

MET CS601: Term Project Requirements



Instructions

Create a website that uses the API's and technologies we discussed during the semester.

Grading

See the sections below in this document for details.

Browser Requirements

The latest releases for any of these: Chrome, Edge, Firefox and Safari.

Mobile Device Requirements

Assume a browser that has been released in the past 2 years to a mobile device. You do not need to consider any browser that was used pre-2020. Modern smartphones only.

High-level Requirements

1. The student can host their project on a free public hosting service (Like AWS or Azure) or on localhost.
2. Students should develop/design their work to be a mobile first design, then desktop with media queries that follow the responsive design pattern
3. There shouldn't be any errors in the browser console. There will be loss of points if I see errors in the console.
4. Must use CSS extensively. Do not use HTML tables to structure your website's pages. If you do, you will lose 10 points immediately upon grading.
5. You cannot cut and paste the same CSS rules over and over again in each HTML page to meet the minimum number of selectors used. (See CSS requirements)

6. Should not copy javascript from other sources and say you did it. You can learn from them. Integrate with them, but do not simply take their work, put into your page and say you developed it.
7. You do not need to have a database, It is completely optional and up to you.
8. The minimum HTML pages you need to have: 1 (one). That is the bare minimum for a SPA webapp. However, you need to have or show a complete website with content and purpose.

In general, you should not need to create more than 10 HTML pages.
(Having a high page count does not mean a good grade)

Previous Ideas

In the past, students have created the following types of websites:

- E-Commerce site
- Hangman Game
- Personal Diary
- Restaurant Ordering System
- Dating app
- Workout notes
- Weather app
- Rewrite of the StudentLink
- Todo/Reminder app
- Personal Bio website
- Healthcare website
- Catering System

Look and Feel

Your website should be visually appealing using the latest CSS standards and practices. You should use images, good CSS and purposeful javascript that does useful things.

<https://bit.ly/37rykNV>

CSS Requirements

- a. Must use at least 10 descendent selectors.
- b. Must use at least 10 unique adjacent selectors.
- c. Must have 2+ different class selectors.
- d. Must have at least 2 ID selectors.
- e. Must have 5 or more pseudo element selectors.
- f. Must have 5 or more pseudo class selectors

Javascript Requirements

- a. Use of React, Vue or Angular is fine. But, you do not have to use these frameworks.
 - i. Javascript code should use ES6 modules. You don't have to - but you should.

- ii. You must have at least 20 active event handlers. They can be of any type. (click, select, drop/drag, mouse events, window events).
 - iii. Must have at least 1 functional ES6 class in your active codebase. Meaning, you can just declare a ES6 class and not use it.
 - iv. Global functions are generally not a good idea. If you need to declare a globally-scoped function, you need to put in a comment on top of it explaining why. Please use modules.
 - v. You need to show proficiency using functions. Do not simply cut paste the same functions over and over again. Your functions should be unique and do something useful. Show a mix of:
 - Function Expressions
 - Function Declarations
 - Anonymous Functions
 - Arrow Functions
- b. The website must use Ajax in some way. The minimum number of Ajax calls in your pages/views should be 4 or more actively used. (You can use Axios, Fetch or jQuery. Native XHR is okay, but not recommended.)

Optional Requirements

1. Students can use ReactJS, Vue or Angular if they choose to.
2. Students can create a backend system with NodeJS, PHP, Java, etc.. **It is not required.**
3. Students can choose to develop their website as a SPA (Single Page Application)
4. Students can use any open source component. However, student must show their own work and Javascript abilities and not rely on using open-source for the entirety of their project.
5. Students can develop a database. **It is not required.**



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