

TERM PROJECT PROPOSAL

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Project Title:

Pokemon Database Management System

Project Scenario:

A database system designed to track and organize Pokémon living in the world, their owners, and various structures and entities such as cities, gyms, and poke-centers. All information and components related to the database are outlined below.

Project Components: (50p)

1. Entities:

1. POKEMON
2. Captured Pokemon (Weak Entity)
3. Wild Pokemon (Weak Entity)
4. TRAINER
 - o Casual Trainer
 - o Professor
 - o Gym Leader
 - o Player
5. TYPE
6. CITY
7. ROUTE
8. GYM
9. POKE-CENTER
10. BADGE
11. ITEM
12. TEAM

2. Relationships:

1. TRAINER — POKEMON (Captured) → 1—M
2. ROUTE — POKEMON (Wild) → M—M
3. POKEMON — TYPE → 1—M
4. GYM — Gym Leader → 1—1
5. CITY — GYM → 1—1
6. POKE-CENTER — CITY → 1—1

7. POKE-CENTER — Professor → 1—M
8. CITY — Player → 1—M
9. Player — ITEM → M—M
10. Player — BADGE → M—M
11. TEAM — Player → 1—M

3. Attributes:

1. ~~POKEMON~~ = id, name, level, type1, type2, hp, ap, speed, isShiny
2. Captured Pokemon = trainer_id (FK)
3. Wild Pokemon = route_id (FK)
4. TRAINER = id, name, age, gender, badges (FK)
 - a. Casual Trainer = id(FK), route_id (FK)
 - b. Professor = id(FK), poke_center_id (FK)
 - c. Gym Leader = id(FK), gym_id (FK)
 - d. Player = id(FK), city_id (FK), items (FK), team (FK)
5. ~~TYPE~~ = id, type_name, strong_against (FK), weak_against (FK)
6. CITY = id, name, population, gyms (FK), poke_centers (FK)
7. ROUTE = id, name, starting_city (FK), ending_city (FK), pokemon_level_range, pokemons (FK)
8. GYM = id, name, city_id (FK), gym_leader_id (FK)
9. POKE-CENTER = id, name, city_id (FK), location, capacity, professors (FK)
10. BADGE = id, name, description, price, isElite
11. ITEM = id, name, description, price
12. TEAM = id, name, players (FK)

4. Existence Dependencies:

1. **A Poke-Center** cannot exist without a **City**.
2. **Gym** cannot exist without a **City**.
3. **Gym Leaders** cannot exist without a **Gym**.
4. **Captured Pokemon** cannot exist without a **Trainer**.
5. **Wild Pokemon** cannot exist without a **Route**.
6. **Team** cannot exist without at least one **Player**.

5. ISA Relationships:

1. All Casual Trainers, Professors, Gym Leaders, and Players are types of Trainers.

6. Exclusion Structures:

1. If a Trainer is a Player, it **cannot be** a Professor, Casual Trainer, or Gym Leader.
2. If a Trainer is a Gym Leader, it **cannot be** a Professor, Casual Trainer, or Player.

7. Weak Entities:

1. Captured Pokemon is a weak entity that cannot exist without a Trainer.
2. Wild Pokemon is a weak entity that cannot exist without a Route.

