Learning Plan 2
PAT1
Standards and Specifications
Touchscreen and API's Projects

Competencies:

Investigate new and emerging web standards and specifications

Assessment Instructions:

You will demonstrate the skills gained regarding 2 class selected topics

- Touchscreen Design
- APIs

The content of the project/s is up to you. This can be done on multiple pages.

Design standards learned throughout the program will apply to projects created for this assessment including SEO and Code Validation. The following valuators for HTML 5 and CSS 3

- HTML5: http://validator.w3.org/

- CSS3: http://jigsaw.w3.org/css-validator/

NOTE: *The criteria is directed at passing validation for 'current standards and specs' and I want to point out that there are several CSS3 techniques that are out there, they work, however they have not yet made it into the official specs! Since they haven't, those would NOT pass validation even if they are actually fully functional and correctly done! So, for example, -moz, -webkit, types of CSS3 will not pass validation because they are not yet part of the official specifications. It is OK to use them, just realize you will see them show up as validation errors. Those types of errors are okay to have shown up at this point.*

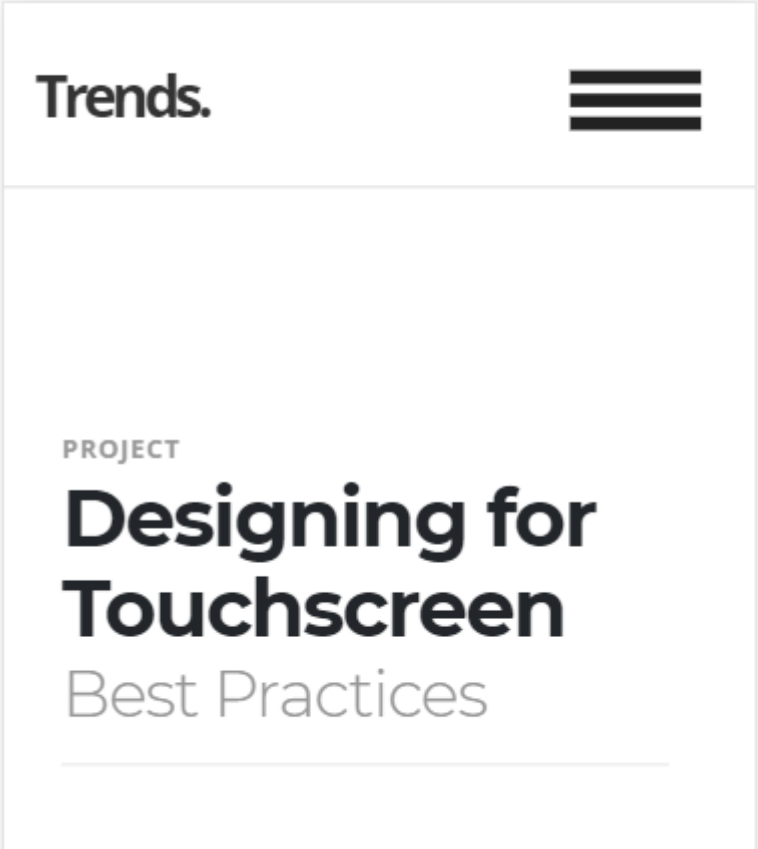
Some articles to read about this at:

- http://www.css3.info/the-big-css3-validation-debate/
- http://stackoverflow.com/questions/1889724/how-to-validate-vendor-prefixes-in-css-like-webkit-and-moz

Documentation:
The required documentation as outlined for each project and core ability criteria below will need to be on a web page. This page should contain links to the project page/s that you created to demonstrate the skills gained. Be sure to be clear as to which links go with which criteria! Organization of your documentation page is important. This will become part of your final Portfolio Showcase website for this class.

