

# CSE 4234/5234 – Web Applications

Fall 2024

## Mini-Project 2: HTML CSS JAVASCRIPT

Total Points: 30

Date Assigned: Wednesday, Sept 25, 2024

Due Date: Monday, Oct 14, 2024

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**Submission Instructions:** This is a group assignment. All members of the group must participate. See example division of labor at the end of this handout. Please submit your work on Canvas as a zipped folder named `cse4234_your_group_number_project2.zip`

### Key Concepts Demonstrated

- Writing JavaScript code to template a UI and filter content
- Styling HTML5 pages using CSS
- Hosting HTML pages on a cloud-based server (AWS EC2)
- Running a simple web server to serve HTML pages

1. (12 points) Inspired by CampusLabs Engage, your task for mini-project 2 is to create a simple events manager that satisfies the following requirements:

- First, download the events.rss XML file from Canvas.
- Read and process the file by using the JavaScript `fetch` method via chained promises and template literals to populate a main container with articles (`<article>`) displayed as cards for each event in the file. Each card should contain the following:
  - An image (currently identified with an enclosure tag in the XML file; use a silhouette or default image if an image is not present)
  - The event title
  - The start date of the event formatted as EEEE, MMMM, dd, YYYY
  - The location of the event
  - A learn more link that toggles the event description when clicked.
- Use CSS to style the main container to use flex layout and display each article as a card as shown in the image below. When viewed on a mobile device up to 768px, there should be only one card per row. Each card should occupy 20% of the screen on a larger screen. This means a max of 5 cards per row. Maintain all other CSS styles from mini-project 1. Images should fill their container as shown in the instructor's demo and images below.

**My Events Manager**

Showing: 463/463 events

Filter Events

Show All  Title  Desc  Date  Submit  Clear Filters

Swim Practice  
Monday, September 23, 2024  
Panther Aquatic Center  
[Learn more](#)

Supplemental Instruction - General Chemistry 1  
Monday, September 23, 2024  
Student Success and Support Center  
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Supplemental Instruction - Organic Chemistry 2  
Monday, September 23, 2024  
Student Success and Support Center  
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Supplemental Instruction - Organic Chemistry 1  
Monday, September 23, 2024  
Student Success and Support Center  
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Supplemental Instruction - General Chemistry 1  
Monday, September 23, 2024  
Student Success and Support Center  
[Learn more](#)

HOCKEY

Figure 1: Events Manager displayed on screen sizes greater than 768px

## My Events Manager

Showing: 463/463 events

Filter Events

Show All	Title	Desc	Date	Submit	Clear Filters
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<b>Swim Practice</b> Monday, September 23, 2024 Panther Aquatic Center  <a href="#">Learn more</a> Swim Practice  From Monday, September 23, 2024 7:00 AM to 8:00 AM EDT at Panther Aquatic Center.	<b>Supplemental Instruction - General Chemistry 1</b> Monday, September 23, 2024 Student Success and Support Center  <a href="#">Learn more</a> Supplemental Instruction - General Chemistry 1  From Monday, September 23, 2024 1:00 PM to 4:00 PM EDT at Student Success and Support Center.	<b>Supplemental Instruction - Organic Chemistry 2</b> Monday, September 23, 2024 Student Success and Support Center  <a href="#">Learn more</a> Supplemental Instruction - Organic Chemistry 2  From Monday, September 23, 2024 3:00 PM to 4:00 PM EDT at Student Success and Support Center.	<b>Supplemental Instruction - Organic Chemistry 1</b> Monday, September 23, 2024 Student Success and Support Center  <a href="#">Learn more</a> Supplemental Instruction - Organic Chemistry 1  From Monday, September 23, 2024 4:00 PM to 5:00 PM EDT at Student Success and Support Center.	<b>Supplemental Instruction - General Chemistry 1</b> Monday, September 23, 2024 Student Success and Support Center  <a href="#">Learn more</a> Supplemental Instruction - General Chemistry 1  From Monday, September 23, 2024 4:00 PM to 6:00 PM EDT at Student Success and Support Center.

