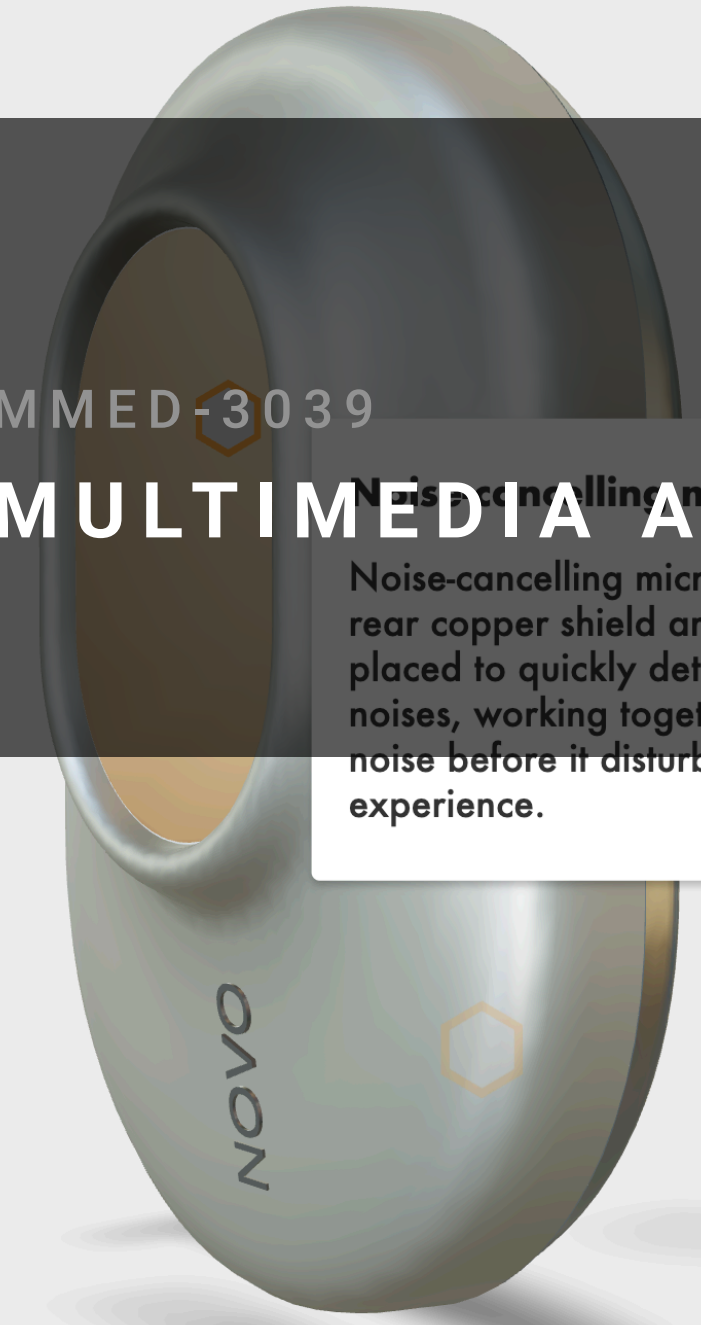


MMED-3039

MULTIMEDIA AUTHORING 3

Noise-cancelling microphones and a rear copper shield are optimally placed to quickly detect outside noises, working together to counter noise before it disturbs your experience.

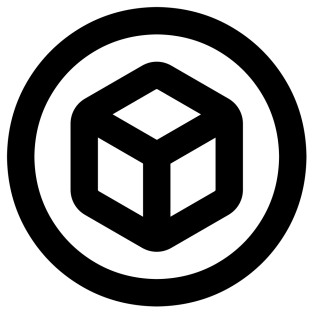
```
JS main.js ●

js > JS main.js > <function>

1  (() => {
2    const hotspots = document.querySelectorAll(".Hotspot");
3    const model = document.querySelector("#model");
4
5    function showInfo(e) {
6      //console.log(e.currentTarget.slot);
7      let selected = document.querySelector(`button[slot="${e.currentTarget
       div`);
8      gsap.to(selected, 1, {autoAlpha:1});
9    }
10
11   function hideInfo(e) {
12     //console.log(e.currentTarget.slot);
13     let selected = document.querySelector(`button[slot="${e.currentTarget
       div`);
14     gsap.to(selected, 1, {autoAlpha:0});
15   }
16
17   hotspots.forEach(hotspot => {
```

TABLE OF CONTENTS






MMED-3039

COURSE DESCRIPTION

This course will further develop the student's range of tools and applications current in the interactive field, as well as the techniques used for the development of web based interactive applications. The emphasis will be on effective application, interface design, and programming using optimized assets and code.

