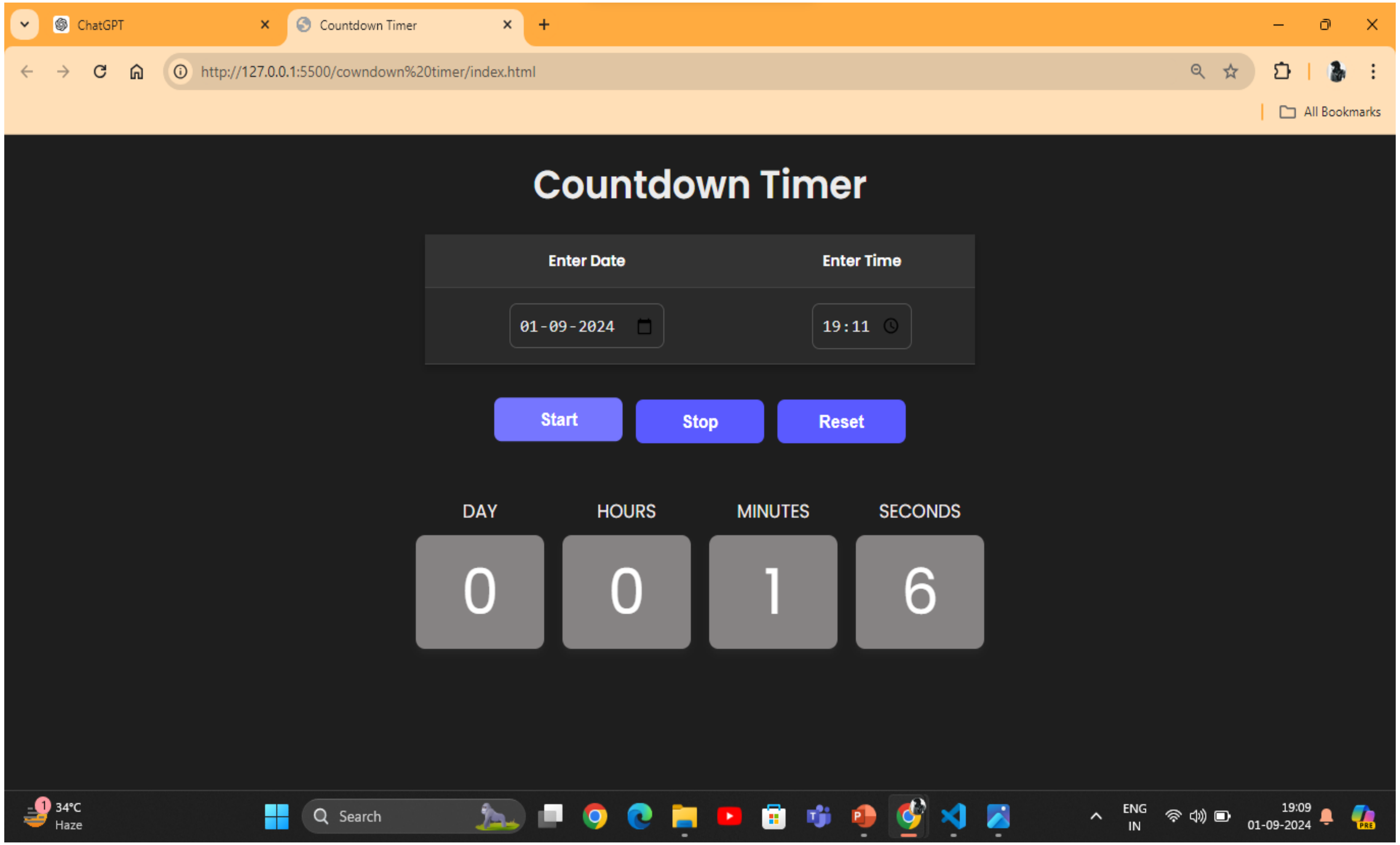
Error Handling: Basic error handling ensures that if the countdown end time has passed, the values are set to zero.

Additional Details-

Responsive Design: The CSS ensures that the layout adjusts for different screen sizes, enhancing usability on mobile devices.

User Interactions: Provides visual feedback and smooth transitions for buttons.

Output-----------



http://127.0.0.1:5500/cowndown%20timer/index.html

Countdown Timer

Enter Date: 01-09-2024

Enter Time: 19:11

DAY 0

HOURS 0

MINUTES 1

SECONDS 6