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As we were first reviewing the "vg_csv" table, we immediately noticed that the values of the "rank" field corresponded with the "global sales" field. We knew that neither one of these would be in the final design of our database since "global sales" itself is a derived attribute that's calculated by summing "NA Sales", "EU Sales", "JP Sales" and "Other Sales".

After realizing this, we turned our attention to extracting the underlying entities that were present in the "vg_csv" table. In our Crow's Foot diagram, we opted to create a new table for 4 entities (Game, Genre, Platform, and Publisher). These new tables all had a surrogate primary key that uniquely identified a value for either the "name", "genre", "platform", or "publisher" fields from the original table. We also included a "GenreID" foreign key within the Game table that connected it to the Genre table. In our eyes Game was a weak entity relative to Genre because we believed that a game genre first had to be created (or chosen) before a game could be made. In contrast, a game genre could in theory be conceived without ever creating a game that fit into that category. Hence, in this 1:M relationship, a genre within the Genre table could be associated with 0 – many games while a game title within Game could belong to 1 and only 1 genre.

Finally, we placed the remaining fields from "vg_csv" into a linking table that we called "Sale". This was the only appropriate place to store attributes like "year" or "na_sales" because it's only possible to know the values of those attributes whenever a Publisher released a Game on a Platform. For this reason, 3 foreign keys were added to the Sale table that connected it to the Publisher, Game, and Platform tables. In our diagram Sale is a weak entity relative to Publisher,

Game, and Platform because each record within the linking table is dependent on the information within those other three tables. While a record in Sale can have 1 and only 1 PublisherID, GameID, and PlatformID, an entry within Publisher, Game, or Platform can all have 0-many occurrences within the linking table. We viewed the three entities as being optional participants in the release or "sale" of a video game because a record in each one of their tables doesn't necessarily have to appear in the linking table. For example, a publisher could exist but never create a game, a game could be created without ever being sold, etc.