COURSE LEARNING OUTCOMES

Upon successful completion of this course, you will be able to reliably demonstrate the following Course Learning Outcomes which will be taught and evaluated:

1.) Learn about Immediately Invoked Function Expressions (IIFE) and their role in encapsulating code and preventing global scope pollution.
2.) Practice creating and using IIFEs to organize and structure JavaScript code effectively.
3.) Learn how to integrate and utilize JavaScript animation libraries to create engaging and interactive UI/UX elements.
4.) Understand the concept of objects in JavaScript and their role in modelling data.
5.) Practice using objects to represent and structure data in JavaScript applications.
6.) Understand the fundamentals of AJAX (Asynchronous JavaScript and XML) and its importance in web development.
7.) Learn how to read and interpret API documentation, including endpoints, request methods, and response formats.
8.) Practice utilizing the Fetch API to retrieve data from a server and handle responses asynchronously.
9.) Understand the concept of JavaScript modules and their benefits in code organization and reusability.
10.) Practice creating and utilizing named modules to encapsulate and share functionality across multiple files.
11.) Practice applying code refactoring techniques and following best practices to optimize JavaScript code
12.) Understand the concept and benefits of using Google's to display 3D models in AR on the web.
13.) Explore the syntax and learn how to incorporate 3D models in AR into web pages.
14.) Understand the basic concept of SASS and its purpose in enhancing CSS development
15.) Apply SASS syntax, including variable declaration, nesting selectors, and using mixins and functions to streamline CSS code.
16.) Develop reusable, scalable and adaptable SCSS

GRADE BREAKDOWN

Team Projects - 30% (Ear Buds)

Assignments - 40% (BootCamp, Guest Speaker Notes, Portfolio Meeting, AJAX assignment)

Portfolio - 30% (Checkpoint Deliverables and Portfolio)

Prepared by Marco De Luca- m_deluca3@fanshaweonline.ca

All “*” represents a week with a project assignment or submission.

COURSE BREAKDOWN

MODULE 1 - HTML5 VIDEO

WEEK 1 *
- Orientation
- Intro to team
- Review course breakdown/booklet
- Discuss Academic Integrity.
- Discuss AI, Fanshawe has software to detect it for essays. Can be used in certain ways in our program.
- Discuss the late project policy
- Boot Camp Assigned (Due week 1), Value 15%

WEEK 2 *
- HTML5 <video> tag, HTML5 Video API
- Intro to SASS
- Portfolio Assigned (Due Week 14), Value 20%

MODULE 2 - SASS AND MODULAR PROGRAMMING

WEEK 3 * *
- SASS features such as variables, mixins, nesting, etc.
- Develop reusable, scalable and adaptable SCSS
- Create modular SASS files that are focused on specific components, sections, or functionalities.
- Into to IIFEs (Immediately Invoked Function Expressions)
- Utilize IIFE to encapsulate code
- Portfolio Checkpoint Assigned (Due week 6), Value 15%
- Guest Speaker Notes Assigned (Due week 3), Value 5%

MODULE 3 - WEB ANIMATION & 3D/AUGMENTED REALITY

WEEK 4
- Intro to GreenSock
- Using GreenSock for creating smooth animations and transitions
- Apply GreenSock, ScrollTo to create animated scrolling effects

WEEK 5 *
- Intro to the concept of Augmented Reality (AR) and its applications on the web.
- Use Google Model Viewer to displaying 3D models and AR on the web.
- Earbuds Promo Page pt 1 Assigned (Due Week 8) Value 15%

WEEK 6 *
- Portfolio Week
- Portfolio Checkpoint Due

WEEK 7 *

• Apply GreenSock, ScrollTrigger to create animated scrolling effects

Ear Buds Promo Page Pt 2 Assigned (Due week 10) Value 15%

WEEK 8 *

• Creating a vertical scrolling animation and image comparison slider

• Earbuds Promo Page pt 1 Due

MODULE 4 - OBJECTS, JSON AND AJAX

WEEK 9 *

• Object and Arrays

• Literal arrays, multi-dimensional arrays, and arrays of objects

• Access and manipulating object and array elements using dot notation and index-based notation

• Leveraging object and array methods.

