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Database Management

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### Cod: Zombies Database

Data is bits of information, or just facts or figures that exist, and they exist everywhere. But, the data has no purpose unless it gets context, then it becomes information. An example of a database that organizes data into information is in Call of Duty. COD is one of the most popular AAA video game titles out there for kids 12 and under and people who simply enjoy the game for war and as a pastime. At least for most people, one of the more enjoyable game modes for players is called “Nazi Zombies”, where the players must fend off an endless raid of zombies while gaining power ups and doing hidden secrets along the way. The basis for the game is that there are four players, there are enemies, there is a currency, there are power ups, and there are weapons in the game. While these are the facts for the game and all that is needed to play it, there are no specifications for this. The database gives life to the data by labeling, organizing, and specifying it. For example, the database provides the name, the damage output, and the price for the many different weapons you can acquire in the mode. So, instead of the game having the same types of guns that do the same amount of damage to the enemy zombies, it brings variety into the game to give it uniqueness and life. By turning the data of guns into information, you make the guns that cost more and are harder to get more worth it due to the damage and special properties it possesses. Without such examples, the Nazi Zombie mode will be very bland and

probably would have died out when it first launched. With information, simple data can be structured to bring order, organization, and even some fun.

### Hierarchical vs Network database models

The Hierarchical database model sorts data like a family tree or a power pyramid, where they put the data that is more general at the very top while it specifies it further down the model. An example is for your adventure game is having the data “Adventure” be at the very top and it goes down to the player then further down the line to the item that player holds. The Network model is in fact very similar to the Hierarchical database model in terms of structure, the key differences is that the design has nodes and arrows that splits the data up in many directions, so it does not go just from top to bottom but in any direction. It also fixes the key issue in the Hierarchical database model, where two pieces of data cannot link to the same piece of data, for example, two players cannot link to the same item in the Hierarchical database model, while in the network model they can do that and it can be in different places at multiple times.

Now, in relation to the Relational model, it fixes the shortcomings in the Hierarchical model by making two players link to the same item by having a table dedicated to show what player has what items instead of trying to link the player to the item itself. This also fixes the problem it has with the Network model, which is consistency since instead of editing a piece of data in many locations on the Network model, you can fix it on one table in the Relational model. I think XML as a database model is a bad idea since it is hard to find pieces of information on the model according to the research I did, while as finding information on the Relational model is easier since it is sorted by tables and is easier to find.