

COMP3005 Monster Database

Final Project (A6) Apr 12, 2022

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Project Demonstration Video: <https://youtu.be/PdsIYbYfuaQ>

Code Repository: <https://github.com/JaysonMendoza/comp3005a6>

Project Description

The Monster Database was created to facilitate people who play the tabletop game Dungeons and Dragons. This tool is mostly tailored for the people who lead games but is also sufficient for use by players. This tool serves several purposes that aid dungeon masters (DM's) in the selection and creation of monsters that may appear in their campaigns. The various queries selected for the project are designed to facilitate two main use cases. The first use case is regarding the selection of monsters as suitable opponents for a campaign. The second use case aids the DM in creating new monster variants for their campaigns by using monsters and abilities of a similar target power level as a point of reference.

In the case of a DM selecting a monster for their campaign the DM should be able to query all monsters and view their key attributes and also be able to select a specific monster and view their complete details. The database is designed with most key attributes in the *Monsters* table because those key attributes are functionally dependent on the specific monster. The one exception is that each monster must have an array of key attributes known as a Statistic Card that can be shared with any number of other monsters. Thus to get a complete monster list a minor join will be required between *Monsters* and *StatCards*. Once the user has located some monsters of interest then can then view all the monster's attributes. This is a far more complex search as it requires almost all tables in the database to be queried. The database uses *monsterID* from *Monsters* as the main key that links together all entities. However, the database also contains a significant number of attributes that are optional to monsters and shared with other monsters. Therefore at least 12 N to N relationships exist that can be explored to determine a full view of monster attributes.

The second case is when a DM is creating their own monster variants for a campaign. In this case it is useful for a DM to view attributes like different action types or resistances that appear on monsters of a targeted difficulty level or range known as a challenge rating. This database has broken off such actions, special abilities, reactions, and legendary actions into separate tables so that it is possible to view them with respect to the challenge rating from the monsters to which they are associated. It may also be interesting for a user to locate good boss monsters to use as a reference when making boss monsters. One example query selects all monsters that have the spellcasting special ability and returns their list of spells along with the number of legendary actions they contain. This would allow a user to then select that monster and view their complete cards in order to design their own spellcasting boss monster using it as a reference.

ER Diagram

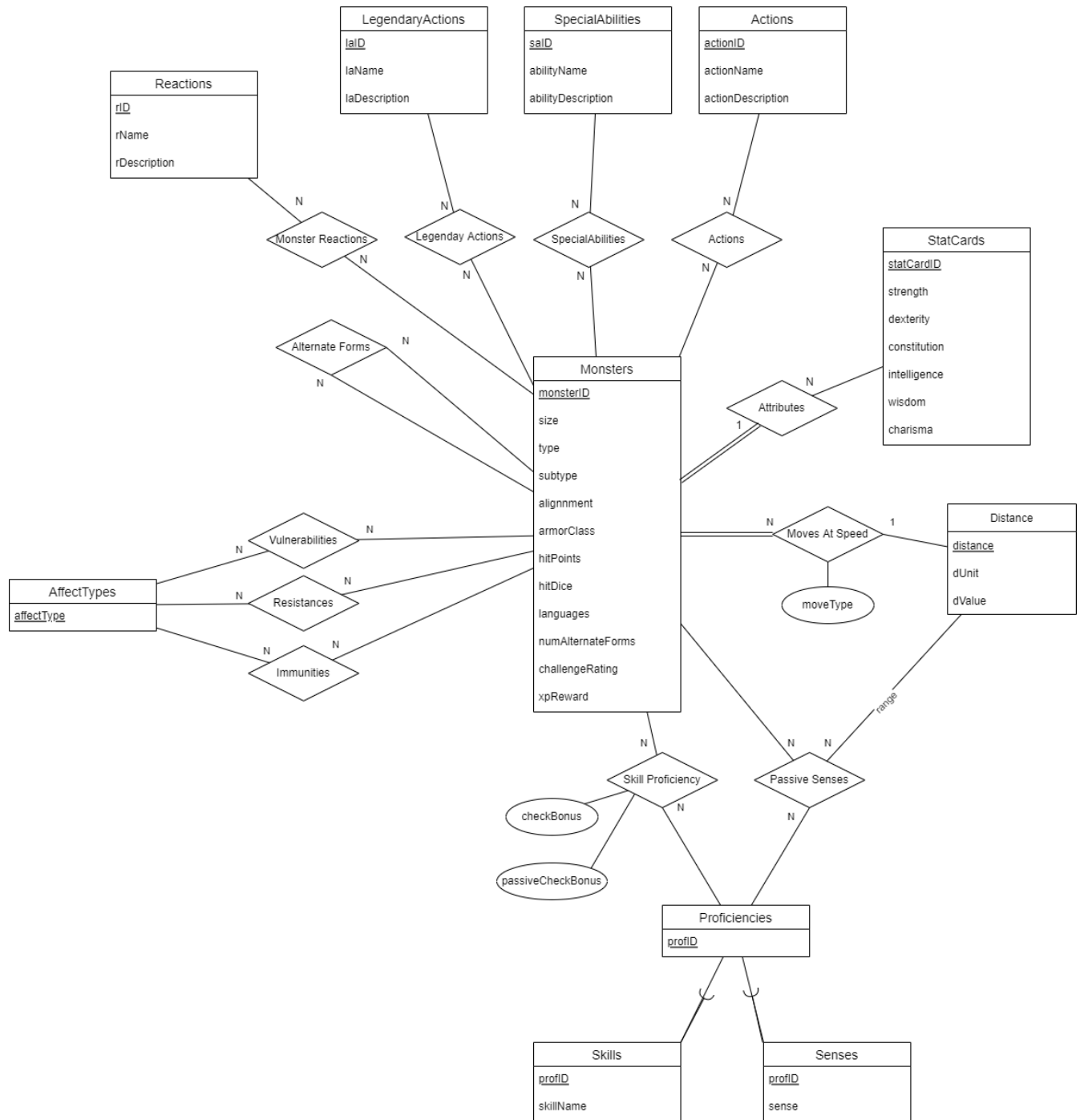


Table Model

Imposed Limitations

Actions, Reactions, Special Abilities, and Legendary Actions will not subdivide damage types. This will be left as description text. This was done to keep the complexity suitable for the project.

