Software Engineering Career Track

Capstone One: Step Three - API Selection and Schema Design

You're about to tackle step three of your first capstone project. To review the project steps, refer to this document.

API Selection and Schema Design (4-8 Hours)

In Step One of this project, you explored APIs to help you come up with a couple of different project ideas. Now that you've written a proposal about one of those ideas, it's time to officially choose an API to work with.

If you have not yet chosen an API:

- Please be sure to restrict your search to APIs that are free to access - happily, there are thousands available!
- Check out this APIs List but feel free to explore other resources too.
- We recommend choosing a JSON API because you've worked with those more, but there is nothing wrong with choosing an XML API.
- For this project, it is worth looking for an API that will contain easy to use data.

After you've chosen your API:

- Familiarize yourself with the data it contains.

- Look at how the data is formatted, and whether it is returned in JSON or XML. The code you write to process the API will be slightly different depending on how the API is formatted.
- Think about what data you'll need for your site, and what data in the API may be unnecessary.
- Consider: Does any of the data seem messy to you? Think about how you might have to manipulate it before it's usable.

Now that you know what the API looks like, it's time to develop your database schema.

Designing Your Schema

- Think about how you want to design the tables in your relational database, based on the API and any other additional data you might be storing, such as user login information.
- What will the primary and foreign keys be? Which tables will relate to each other? What kind of relationships will they have?
- Draw out how you'd like the associations to work in the Crow's Foot notation we taught you. Refer to this video for a refresher.
- Once you decided on your columns and their data types, tables and their relationships, primary and foreign keys, and constraints that your schema will have, upload a text file containing your schema design or draw it out, take a picture, and upload that.

Submitting Your Work

1. Add your Schema files to your GitHub repo.
2. Make a file called README.md and add the link to your API in there. For right now, that is all the README needs, but in the last step of the project you will flush it out with more documentation.
3. Submit your GitHub link so to your mentor so they can review your Schema. You do not need approval from your mentor to continue working on the project, but they may have advice on how to improve it.