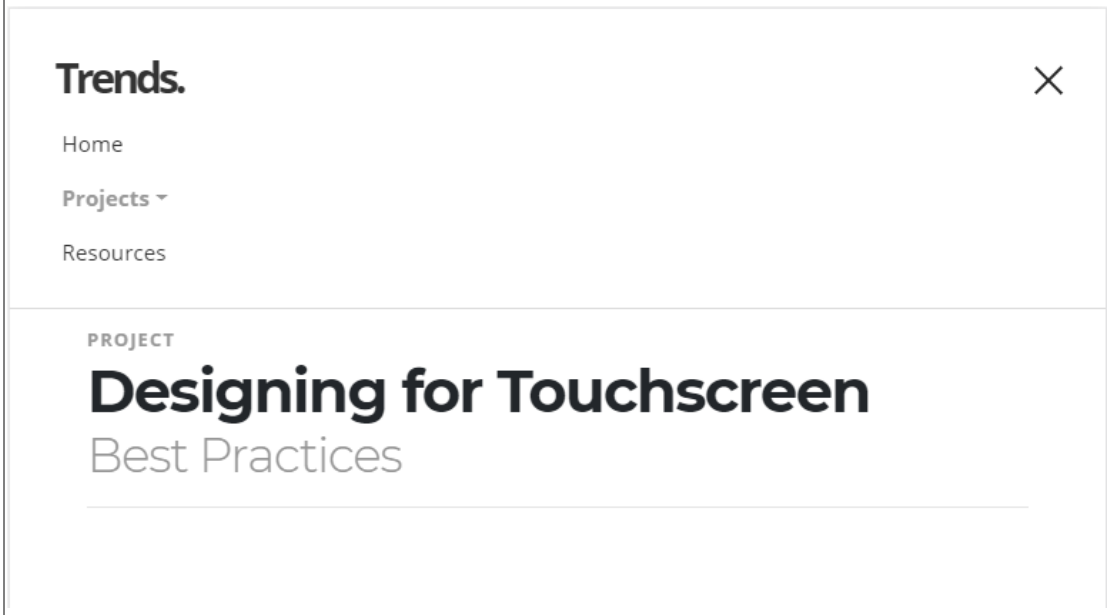
Submit the URL to the Documentation page to the Assessment Link on this page.

Scoring Guide: Grading Criteria

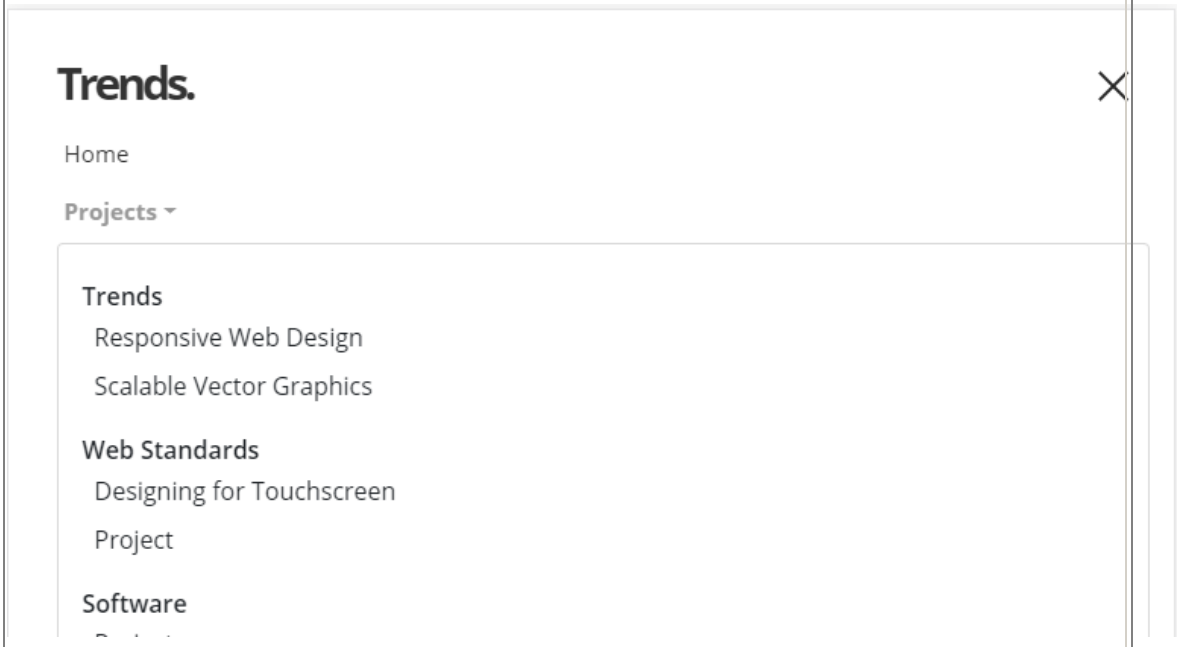
Criteria **New and Emerging Web Project:** **Touchscreen Design** **URL:** http://aallmann.com/trends/touchscreen.html	**Values**
You apply the pixel width of the average index or thumb finger in your design. **Documentation:** You provide documentation showing support of this criteria. This should include both screen captures and written explanation of application. You provide justification for the choices made. According to Wikipedia, the average width of the adult thumb is 25 mm (1 inch), which equates to 72 pixels. The average finger is 18 mm (68 pixels). Example: If the mobile menu icon was increased to 68 pixels, it would look like this on iPhone X:  This is obviously exaggerated as the touch point wouldn't require the full 68 pixels. The solution is to create enough spacing around the target element, so the finger touch does not engage a nearby navigational element.	5 4 2 0