• AJAX App Assigned (Due Week 12), Value 15%

WEEK 10 *

• Intro to JSON

• Composing and parsing JSON

• Intro to AJAX

• Intro to the Fetch API

• Ear Buds Promo Page Pt 2 Due

WEEK 11

• Intro to the HTML <template> element

• using the HTML <template> element and AJAX in combination

WEEK 12 *

• Intro to Javascript modules

• Working with named imports and exports

• Code refactoring & best practices

• AJAX App Due

WEEK 13

• Open Lab

WEEK 14 *

• Portfolio Extras and Portfolio Submission

WEEK 15 *

• Presentations

ADDITIONAL LEARNING MATERIALS

LEARNING

Working with HTML5 Video

SASS Essential Training

Learning JavaScript Animations with GreenSock

Javascript Arrays

JSON Essential Training

AJAX and Fetch

LinkedIn Learning is available for free through https://fcsw2.fanshawec.ca/portal/index.htm. Look for LinkedIn Learning under My Bookmarks and Campus Links on the right side of the page. You will be prompted to login, using your FOL login credentials to access LinkedIn Learning. You will need to login first before you can click or copy and paste the above links.

HOMEWORK BRIEFS

BOOTCAMP – STUDENT SHOWCASE

Assignment Description

Students, in groups of 4, are responsible for designing and developing a mobile-first, responsive website to showcase student portfolios for the upcoming Industry Night event.

The purpose of the website is to provide a platform for fellow students to display their skills, projects, and achievements to potential employers, industry professionals, and peers attending the event. You will also incorporate information about the Interactive Media Design program, client projects, testimonials, and details about the Industry Night event

This project will be a collaborative effort between all of your IDP classes.

Assignment Requirements

Each team will develop a responsive mobile-first site using objects and arrays for data.

You must pull a list of student names and link to their portfolio site from an array, object, or combination of both. You must display testimonials pulled from an array or object or a combination of both.

Both the list of student names and testimonials must be dynamically added to the page on some type of event (load, click, hover, etc.).

Implement a mobile-specific menu using CSS and or Javascript. The mobile menu must either have a transition or animation applied.

You MAY NOT use jQuery or a 3rd party library. All code MUST be your own and MUST be native JavaScript. Do not use inline Javascript!

Create a repository on GitHub including a detailed Readme file. Put the appropriate information in the Readme file. Push the finished files to your repo, CONTINUOUSLY merge everything to master as you go, and submit the repo link to the FOL Dropbox.

Remember that only the master branch will be graded, so merge everything to that branch before the project deadline.

Use best practices as outlined in both your first and second-year classes: semantic tagging, mobile-first design, document outline, a detailed Readme, build files, etc

SUBMISSION REQUIREMENTS & DUE DATE

Project must be submitted by 6:00 p.m. EST on Sunday, September 10th. (A 30% deduction will be applied to late projects).

GRADING RUBRIC - Total project value is 100, Weight is 15% of Final Grade, Authoring Portion /25

GitHub Workflow / Readme: 10 marks

JavaScript Code (proper syntax, well-formed code with little or no redundancy, ES6 / Next features, no inline JavaScript): 15 marks

***Please see shared Bootcamp document on FOL for additional information on all classes.**

PORTFOLIO WEEK: INDUSTRY PRESENTATION & CHECKPOINT

Assignment Description

In Week 6 of this term (October 10th - 15th), normal lecture classes will not be held; this week will focus on the design and development of your individual web portfolio.

While there will be no lectures, students are required to attend their individual feedback meeting scheduled during this week, and to submit the deliverables (specified below) at the end of portfolio week (October 15th by 5 PM, FOL Dropbox).

This project will be a collaborative effort between all of your IDP classes and professors, with the overall intention of ensuring that each student has a professional, focused and live portfolio of their work.

Part One: Industry Presentation

In Week 3 of the Fall term, A presentation by industry professional(s), will be held, on best practices in portfolio design, valuable content, what hiring managers need and want to see, etc. All students are required to attend this session (Day, Time & Location TBA in class).

