**Pokémon Database Project**

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*Data and Functional Requirements*

**Entity Sets**

Pokémon: A Pokémon is any of the monster characters featured in Pokémon video games. Pokémon are defined by the following attributes:

* Dex\_num: Every Pokémon is assigned a Pokédex number when added to the game. This number is a part of an on-going list that is called the National Dex and is the same across different games and regions.
* Name: Each Pokémon is given a name that helps you identify them easier than remembering their specific Pokédex number.
* Type1: Each Pokémon is given at least one type and there is a list of type’s that are as follows: Normal, Fighting, Flying, Poison, Ground, Rock, Bug, Ghost, Steel, Fire, Water, Grass, Electric, Psychic, Ice, Dragon, Dark, Fairy
* Type2: Depending on the Pokémon they may be given a second type on top of their first type. The types include the following: Normal, Fighting, Flying, Poison, Ground, Rock, Bug, Ghost, Steel, Fire, Water, Grass, Electric, Psychic, Ice, Dragon, Dark, Fairy. If they do not have a second type it will be referred to as n/a.
* Evo\_status: Each Pokémon has an evolution status either 0, 1, 2, or 3. If their evolution status is 0 they cannot evolve. Otherwise, they are given a 1, 2, or 3 based on if they are a 1st stage, 2nd stage, or 3rd stage evolution.
* Mon\_status: Each Pokémon has a status pertaining to what kind of Pokémon it is. The different kinds of Pokémon include the following: Starter, Basic, Baby, Fossil, Psuedo-Legendary, Sub-Legendary, Legendary, and Mythical.
* Region: Each Pokémon is native to a certain region and can be found in the wild in that region.

Region: A region is a place where people and Pokémon can reside in, very similar to a country. A region is defined by the following attributes:

* Name: Each region is given a name to be referred to by.
* Games: Each Pokémon game is made around a region.
* Year\_made: This is the year that the game was released when the region had its debut to the world.
* Based\_off: Every region is based off a real-world place, whether it be a whole country, just a part of a country or a city.
* Num\_pokemon: This is just a count of the Pokémon that are in that specific region.

Locations: A location is anywhere in a region that a player can visit that is considered a city or a town. Each location is defined by the following attributes:

* Location\_id: Each location is given an id number to be identified with.
* Name: Each location is given a name to be more easily remembered and identified with.
* Gym\_leader: Some locations may contain a gym where the trainer can challenge to earn a badge which means they will have a gym leader defending that gym.
* Region: Every location can be found in a specific region.

People: The set of people is anyone that resides in the Pokémon world. A person can fall under five different categories: Professor, Rival, Gym Leader, Elite 4, Champion. Each person is defined as follows:

* Person\_id: Each person is given an id to identify them.

Categories of people:

Professor: A professor is a character that gives the player their first Pokémon and the Pokédex in pursuit of completing the Pokédex by collecting every Pokémon. A professor is defined by the following attributes:

* Name: Each professor has a name to be easily identified.
* Region: Each professor belongs to a certain region.
* Gender: Each professor has a gender, male or female.
* Specialty: Each professor has a specific specialty unique to them.

Rivals: A rival is a character that follows you around the region on your quest to become Champion. They follow the same progression as you by collecting the gym badges and battle with you many times. A rival is defined by the following attributes:

* Name: Each rival has a name to be easily identified.
* Region: Each rival belongs to a certain region.
* Gender: Each rival has a gender, male or female.
* Number of Battles: Each rival is fought a certain number of times throughout the player’s journey.

Gym Leaders: A gym leader is a character that protects a gym in varying towns/cities. When the player completes the gym and defeats the gym leader, they are given a badge to prove they defeated the gym. Typically, there are 8 gyms per region, thus 8 gym leaders. A gym leader is defined by the following attributes:

* Name: Each gym leader has a name to be easily identified.
* Region: Each gym leader belongs to a certain region.
* Type: Each gym leader typically has a certain Pokémon type that they base their team around. For example, a rock-type gym leader would have a team that is composed of rock-type Pokémon.
* City: Each gym leader belongs to a certain city/town in their region.
* Badge: Each gym leader gives the player a badge after being defeated.
* Number of Pokémon: Each gym leader has a certain number of Pokémon that can vary from 1-6.
* Ace Pokémon: Each gym leader typically has an ace Pokémon that is the strongest Pokémon they possess and should give the player the most trouble compared to their other Pokémon.

Elite 4: An elite 4 member is a part of the Pokémon League that can be challenged after defeating all 8 gym leaders in the region. There are four elite 4 members and all of them are much stronger than the previous 8 gym leaders. An elite 4 member is defined by the following attributes:

* Name: Each elite 4 member has a name to be easily identified.
* Region: Each elite 4 member belongs to a certain region.
* Type: Each elite 4 member typically has a certain Pokémon type that they base their team around. For example, a rock-type elite 4 member would have a team that is composed of rock-type Pokémon.
* Number of Pokémon: Each elite 4 member has a certain number of Pokémon that can vary from 1-6.
* Ace Pokémon: Each elite 4 member typically has an ace Pokémon that is the strongest Pokémon they possess and should give the player the most trouble compared to their other Pokémon.

Champion: A champion is the final person the player must battle in the Pokémon league to claim the title of Pokémon Master and become the region’s champion. Upon defeating the champion, the player has essentially completed the main story of the game. A champion is defined by the following attributes:

* Name: Each champion has a name to be easily identified.
* Region: Each champion belongs to a certain region.
* Type: Each champion typically has a certain Pokémon type that they base their team around. For example, a rock-type elite 4 member would have a team that is composed of rock-type Pokémon. One exception for champions is that they don’t need to have a type they could have a more balanced team with different types.
* Number of Pokémon: Each champion has a certain number of Pokémon that can vary from 1-6.
* Ace Pokémon: Each champion typically has an ace Pokémon that is the strongest Pokémon they possess and should give the player the most trouble compared to their other Pokémon.

**Relationship Sets**

1. People reside in different regions.
2. Locations are located in different regions.
3. Pokémon are native to different regions.
4. Pokémon are owned by people.
5. Gym leaders defend their respective gyms that reside in specific cities/towns.

A white sheet with black dots

Description automatically generated with medium confidence*ER Diagram*

A white sheet with black dots

Description automatically generated with medium confidence

A diagram of a structure

Description automatically generated*Relational Schema*