

## Midterm Activity – Create a “Weekly Sleep Tracker” Application

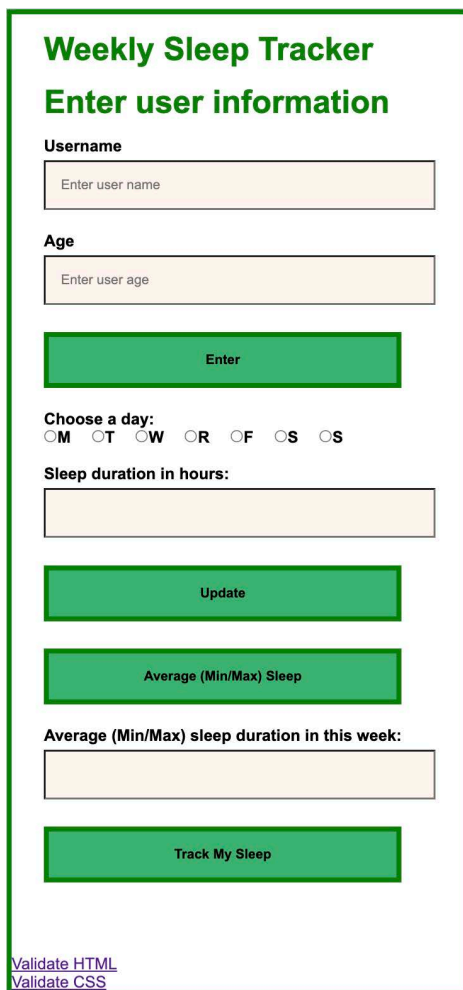
For this midterm activity, you’ll create an application that allows a user to add their information, update their sleep duration, see average (min/max) sleep duration and days on which a user sleeps less than 5 hrs. You will have 2.5 hours to complete this activity.

### Part 0: Download files

1. Download *Midterm .zip that contains the Midterm.html, Midterm.css, and Midterm.js* and save it under the Midterm folder on your computer. Then extract the zip file.
2. Verify there are no errors in all the files

### Part 1: Develop and design the application

After completion, the web application’s user interface should look like the following figure:



**Weekly Sleep Tracker**  
**Enter user information**

**Username**

**Age**

**Enter**

**Choose a day:**  
☐ M ☐ T ☐ W ☐ R ☐ F ☐ S ☐ S

**Sleep duration in hours:**

**Update**

**Average (Min/Max) Sleep**

**Average (Min/Max) sleep duration in this week:**

**Track My Sleep**

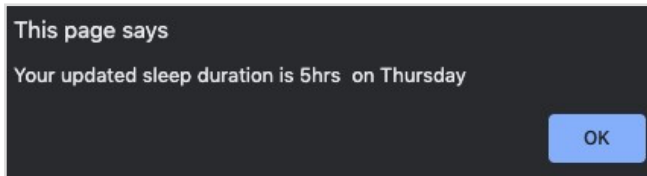
[Validate HTML](#)  
[Validate CSS](#)

1. Add a form so that it looks similar to the first part of the above figure, where you will add the following:
  - a) Header with content- “Enter user information”
  - b) Input fields will be for Username and Age. Add appropriate placeholders and labels. Input values are required for both these fields.
  - c) Labels should be bold.
  - d) The Age field should only accept numbers between 5 and 120.
  - e) The Username field should not accept more than 10 letters.
  - f) A button for form submission labeled "Enter".
2. After the form, add a radio button with appropriate labels and options of all the days from Monday through Sunday.
3. Add an input field for “Sleep duration in hours” with the appropriate label that only accepts numbers.
4. Add three buttons, for “Update”, “Average (Min/Max) Sleep”, and “Track my Sleep”
5. Add a text field to display the average, minimal and maximal sleep durations with the appropriate label.
6. All labels should be bold.
7. In the Midterm.css apply the same style to all the four buttons (Enter, Update, Average (Min/Max) Sleep, and Track My Sleep), so that they look similar to the figure. Make sure you use green background color for buttons and add a border for each button.

