My website will be designed to assist individuals running for writing a Dungeons and Dragons campaign, otherwise known as a DM. The site will help gather and generate data for possible enemies, at a given level of difficulty, that players will fight in a random encounter.

Example:

Your players are a group of four adventurers, all at level 2 of their respective classes. This means that an enemy with a challenge rating (CR) of 2 would be a worthy challenge. Your players are traveling down a forest path to the next town, and you would like them to run into an adversary. You head to the proposed website and fill in how many players you have, their respective levels, how difficult you would like the fight to be, how many enemies you would like and what environment they are in. The website generates the correct enemies with appropriate CR for the fight. You will be provided info cards for each enemy showing all of the stats and abilities of the enemy, so that you may use them correctly and keep track of them in battle.

This info card will feature editable stats for armor class and hit points (health), as those may fluctuate throughout the fight. I will also provide a notes section for any notes the DM might feel that they need to write about the particular fight. I plan to have a user able to login and have their past random encounters saved, so that they may pull them back up and view them with the notes that the user might have taken. The user will have the ability to edit these notes as well as delete past encounters if they so wish.

I plan on utilizing data from the [D&D 5e API](https://www.dnd5eapi.co/). This API should hopefully contain everything I require to filter through, and display what I need to accomplish this web site’s goal.

I would need tables for at least the user and the encounter, possibly more. I would have a form for creating a new encounter where all the information listed above would be provided. The user model would have an id, username, password and email. The encounter table could have many columns including, but not limited to, id, CR, notes, monster\_id1, monster\_id2… (etc… I would probably cap the number of possible monsters in an encounter at 8)

I imagine that one of the most difficult tasks I will face with this project will be the filtering of monsters to only show ones with their correct environment and CR of the given campaign information by the user.

I would make sure to handle authentication and authorization via bitcrypt hashing.

A long term or stretch goal would be to add more tools for the DM to use while managing the encounter. Such as, customized initiative order with details needed about that particular player. These would be tiles at the top of the screen to help keep track of who's turn it is currently, and who’s turn is next. The tiles would be able to be highlighted upon click to signify the current turn, and the highlight would be removed when either clicked again or another tile is clicked. These tiles could also have editable fields for the player's current hit points.