Figure 2: Events Manager display showing description toggled on when learn-more button is clicked

2. (12 points) Write a JavaScript function named `filterEvents(events, filterValue, filterFunction)` that accepts as input your list of events (JavaScript objects or HTML elements), a property value from keys shown in the `filterObj` below, and a filter function, and filters the list of events according to the values entered by the user. Your code should only apply the filter if a value is specified for that property. For example, you may chain your filters one after the other where a value is specified (`filterByDate` then `filterByTitle`, etc., then put all items in a set to remove duplicates). Each filter function should be coded separately and called appropriately such that multiple filters can be applied. Update your UI to show the count of items returned after filtering.

```
let filterObj =  
{  
    'title' : 'baseball',  
    'startDate' : 'feb 2'  
    'description' : 'florida tech'  
}  
  
// Example function calls  
//filter by title  
let filteredByTitle = filterEvents(eventObjs, filterObj.title, titleFilter);  
  
//filter by description  
let filteredByDesc = filterEvents(eventObjs, filterObj.description, descriptionFilter);  
  
//filter by date  
let filteredByDate = filterEvents(eventObjs, filterObj.startDate, dateFilter);
```

Add fields in your UI that allow the user to enter these parameters and execute your function to update the list of displayed events accordingly. Do not use the input date field for the date. Instead, use input validation to ensure the user enters a valid date in any JavaScript parseable format. See Figures 3, 4, and 5 for demos of this feature.

3. (3 points) Code should be written and indented properly with code comments where necessary as demonstrated in class. Best practices discussed in class should be followed accordingly (including proper contrast, neat layouts that do not overlap or hide content, the use of HTML5 tags, etc). Ensure that you are coding JavaScript in strict mode (`"use strict"`).

**My Events Manager**

Showing: 21/463 events

Filter Events

Show All Title: general meeting Desc Date Submit Clear Filters

Event Title	Date	Location	Action
FITQB General Meeting and Practice	Monday, September 23, 2024	CRF 112	<a href="#">Learn more</a>
General Meeting	Tuesday, September 24, 2024	OLS 130	<a href="#">Learn more</a>
Chess Club General Meeting	Friday, September 27, 2024	Skurla 103	<a href="#">Learn more</a>
Chess Club General Meeting	Friday, October 4, 2024	Skurla 103	<a href="#">Learn more</a>
FITQB General Meeting and Practice	Monday, October 7, 2024	CRF 112	<a href="#">Learn more</a>

Figure 3: Events Manager showing events filtered by an example title

4. (3 points) Include 1 HTML page named "readme.html" inside your submission folder showing evidence that your events manager works on EC2.

Evidence may be one of the following:

1. Screenshots showing full-views of some of your page running via a web browser with your EC2 Public IP or DNS displayed in the address bar.
2. A video showing a traversal of your site in a web browser with your EC2 Public IP or DNS displayed in the address bar.

## Tips

Use the following resources as reference to create cards and parse your XML file

- <https://getflywheel.com/layout/flexbox-create-modern-card-design-layout/>
- [https://developer.mozilla.org/en-US/docs/Web/XML/Parsing\\_and\\_serializing\\_XML](https://developer.mozilla.org/en-US/docs/Web/XML/Parsing_and_serializing_XML)
- <https://css-tricks.com/how-to-fetch-and-parse-rss-feeds-in-javascript/>
- [https://www.tutorialspoint.com/xml/xml\\_cdata\\_sections.htm](https://www.tutorialspoint.com/xml/xml_cdata_sections.htm)

## My Events Manager

Showing: 2/463 events

Filter Events

Show All

Title chemistry

Desc

Date 9/25/2024

Submit Clear Filters



**Supplemental  
Instruction -  
General Chemistry  
1**

Wednesday, September 25, 2024  
Student Success and Support  
Center

[Learn more](#)

**Supplemental  
Instruction -  
General Chemistry  
1**

Wednesday, September 25, 2024  
Student Success and Support  
Center

[Learn more](#)

Figure 4: Events Manager showing events filtered by an example title and date

## My Events Manager

Showing: 2/463 events

Filter Events

Show All

Title swim

Desc

Date

[Submit](#)

[Clear Filters](#)



### Swim Practice

Monday, September 23, 2024  
Panther Aquatic Center

[Learn more](#)  
Swim Practice

From Monday, September 23, 2024 7:00 AM to 8:00 AM EDT at  
Panther Aquatic Center.

Figure 5: Events Manager showing events filtered by an example title in mobile view

## Suggested Division of Labor

### Example 5-Person Division of Labor

Member 1: HTML and CSS with responsive design, and function to toggle event description using a learn-more button

Member 2: Parsing XML and creating cards and storing objects of each card in a list

Member 3: filterByDate function and EC2 deployment and testing

Member 4: filterByDesc and clearFilter function

Member 5: Reading and verifying user inputs and filterByTitle function

### Example 4-Person Division of Labor

Member 1: HTML and CSS with responsive design, and function to toggle event description using a learn-more button

Member 2: Parsing XML and creating cards and storing objects of each card in a list

Member 3: filterByDate, filterByTitle function and EC2 deployment and testing

Member 4: filterByDesc, clearFilter function, reading and verifying user inputs

## Bonus - 5pts

Write a paginator to allow the user to show different number of events per page (25, 50, 100, all). Include a *next* and *previous* button to enable the user to navigate the list of events. These buttons must show at the top and bottom of the page.