Other Examples:

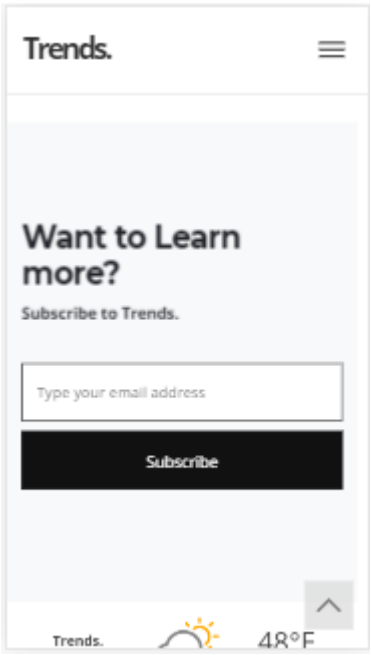
Menu list items have ample sizing and spacing for targeting (iPad portrait):



Dropdown menu list items have ample size and spacing (iPad portrait):



Other examples of properly sized and spaced navigational elements include the project scoring guide button, subscribe button, and the scroll-to-top button. The fixed social share icons bar is hidden on mobile.



You demonstrate application of 3-4 major touchscreen design guidelines in your design. **Documentation:** You provide documentation showing support of this criteria. This should include both screen captures and written explanation of application. You provide justification for the choices made.	5 4 2 0

- Navigational elements are large enough for the user to press without the risk of touching other nearby links. See documentation above.

- All elements scale up and down responsively so the user doesn't have to slide or zoom:

- Graphics and page elements are proportionately-sized which helps create a more fluid and consistent browsing experience for users.

Designing for Oversized Screens

While most of the design principles are the same as other interface-based designs, adjusting for size and scale of large screens can be unfamiliar to many designers.

Here are a few best practices to help guide you!

Use Natural Gestures

Consider more than finger actions. Think about the entire hand. There's a reason "swipe right" and "swipe left" are so popular — they are natural hand movements and gestures.

Another natural gesture to think about is eye-scanning. Some oversized screens are too large for the user to take in all at once. Design for eye movement — top to bottom and left to right — to ensure that users see the most important information first.

Don't Create Too Many Choices

The bigger the screen, the more overwhelming choices can be. Simplify your design with only a few choices per screen. This reduces visual clutter and creates a more usable interface.

Use visual cues such as animation and buttons to help guide users through the process. Buttons should be obvious and large enough to touch with ease. Use a small animation to help draw the eye to interactive elements.

Scale Up Text and Graphics

Content, including text and graphics, needs to be scaled up for oversized screen design.

- Users tend to interact from a greater distance and still need to see and distinguish between elements.
- Users need to be enticed to come to a screen, such as a kiosk, from far away.
- Screen elements need to be navigable and clear without instruction. Touch targets need to be easy to see.

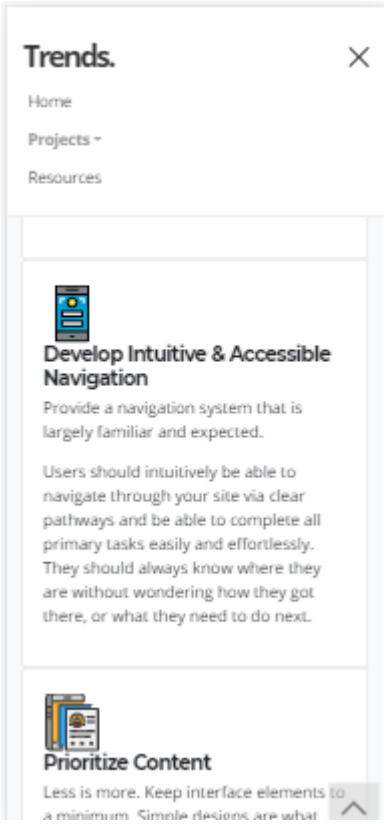
Note: A bigger screen doesn't mean more stuff — the opposite can actually be true. Think of it as a different user experience.

