# Pokemon assignment

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## 1 Abstract

This report examines the effectiveness of using GenAI in creating databases in MySQL and NoSQL (MongoDB). It was observed that GenAI provides better guidance for MySQL compared to MongoDB. A smoother experience was observed with MySQL, while GenAI appeared confused and less helpful with MongoDB. This highlights the challenges GenAI faces in adapting to different database systems. Understanding these differences can help improve GenAI's support for NoSQL databases like MongoDB.

## 2 Problem Statement

To evaluate GenAI's ability with databases, we were tasked with creating a database for the popular video game series "Pokémon". The simplified version of the game included Pokémon with one primary type, and some having a secondary type. The game involves using moves to attack other Pokémon, each move having a power and type. Given these details, we needed to create database tables for Pokémon, Type, and Move, considering the classic many-to-many relationship between Pokémon and Moves. Additionally, we were asked to populate the tables with specific Pokémon and move details.

## 3 MySQL

Designing a database with MySQL was straightforward. Step-by-step instructions were provided, and GenAI accurately generated the commands for creating the required tables. Queries for the specified questions were promptly generated by GenAI, facilitating the completion of the assignment.

### 3.1 Query: Pokémon Learning 'Return'

[language=SQL] SELECT p.name FROM Pokemon p JOIN Pokemon$_{M}ovespmONp.pokemon_{i}d = pm.pokemon_{i}dJOINMovemONpm.move_{i}d = m.move_{i}dWHEREm.name =' Return'$;

## 4 NoSQL MongoDB

Despite lacking prior experience with NoSQL, I anticipated better guidance from GenAI. However, encountering confusion, I resorted to consulting documentation and utilizing MongoDB Compass and Mongosh terminal to create the database and collections. While this process taught me about NoSQL database design, I found GenAI's assistance to be less helpful than expected.

## 5 Analysis and Conclusion

MySQL proved to be straightforward for database design, with GenAI providing clear guidance. However, NoSQL implementation with MongoDB posed challenges, requiring additional effort and reliance on external resources. Despite these challenges, the experience offered valuable learning opportunities in database design and management. Improving GenAI's support for NoSQL databases like MongoDB could enhance its effectiveness in database-related tasks.