Notes taken by each student during the session will be submitted to a dropbox on FOL for evaluation (Value 5%) and to register their attendance at the session.

Part Two: Portfolio Week

Tuesday - Wednesday: Each student will sign up for an individual meeting with all level 3 professors to review and discuss your portfolio plan, design directions, and planned content. (This will be one scheduled meeting with all of your profs and not separate meetings per class.) During this meeting, your professors will review each student's portfolio planning and research, provide feedback on the direction, and specify the deliverables that each student must submit at the end of the week.

The remainder of the week will be given for students to work on the defined deliverables. Regularly scheduled class times later in the week will be open labs for students to work on their portfolio and receive assistance/feedback.

SUBMISSION REQUIREMENTS

Meeting/Research & Preparation for the Week (Value 5%)

A Github repo must be set up to review. Your repo should be set up with a Readme file (doesn't have to be the finished version, but at least a start with some of the basics). There should be multiple branches / commits.

You should begin breaking down your project into modules - you can start with main.scss, a _vars file, maybe some colour and font choices defined, etc.

A Developer Doc should be set up and available for sharing on google docs. The document must include the following information:

- How many pages will you have or will you contain everything to one page? You may choose to have a single page scroller or include some other separate pages such as contact, about, etc.
- What type of GreenSock enhancements do you plan on implementing e.g. Smooth Scrolling links, Scroll based Animations, Animated logo or icons, Animated Hero image, etc.
- How will your gallery function to show your work?
- What other types of interactivity are you planning on including? If the interactivity is not covered in class, how do you plan on executing it? Provide links and research.

Final Deliverables (Value 10%)

The homepage must be boxed out/prototyped and responsive from mobile to desktop.

You should be starting to experiment with JS interactivity - rough page layout, some functions, etc. This DOES NOT have to be fully functional - just think about how the user is going to consume your content, and provide some basic strategy.

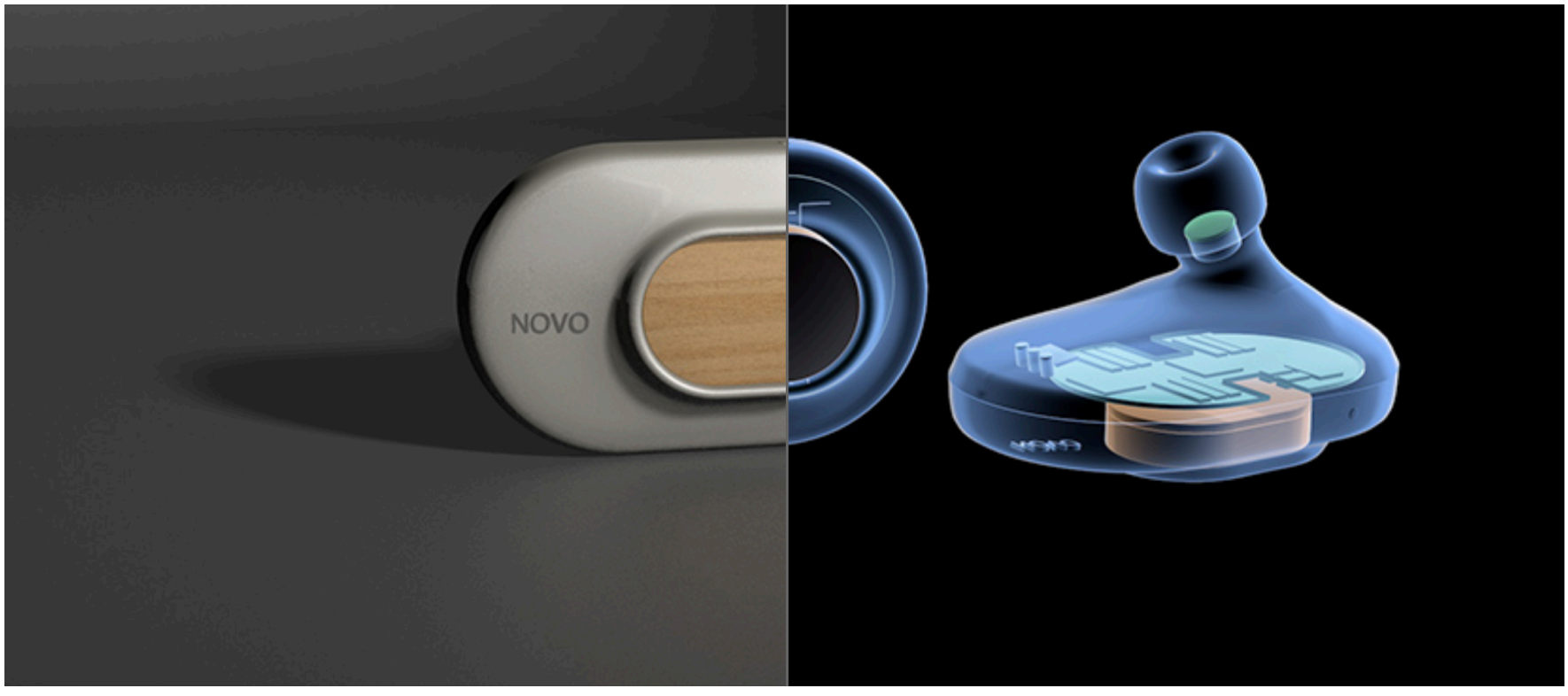
Similarly, get a start on strategizing on how you plan on displaying work. Will you have a Lightbox on your project page? How will you display case studies? You don't need to have anything finished, but you should be starting on most functionality.