***Note:** Background color code used for all four buttons is 3cb371. The border color is solid green and the border is 5 pixels wide.*
8. All text boxes should use a background color SeaShell.
9. Check that there are no HTML and CSS errors.

## Part 2: Add interaction to your application

1. Two arrays with the seven **days** and its corresponding initial sleep **durations** are given to you.
2. Write the **updateSleep()** function. This event will be triggered, after a user chooses a day, enters a sleep duration, and hits the Update button. This function should read the sleep duration entered by the user, and update it in the “duration” array for the day that the user has chosen. With that, it should also show an alert - Your updated sleep duration is "—" hrs on " — " day as shown in the below figure (the style for the alert in your machine can look different).
3. If the user hits Update without entering a sleep duration, then an alert should say-"Enter a valid number for sleep duration". After an alert is shown, you should clear the input field for entering a new sleep duration.



4. Write a function to calculate average, minimal, and maximal sleep durations for the week. Name the function as **showAverageMinMaxSleep ()**.
5. The function **showAverageMinMaxSleep()** will be triggered after a user hits the Average (Min/Max) Sleep button. It should show the average, minimal, and maximal sleep durations for the week inside the input field that has a label of “Average sleep duration for this week”. Then use JS to add style. *Set the font color to green and the border color to red.*
6. Write the **displaySleepDuration()** function. This event will be triggered after a user *hovers* the mouse over the button “Track My Sleep” (please note it’s *hover* rather than *click* here). It should find out all the days on which the user slept less than 5 hours and show it on the HTML page as a table. It should also add a paragraph before the table as shown in the figure below. Note that the paragraph should show the username entered by the user.



7. Check that there are no JavaScript errors.



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**Part 4: Turn in your activity (Note: There are two steps)**

1. Upload all three files, **Midterm.html**, **Midterm.css**, **Midterm.js** files to Canvas before this midterm activity ends. Please **DO NOT** upload these files to your webpages.charlotte.edu account before Monday, March 4.
2. Then **on Monday, March 4**, please upload the above three files to webpages.charlotte.edu account, and submit the **URL** from your webpages account to the specific Midterm Activity Server URL Submission link on Canvas. Your Midterm will not be graded without this step.

***Rubric is on the next page...***

Mid-Term Activity Rubric			
Criteria	Ratings		Pts
<b>1. Form Design</b> a) Header with content (1pt) b) Appropriate input fields added. Appropriate placeholders and labels added (4) c) Required HTML validations added (4) d) A submit button (1)	10 pts Full Marks	0 pts No Marks	10 pts
<b>2. Radio button</b> Radio button added with appropriate labels and options (2)	2 pts Full Marks	0 pts No Marks	2 pts
<b>3. Input Fields</b> Input field with appropriate label should only accept numbers (2)	2 pts Full Marks	0 pts No Marks	2 pts
<b>4. Three buttons added</b>	1 pts Full Marks	0 pts No Marks	1 pts
<b>5. Input field with an appropriate label (1)</b>	1 pts Full Marks	0 pts No Marks	1 pts
<b>7. Same style to all buttons (2)</b>	2 pts Full Marks	0 pts No Marks	2 pts
Check that there is no HTML , CSS errors, and JS errors	3 pts Full Marks	0 pts No Marks	3 pts

updateSleep() a) read the user entered data (1) b) update array values (1) c) shows the correct alert message (1) d) alert is number is not entered (1) e) clear the input field (1) f) function works as expected (2)	7 pts Full Marks	0 pts No Marks	7 pts
<u>showAverageMinMaxSleep()</u> a) average, min, max calculated correctly (2) b) show correct values inside the input field (1) c) use JS to add styles (2) d) method works as expected (2)	7 pts Full Marks	0 pts No Marks	7 pts
displaySleepDuration() a) finds the correct values to be displayed (2) b) show it on the HTML page as a table (2) c) add the paragraph (1) c) method works as expected (2)	7 pts Full Marks	0 pts No Marks	7 pts
Correct URL provided	1 pts Full Marks	0 pts No Marks	1 pts
8. Text Color (1)	1 pts Full Marks	0 pts No Marks	1 pts
Total Points: 44			