Be Sure Navigation is Always Accessible

Create a navigation pattern for these devices that is always accessible. Use a format that's similar to commonly-accepted website patterns, such as across the top of the screen or in a sidebar. Make sure that navigation doesn't go away when different content is accessed.

Try to minimize typing-based inputs as much as possible on these screens. Include a keyboard toggle command in the navigation so users can easily show and hide the keyboard.

- Intuitive and accessible navigation is provided. Users can complete all tasks easily and effortlessly. Navigation is fixed at the top so it is visible at all times.



• Swipe space and spacing between targets is generous. The user can touch the screen, scroll the screen, and swipe up, down, left or right, and navigate without accidentally engaging another link.  	
You demonstrate the application of 2-3 API's of your choice. **Documentation:** You provide documentation showing support of this criteria. This should include both screen captures and written explanation of application. You provide justification for the choices made. Interacting with APIs is an important part of web development. An API is essentially a messenger that receives requests and sends responses from the server.	25 20 10 0

Google Analytics (GA)

Google Analytics is a free web analytics tool offered by Google to help you analyze your website traffic and track your digital marketing effectiveness. Several lines of GA tracking code is inserted into the code of the website. The code records various activities of users when they visit your website, along with the attributes (such as age, gender, interests) of those users. It then sends all that information to the GA server once the user exits the website.

Google Analytics aggregates the data collected from the website in multiple ways, primarily by four levels:

- User level (related to actions by each user)
- Session level (each individual visit)
- Pageview level (each individual page visited)
- Event level (button clicks, video views, etc.)

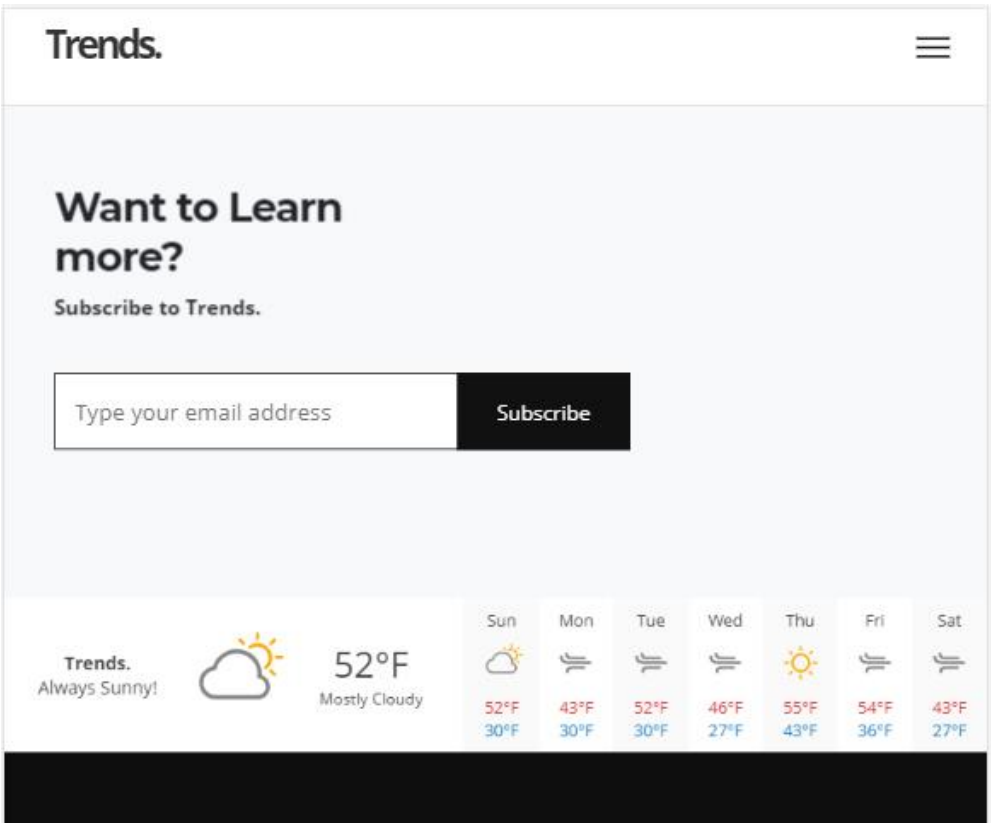
```
<!-- Google Analytics -->
<script>
    (function (i, s, o, g, r, a, m) {
        i['GoogleAnalyticsObject'] = r; i[r] = i[r] || function () {
            (i[r].q = i[r].q || []).push(arguments)
        }, i[r].l = 1 * new Date(); a = s.createElement(o),
            m = s.getElementsByTagName(o)[0]; a.async = 1; a.src = g; m.parentNode.insertBefore(a, m)
    })(window, document, 'script', 'https://www.google-analytics.com/analytics.js', 'ga');

    ga('create', 'UA-16311559-1', 'auto');
    ga('send', 'pageview');
</script>
<!-- End Google Analytics -->
```