***Please see the shared Portfolio Week Document for information on all classes.**

DUE DATE & RUBRIC

- Meeting/Research & Preparation for the Week must ready to go for your designated meeting time
- Final Deliverables Must be submitted by Oct 18, 2023 11:59 PM
- Submit the repo URL via FOL dropbox - DO NOT submit working files
- Provide a link to a google doc (make sure proper permissions are set), including content, developer plan, etc.
- Please follow correct folder and file structure as outlined in class.

GRADING RUBRIC /10
Folder Structure /1 Boxed Layout /3 GitHub Best Practices /2 Functionality /4



EARBUDS PROMOTIONAL PAGE

Assignment Description

This assignment aims to encourage students to explore and research innovative concepts for a new pair of earbuds and their charging case. Students will then use Cinema 4D to model, texture, light, and animate their designs. These assets will be utilized as resources on a promotional website.

The project also includes the creation of various assets, such as multiple colour variations of the earbuds, an X-ray view showcasing the internal components, and promotional images or animations.

Additionally, the 3D model will be exported for use as an augmented reality (AR) object on the promotional site, featuring interactive informational hot spots or an animated exploded view.

Assignment Requirements

Submission 1 - Week 8, first .5hr of class time.

Take the exported AR object and code created in MMED-1058, and integrate it into the promo-site.

Use a combination of CSS3, Javascript and the GreenSock library to animate the hotspots and display information.

Use an array or object or combination of both to store and retrieve the data for the hotspots - you must include an image of some kind.

Submission 2 - Due on Nov 12, 2023 11:59 PM

Implement your own version of an Xray Slider/Image revealer. We will cover this in class, but I want you to make your own adjustments and enhancements.

Implement your own version of a Vertical Scrolling Animation using the exported image sequence from MMED-1058.

Make use of ScrollTrigger to create scroll-driven animations

Use modern tools and techniques to generate the required assets. Use SASS components for your CSS and wrap your JS in an Immediately-invoked Function Expression.

You need to consider how the graphics and interactivity will evolve as a responsive page. Think about how your content might appear or change at various sizes. Use media queries, etc to control the visual flow.

Create a repository on Github including a detailed Readme file. Put the appropriate information in the Readme file. Push the finished files to your repo, CONTINUOUSLY merge everything to master as you and submit the repo link to the FOL dropbox.

Remember that only the master branch will be graded, so merge everything to that branch before the project deadline.

