The purpose of this lab is to give you experience with timed events.

Specifications

Using PhpStorm, create at least one HTML file and one JavaScript file in the directory where you cloned the assignment. Place all JavaScript files inside a dedicated directory for better organization. You will be building a clock application that includes at least three different features:

- **Clock**
  - This feature will tell the user the current EST time. You can use this link to help you with syntax: https://tecadmin.net/get-current-date-time-javascript/
  - The clock should show the hour, minutes, seconds, and indicate AM or PM.
- **Stopwatch**
  - This feature will count upward from 0, showing hours, minutes, and seconds.
    - If you're feeling adventurous, you can also display milliseconds!
  - You can use this link as reference for functionality: https://www.timeanddate.com/stopwatch/
  - The time on the stopwatch should be displayed accurately on the web page.
- **Alarm**
  - This feature allows the user to set a time for an alarm and receive a notification when the specified time is reached. Assume that all alarms are for the same day.
  - The user should have an input option for hours, minutes, and AM/PM. You can use one, two, or three separate inputs. For AM/PM, consider using a dropdown for a better user experience.
  - For the alarm notification, use the JavaScript `alert()` method and also modify the DOM to notify the user that the alarm is going off.
- **Timer**
  - Similar to the alarm, but this feature counts down from a specified time interval.
  - The user should be able to input the time interval in hours, minutes, and seconds. You can use one, two, or three inputs.
  - You can use this link as a reference for functionality: https://www.timeanddate.com/timer/
  - The remaining time should be displayed accurately on the web page.
  - The default values for all time inputs should be 0. For example, if the user inputs "2" for minutes, it should be assumed that hours and seconds are both 0.
  - When the time is up, display an alert to the user.

As only three of the four listed features are needed, you have the freedom to select which three to include. Each feature must incorporate `setTimeout()` and/or `setInterval()`.

While aesthetics are not a priority for this lab, clarity in your page(s) is essential, and you should strive to optimize user experience (UX) as much as possible.

Constraints

- You cannot use jQuery.
- You cannot make API calls to 3rd party services.
- Like all other labs, ECMAScript modules must be used instead of ordinary CommonJS.
- Minutes and seconds must be displayed as two digits (e.g., 12:01:09 instead of 12:1:9).

Extra Credit Opportunity

- (2 pts) Successfully implement all four features

Submission

The submission for this lab is the commit ID you want graded. Submit the commit ID on Canvas.

Tips

- You can use Bootstrap for styling.
- Consider organizing your code by using multiple JavaScript files, one for each feature.
- You may create multiple pages if desired, but if you do, ensure you include a navigation menu or a list of links for easy navigation between features.