Pikachooze

A description of the problem you wish to solve or the application you wish to develop, and, more specifically, what you plan to demonstrate at the end of this project.

A common complaint about games from the beloved Pokémon series is the learning curve. Novice and amateur players often feel overwhelmed by the type complexities within the game. There exist 18 types of Pokémon in which each type is resistant, immune, or weak against various other types. Type matchups have a large impact on whether a player will be able to win against another player. Knowing what types are effective against others makes victory more attainable. Some players will catch on quickly, while others may be caught unsuspecting by a matchup with a gym leader. With our project, we aim to streamline this typing system for new players, providing an intuitive interface to view when a trainer should use certain Pokémon within their party, and offering recommendations against certain opponents. We hope that this application will help new players feel more comfortable taking on Pokémon games and give them a leg up against more experienced players.

How it is important, interesting, and/or useful; and how it involves data management.

Our tool is important as it gives users several functionalities… accessing a player's own lineup (6 Pokémon) and measuring their efficacy against virtual opponents in the game as well as offering a tool for ranking Pokémon captured and stored by a player to decide which to include within a 6 Pokémon lineup. We will create a scoring system that will simplify difficult to read weaknesses / resistances / immunities as well as "move" (ability) sets. It will allow for detailed entry of a Pokémon lineup which has not been present on sites and web apps that assume competitive optimization or merely present--graphically--existing facts about type comparisons. This requires data management as we will store the user's inputs so that they may reference their team over time. Further, we will be able to make value judgements on stored Pokémon and be able to store a large amount of data on gym leaders (game bosses). This will require data management.

Initial thoughts on how to approach the problem or build the application, including the preliminary system architecture and the platform you plan to use.

To build this platform, we want to include the following features:

- **Users and Parties** account setup, with the ability to import all the Pokémon you want to the database.
- Multiple **databases** that include all Pokémon, their learnable moves, types, and stats.
- **Opponent Matchup** database that includes details of all 8 gym leaders and elite 4, their Pokémon, and their respective move sets. This database can be easily expanded to include more trainers from throughout the game.
- A **Type Matchup Calculator**, where based on what the opposing Pokémon and their moves are, we can score each Pokémon by how effective it is in the matchup. This will help the user find the top 6 strongest Pokémon to use against the gym leader.
- **Frontend** on webapp using Flask to put everything together.

Survey of previous and/or related work and systems, including discussions of how they relate to your problem as well as their limitations and/or flaws.

- Pokedex
  Pokedex is a wealth combination of information on all the Pokémon creatures from the entire game series
  - Very detailed information about every pokemon in all game versions, including names, stats, moves, etc. However, TMI and not beginner-friendly
  - Each pokemon is considered individually but not in teams/battles.

- Marriland's Pokémon Team Builder
  It is a tool used to check the weaknesses and resistances of the entire pokemon team "at a glance to spot any glaring holes in your team's defensive coverage."
  - The website does not keep track of user history and will lose all the previous data input
  - Pokemon inputs are formatted in long lists, which are hard to see or pick
  - Output shown in a confusing grid without proper labels or instructions

- http://jakerodelius.com/web/pokemon-calc/index.html
  This website can take in the team of pokemon types and output the weaknesses and resistances for each.
  - Not pokemon specific.
  - Output is shown in lists of types and is hard to read/comprehend.
  - Bad UI/UX