Use best practices as outlined in both your first and second year classes: semantic tagging, mobile-first design, document outline, a detailed Readme, build files etc

SUBMISSION REQUIREMENTS & DUE DATE

Github repo: readme.md file, master branch, design branch and development branch

Correct structure for a web project (css, js, sass, images etc and index.html)

Name the dev branches appropriately per feature IE des.yourinitials.artwork, dev.yourinitials.script

Submit the repo link via FOL dropbox

ONLY THE MASTER BRANCH WILL BE GRADED

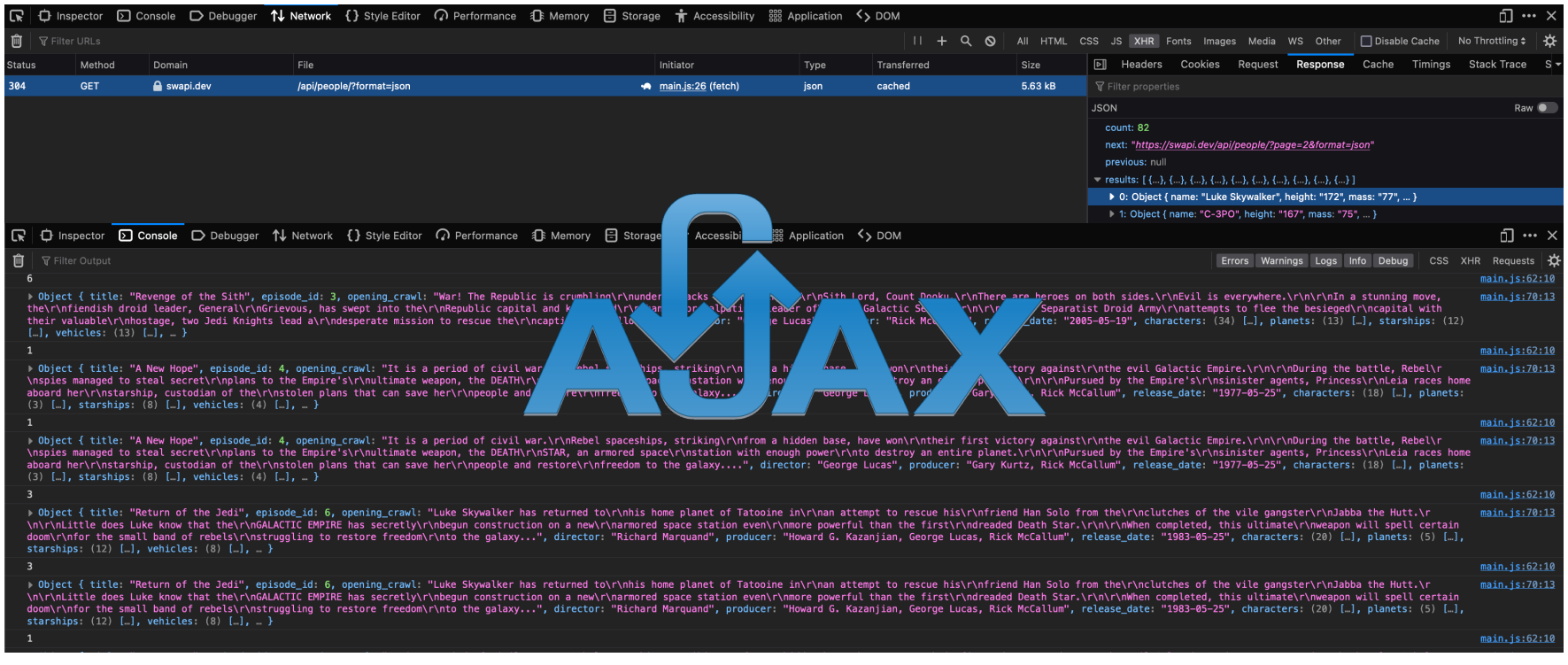
GRADING RUBRIC

Submission 1 - Value 15%

3 / AR object integration.
3 / Animated hotspots that display information.
3 / Info and image retrieved from object or array.
2 / Coding best practices (SASS, IIFE)
2 / Github workflow
2 / Contextual Considerations (Mobile vs. Tablet vs. Desktop)

Submission 2 - Value 15%

3 / Xray Slider/Image revealer.
3 / Vertical Scrolling Animation
3 / Scroll-driven animations
2 / Coding best practices (SASS, IIFE)
2 / Github workflow
2 / Contextual Considerations (Mobile vs. Tablet vs. Desktop)



AJAX APP

Assignment Description

This is a continuation of the Earbuds Promotional Page. Each student must complete this assignment individually.