Google Fonts

Typography plays an important role in balancing the overall look of the website. Advantages of using Google Fonts:

- Free to Use with Unlimited Usage & No License Required
- Cross Platform Rendering – Google Fonts supports all major browsers, as well as a wide range of mobile devices.
- Faster Loading Times – Google Fonts are more lightweight than Typekit and self-hosted fonts. Each font is compressed for speedier download. It has a fast content delivery network (CDN).
- Selection – Google Fonts has nearly 900 fonts to choose from.
- Ease of Use – Browsing the font libraries, downloading and installing is easy.

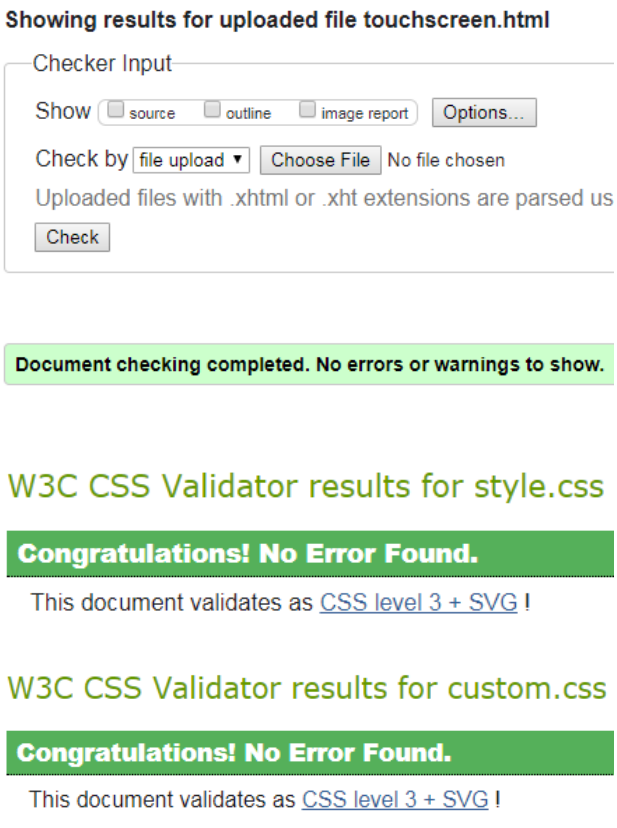
```
<!-- Google Fonts -->
<link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Open+Sans:400,600,700,800">
<link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Montserrat:200,300,400,500,600,700,800,900">
```

Weather Widget (from weatherwidget.io) Customizable and responsive. Compatible with all major browsers. Utilizes the OpenWeatherMap API. 	
Techniques employed are 100% functional in devices of choice. **Documentation:** *List the devices that you used to test the project* **Devices** iPad Mini – Current version iOS – Chrome, Firefox & Safari browsers iPad 2 – Chrome & Firefox browsers Samsung Galaxy – Chrome older browser	5 4 2 0
	5 4 2 0

