Capstone Project Documentation

1. Goal

The goal of the application is to provide users with a convenient and user-friendly tool for searching and exploring Pokémon types. It aims to help users easily find information about target Pokémon strengths and weaknesses based on their types.

2. User Demographic

The target audience for the application is players who are new to the Pokémon games, for many experienced players are aware of the Pokémon's types and their relations to other types.

3. Data Usage

For our project, we will utilize the Pokémon API to fetch Pokémon's basic information and types of relationships. To optimize performance, we will implement caching for type information and store previously searched Pokémon data in our PostgreSQL database.

4. Project Approach

    a.   Database Schema:
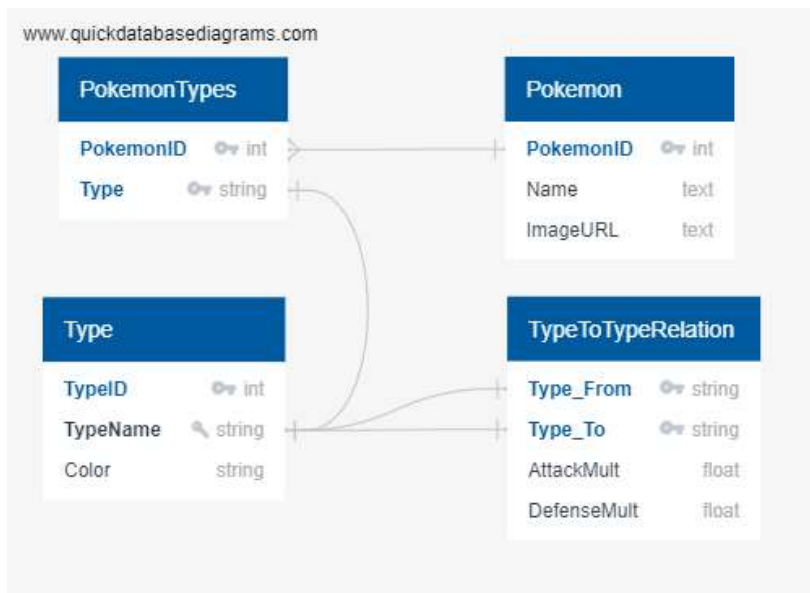
        1. Pokémon:

        a. ID
        b. name
    2. Type:
        a. ID
        b. name
    3. Pokemon-Type:
        a. PokemonID
        b. TypeID
    4. Type-TypeRelation:
        a. FromType
        b. ToType
        c. AttackMultiplier
        d. DefenseMultiplier

b. Potential Issues: As many APIs limit the amount or rate at which data can be requested, I will have to minimize the number of requests I make. For this, I will be caching the types of information and the Pokemon's information that has been searched into the application's PostgreSQL database.

c. User Flow: The user flow will be as simple as typing in the name of the Pokemon the user wants to know more about. We will change the input to match the format that the API requires for ease of use.