Domain description

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The domain for our database design is a made up simplified action RPG game, with inspiration drawn from and similarities to the popular game Elden Ring. The database should be designed to contain game data, and relate it to current game states. This short description will be focussed on what that will look like.

An RPG game would not be a game without items and non player characters (NPCs) that the player can interact with. To start, the database must contain all the different item types in the game (weapons, stackable items, armor, consumables), and the values corresponding to their attributes. Since some attributes are shared this will be done with an ISA relation from an item to the different subtypes that contain more type specific attributes. All the different types of NPCs, this includes bosses, dialogue NPCs, or passive creatures, that the player can interact with should also be contained in the database. All these different types of NPCs are all dependent on an ISA relation with a superentity NPC. Considering they all have many shared attributes. Every NPC has an optional item table that also saves if the item is equipped and the chance the NPC drops it on death. The dialogue NPC is special since it is potentially a merchant, so in our database it should have an optional shop table that contains items with a stack amount and price.

Aside from all these game entities the most important thing in the game is the player, so let us get to that. The first thing that needs to be done when starting a game is making an account, all the accounts made by players should be saved in our database with the account information. Aside from regular account info these accounts can possibly contain one or potentially many savefiles. These save files should also be saved, every save has a character the player makes, this character has many attributes that all need to be saved, the character also holds items. These are to be saved in a table as well. Every character therefore will have one inventory, which is a table with an amount related to an item. The character table also contains an item ID of a currently equipped item. In our game after bosses and dialogue NPCs do not respawn after they are killed so the save should also link to a table that contains which bosses and NPCs are still alive. That was everything that will be saved in the database.