Project Planning for Capstone Project

Define the Audience
Who is the target audience for the capstone project?

The Filipino Martial Arts, or FMA as we call it, is a lesser known sport but one of the fastest growing sports in the world. Not only is FMA a great sport, it's easy for anybody of any age to pick-up, and is one of the most effective self-defense systems in the world. There are currently about the 3,500 clubs and 175,000 FMA practitioners in North America.

Define the Project
What is an appropriate capstone project?
- Definition statement (I want to create a web application that...) for your project
- Your project MUST include JavaScript
- Should display your development skills and creativity in a professional manner.
- Can be completed in the allotted time frame you have to commit.

Definition Statement:

> I want to create a web application that helps FMA practitioners have fun! The app is to help people connect with each other, clubs, and events. It will be called "STIX *FMA* Fun Finder".

- The interface is very simple and will be built with HTML5 on the front-end styled with CSS3 using the Foundations or BootStap framework. A CSS framework is a library allowing for easier, more standards-compliant web design using the Cascading Style Sheets language.
- The backend will be written in JavaScript and build with Node.js. Node is used to executing JavaScript code server-side, and for developing applications that require a persistent connection from the browser to the server.
- The application will store and access data from a database to read, edit and delete records. The DB application will probably be Firebase. Firebase is essentially a real time database. The data appears as JSON files and allows real time changes to occur on the connected client side.
- The application will need to interact with the Google Maps API for geo-fencing capabilities to make the correlation between zip code and distances for results that are being returned from the DB searches.
- The API will probably be used through Axios which would make it easier to send asynchronous HTTP request to the API REST endpoints and perform CRUD operations.
- The application will have 2 forms – one to gather data for additions, and another to allow users to contact the admins.
- An email interface will be needed to send the responses from the forms to an email address.
- The application will be hosted through Heroku. Heroku is a container-based cloud Platform as a Service (PaaS) and allows developers to deploy, manage, and scale modern apps

Determine what the project will be.

Create a high-level story you want tell with your project.
- This will be your elevator pitch for your capstone project and used during demo day.
- Allows users to ask questions via chat during a talk and add resources to videos. "
- "I want to create a web APPLICATION that...

See Elevator speech in Git repository by clicking this link.

Define the Content

Determine what pages you need and the content of each page. Don't worry about look and feel or style of the content, that comes later.
- Make a list of pages
- Write a brief description of the content for each page
- Navigation
- Main content
- Footer

1. **List of pages**
   This application will essentially consist of 3 pages and 2 forms

   - Front / Home page, About page, and Search Results page
   - "Add Content" form, and "Contact" form (could be pages instead of modals)

2. **Brief description of the content for each page**
   - Each page will have a clickable logo and Title at the top of the page, and feature a fixed header and footer area (while the body will be scrollable).

   - **The footer** will be fixed to the bottom of the viewport, and will contain some disclaimers that could possibly link to additional pages, and 3 other buttons – "Home", "About", and "Contact".

   - **The Home page** will have a brief intro paragraph below the logo, and an input box for a zip code (required) with a "Search" button next to the input box. 3 option radio-buttons will be placed below that. The 3 option radio buttons are for Club, Event, or All (default - not choosing a button returns all results in a radius).
     At the bottom of the home page above the footer, there will be 1 other button – "Add Club / Event".

   - **The search results page** will return search results ordered in descending order according to distance from the target zip search, with search filters at the top and bottom of the list.
     Results will show the name of school / event, fighting styles, venue, and contact details.

   - **The "Add" content form** will open with the following input fields to sign-up a club, school, or event (most fields required)
     - Name of club / school / event
     - **Date and time for Events** (date and time pickers)

- What fighting style(s) (check boxes)
- Brief details (Text box area with limited input)
- Venue Address -- Street, state, zip
- Contact information -- Phone, Email, website URL (website optional)
- Contact person(s)

- **The "About" page** will contain brief info about this initiative / application, and credits to the FMA associations in North America, and other contributors.

- **The "Contact" form** will open with the following input fields…
  - Name (required)
  - Email (required)
  - Phone
  - Message (Text box area with limited input - required)

3. **Navigation**
   - The logo and title at the top of each page will be clickable, and link back to the home page.
   - Other navigation will consist of a "back to top" button on each page, and the 3 navigations buttons in the footer section – About, Home, and Contact.

4. **Main content**
   - **The search results page will feature the main content for this application.**
   - The results page will also feature a floating "return to top" button, that will take the user back to the top of the results page.
   - **Searches** will return results ordered in descending order according to distance from the target zip search. The following info would be returned:
     - Name of club / event
     - **Date and time for Events** (for events only)
     - What style
     - Venue Address -- Street, state, zip
     - contact information -- Phone, Email, website URL
   - **At the top and at the bottom of the search list, 5 filter options will be provided to expand or limit the search results. The filter fields are zip, state, radius, style, and type.**
     - Zips input will be verified for validity
     - State will be selected from a dropdown
     - Radius options in miles to be selected - 200, 100, 50 (default), 25, and 10.
     - The style option refers to different FMA styles and will be Arnis, Escrima, Kali, and All.
     - The type filter is for Club / School/ Event / All.
   - **The search will pull data from a database that will have tables to organize the following data:**
     - Type
       - Club, School, Event
     - Style
       - Arnis, Eskrima, Kali

- Address
  - Street, state, zip, Longitude, latitude
- Contact info
  - Phone, email, website URL
- Contact person
- Details

5. **Footer**
   - The Footer section will be fixed at the bottom of the viewport, and will contain disclaimers and 3 navigation buttons – "About", "Home", and "Contact". The footer will appear at the bottom of all pages.
   - The disclaimer section will probably contain a copy rights statement, and a statement of indemnitee and limited liability. This will be determined after consultation with a legal expert. (There might need to be a separate page for the expanded text of these disclaimers/declarations.)

Define the User Flow

What interactions will the user be required to do to use your web application. Example: E-commerce Application
- Focus on page flow not content of pages
- Make sure you analyze all user flows, creating multiple flow charts if necessary.

See STIX Application Page Flow Diagram in Git repository by clicking this link.

Create application Wireframes

Start with pencil and paper or whiteboard, then if necessary, create a digital version
Analog Tools:
- Pencil & Paper
- Whiteboard & Dry Erase Markers

See STIX Application hand drawn wireframe diagrams in my Git repository by clicking this link.

Digital Tools:
- Draw.io (https://www.draw.io/) <- Recommend
- Adobe XD (https://www.adobe.com/products/xd.html)
- Inkscape (https://inkscape.org/)
- Adobe Illustrator (https://www.adobe.com/products/illustrator.html)
- Mockflow (https://mockflow.com/)
- JustInMind (https://www.justinmind.com)

See STIX Application digital wireframe diagrams in my Git repository by clicking this link.

Create Project Documentation

Create your capstone repo (in a new folder) and add a docs folder.

Create a docs folder, add documentation in the form of markdown, images or PDFs.

Update your README.md file to link to your new project documentation.

Your documentation should include...

- Definition of your audience
- Definition statement for your project
- High level story (elevator pitch)
- Outline of the content
- User Flow
- Wireframes (1 wireframe per page minimum, hand-drawn is ok!)

See STIX Application documentation in my [Git repository by clicking this link](#).