It’s time to put it all together! Use everything we’ve covered so far - SASS, AJAX, and the Fetch API to make the Earbuds Promotional Page dynamic. You will be provided with a link to an API which will output information about the earbuds as JSON. You will use the Fetch API to retrieve the object on page load and update the view as the user interacts with the hotspots.

You must also also make use of the HTML Template element and JS modules as covered in class.

Your XHTTP / Fetch function should handle the stages of an AJAX request gracefully - what happens if the request fails (use separate functions / handlers for each stage of an AJAX request).

If the AJAX request is successful, build out your view - the content of the page - using the response data (the application state).

SUBMISSION REQUIREMENTS.

1. Create a project repo and a Readme.md document for the repo with detailed information about the project.
2. Use branches as appropriate with your project. NEVER work directly on the master branch.
3. Merge everything to the master branch and submit a link to the dropbox on FOL.

DUE DATE & RUBRIC

Homework must be submitted Week 12 within the first .5hr of class time.
- Github repo: readme.md file, master branch, design branch and development branches
- correct structure for a web project (css, js, images and index.html)
- Name the dev branches appropriately per feature IE des.tvr.artwork, dev.tvr.script
- Submit the repo link via FOL dropbox ONLY THE MAIN BRANCH WILL BE GRADED

GRADING RUBRIC /15
Github Workflow / Readme: 2 marks Connect & pull data from API / 5 marks Output JSON data / 5 marks
Coding best practices (SASS, Modules, Template) / 3

PORTFOLIO(FIP)

Assignment Description

The portfolio site you develop this term is ultimately what you will use to present your work and your skill set (both technologically and graphically) to potential clients and employers. As such, the design and presentation of that design is up to you entirely, within the technical parameters listed in each class.

Even though the design and technical aspects of the will develop and change over your last term, this site should represent the basis of the site that you will have as your final portfolio.

The site must have pages for all main sections (no empty links in the global navigation, no Lorem Ipsum text).

The site must render appropriately in Firefox (Windows and Macintosh), Safari, Chrome (Windows and Macintosh) and Edge for Windows along with the major mobile platforms (Android and IOS).

Assignment Requirements

Your portfolio site must include an HTML5 mobile-first responsive layout, with CSS3 and GreenSock elements (animation, scroll effects, transitions etc) used to whatever extent they can be.

Use Javascript to create some additional features on your site. For example, You can build some type of gallery (lightbox, slider, popover etc) for your portfolio work that uses your own custom functionality.

ALL of the JavaScript code MUST be your own. Libraries (other than what is covered in class) are not allowed and will not be considered when graded.

Your JavaScript code should follow best practices as outlined in class (no inline JavaScript in HTML markup, no jQuery, use IIFEs as required).

Use a CSS preprocessor (SASS) for your CSS files. Use SCSS modules with files relevant to sections of your website (ie _nav.scss, _portfolio.scss) and compile them to a minified production file.

SUBMISSION REQUIREMENTS

- Github repo: readme.md file, master branch, design branch and development branches
- correct structure for a web project (css, js, sass, images, video folders and index.html)

- Name the dev branches appropriately per feature IE des.yourinitials.artwork, dev.yourinitials.script
- Submit the repo link via FOL dropbox ONLY THE MAIN BRANCH WILL BE GRADED

DUE DATE & RUBRIC

The FIP is due on Sunday, December 10th at 5pm EST(Eastern Standard Time). It is your responsibility to check with each course FIP breakdown (course book) to see the specific submission requirements for each individual course in IDP

20% of Term Grade

Javascript Functionality (GreenSock Animation, Scroll Effects, ScrollTrigger, custom js, etc.): 5 marks
SASS (Modules, Minified): 5 marks
Github Workflow / Readme: 5 marks
Presentation / 5 marks

Folder Structure

- .html pages
- images folder
- SASS directory
- styles/css folder
- video
- working_files folder (PSD/AI/SKETCH/XD, WEB READY VIDEOS ONLY)

DO NOT INCLUDE THE working_files FOLDER IN YOUR REPO!

PLEASE NOTE: Your project will not be graded unless you adhere to what has been outlined for you in this document. Individual practices that were given to you during the semester are applicable here as well.

i.e: A photoshop/XD/AI file with improperly labeled layers, code not in between body tags, lack of naming conventions, etc.

Naming convention for submission:

LastName_FirstName_Portfolio - e.g.) smith_joe_portfolio