8. Disjoint Relationships:

1. A Pokemon cannot be both Captured and Wild simultaneously.

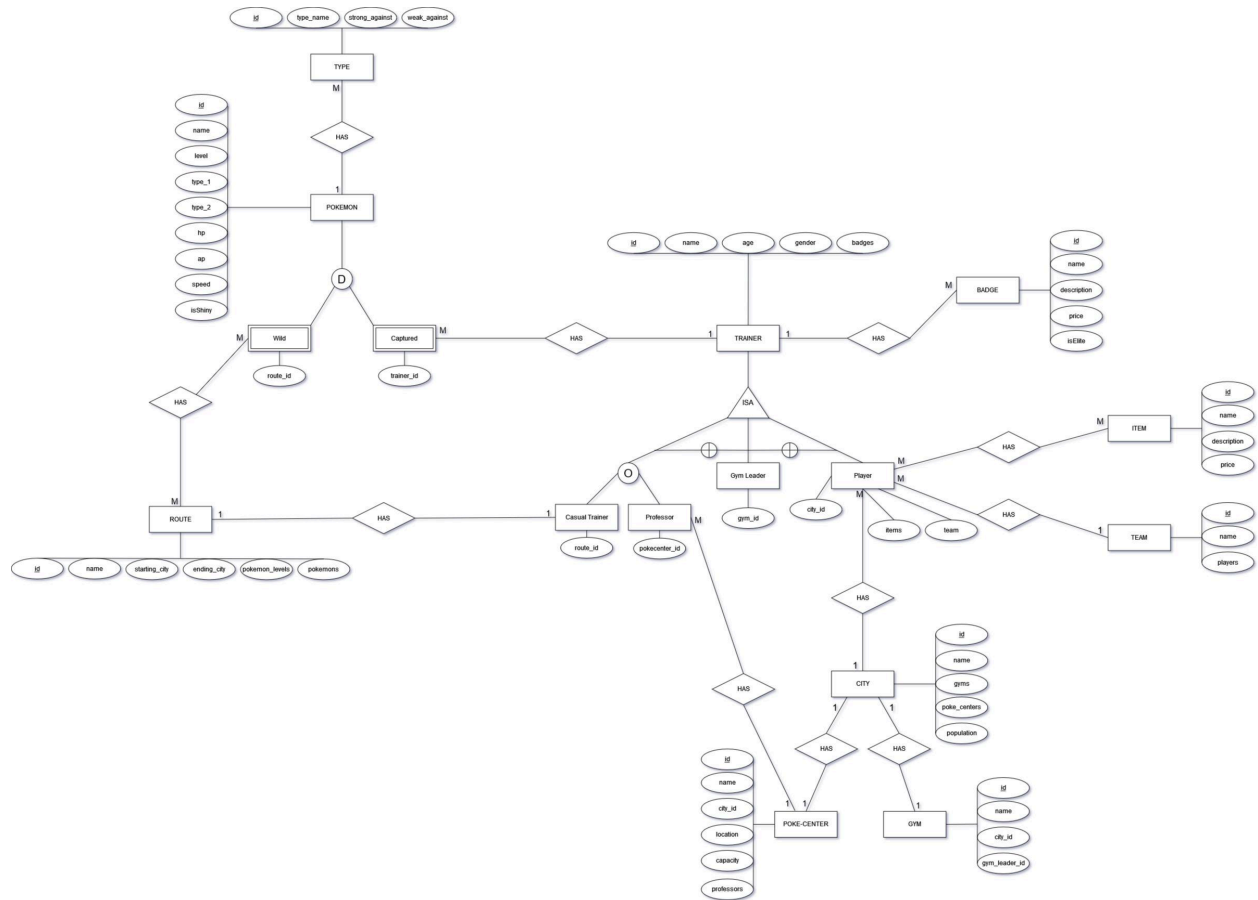
9. Overlapping Relationships:

1. A Trainer can simultaneously be both a Professor and a Casual Trainer.

10. Relation Schemas:

- **POKEMON** (id [PK], name, level, type1, type2, hp, ap, speed, isShiny)
 - **Captured Pokemon** (trainer_id [FK], pokemon_id [FK])
 - **Wild Pokemon** (route_id [FK], pokemon_id [FK])
 - **TRAINER** ((id [PK]), name, age, gender, badges [FK])
 - **Casual Trainer** (id [FK], route_id [FK])
 - **Professor** (id [FK], poke_center_id [FK])
 - **Gym Leader** (id [FK], gym_id [FK])
 - **Player** (id [FK], city_id [FK], items [FK], team [FK])
 - **TYPE** (id [PK], type_name, strong_against [FK], weak_against [FK])
 - **CITY** (id [PK], name, population, gyms [FK], poke_centers [FK])
 - **ROUTE** (id [PK], name, starting_city [FK], ending_city [FK], pokemon_level_range, pokemons [FK])
 - **GYM** (id [PK], name, city_id [FK], gym_leader_id [FK])
 - **POKE-CENTER** (id [PK], name, city_id [FK], location, capacity, professors [FK])
 - **BADGE** (id [PK], name, description, price, isElite)
 - **ITEM** (id [PK], name, description, price)
 - **TEAM** (id [PK], name, players [FK])
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Original File



Değerlendirici Görüşü: (10p)

Projenin özgünlüğü, uygulanabilirliği, uygulanabilirlik ve yaygın etki, ekonomik katkı ve ticarileşme potansiyeli ve projenin daha önce sunulup sunulmadığı vs konularında değerlendiricinin görüşleri buraya not düşülecektir.