Is search engine optimized for page titles, meta tags, body text, headings, images, internal links, and navigation. **Documentation:** Provide a description justifying how you have provided the best search engine friendly optimization that you can for your project. • Meta *Description*, *Keywords*, *Robots* are present. • Proper heading structure is maintained. • Image alt tags are descriptive and complete. • External links have title tags. • Text content utilizes keywords. • Page titles utilize keyword. • Global navigation is in a single, plain horizontal bar. Easy for search engines to crawl. • Page is mobile responsive.	
Design elements such as typography, body text, headings, graphics, links and color are balanced, practical, and aesthetic to create unity and consistency resulting in a harmonious visual appearance applying standards of web design and development including HTML and CSS validation when applicable.  **Note:** *This means that every aspect of the page design has to be planned out and considered from a best practice perspective. Example: Typography, don't use 7 different font families. Best practices state 2-3. Best practices state that there should be a style design for the heading, for the text treatment, hyperlink states, etc. Also, consider all aspect of both visual and non-visual design elements. Don't forget page titles, alt tags on images, title text on hyperlinks, meta tags, footers, semantic structure of the page through correct use of headings, etc.* **Also:** *This means that there must be some design applied to the layout that doesn't just place one element after the other in a linear fashion straight down the page. You have to use CSS to position elements on the page. For example:* *Linear and Not Acceptable >> >>>>>> Better design more acceptable.*  **Also:** *This means that all presentation styles are controlled by external CSS. This means that the page's entire layout is controlled by external CSS. This can be done in one or multiple external style sheets. This means that tables are not used for layout. Tables can be used for data display only.*	10 8 6 0

- Page layout was enhanced by using cards, adding a sticky social share bar, and removing the sidebar. The page still maintains consistency with previous projects and the overall website.
- Page colors are consistent with the website.
- Heading styles and hierarchy are consistent with the website.
- Ample white space, margins and font size is maintained for readability.
- Text content is readable, understandable, and uses proper sentence structure.
- Two font families are used, serif for headings, and sans-serif for text.
- Lead text, followed by regular text, is used to indicate hierarchy of content, as well as add visual interest.
- Navigation is functional. All links are working.
- Navbar is sticky.
- Animations are subtle and enhance the page's message.
- Page is mobile responsive.
- Page is balanced, harmonious and attractive.

HTML and CSS validates without error or warning:



TOTAL:	**55**
Key: First Point Value = Criteria Fully Met Second Point Value = Criteria Present but minor errors exist (no redo required) Third Point Value = Criteria needs improvement –redo required Fourth Point Value = Criteria not present, not met	

Core Abilities Scoring Guide

Criteria	Values
Think Critically and Creatively: Learner synthesizes information from a variety of sources. **Documentation:** *Cite resources that you used when submitting an assessment.* **Sources** Touchscreen: https://parachutedesign.ca/blog/best-user-interface-design-practices-for-touchscreen-devices/ https://designshack.net/articles/ux-design/tips-for-designing-oversized-touchscreens/ https://www.nngroup.com/articles/very-large-touchscreen-ux-design/ https://www.ics.com/blog/design-cues-navigating-large-format-touchscreens https://www.pannam.com/blog/how-to-design-a-touch-screen-interface/ http://uxbert.com/10-mobile-ux-design-principles/#.W74tnHtKjZ4 API: https://developers.google.com/analytics/ https://weatherwidget.io/ https://fonts.googleapis.com/css?family=Open+Sans:300,400,600,700,800 https://medium.com/analytics-for-humans/what-is-google-analytics-and-why-is-it-important-to-my-business-8c083a9f81be https://webindustries.co.nz/articles/advantages-using-google-fonts-web-design Page Development: https://sharingbuttons.io/ https://tutorialdeep.com/knowhow/show-hide-div-on-scroll-jquery/ Other: Adobe Photoshop Adobe Illustrator Flaticon Vecteezy	yes no

Think Critically and Creatively: Learner uses problem-solving and decision-making strategies. **Documentation:** *A reflection statement is included in your submission that critiques the experience you had, how you used the feedback from your peers and discusses the way you demonstrated this criterion.* **Reflection** This was a very useful and practical project. While I was familiar with most of best practices for mobile, many of the best practices for oversized screens were new to me. My difficulty was researching and working with various APIs. Too many steps, too many accounts, etc. It was an exercise in frustration. I finally used APIs that I was already somewhat familiar with. Had to keep moving forward. Feedback from peers only consisted of posting, reading and commenting on the posted resources in the discussion.	yes no
Work Cooperatively: Learner will use collaborative strategies to complete tasks. **Documentation:** *participation in discussion where projects are shared will be evaluated.*	yes no
Act Responsibly: Learner completes tasks according to prescribed deadlines.	yes no
Key: yes = 2 pts. no = 0 pts.	