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Lab #1 CMPT 308

Data Vs. Information – When talking about databases, it is important to understand the difference between data and information. In one sentence, without context; Data has no meaning. Data can be anything, a number, a phrase, word but without context we wouldn't know what we're looking at. For example, in the database of World of Warcraft, you would find things like; mage, 90, blood elf, Deatheoc. Now without any context, no one really knows what any of that means. If you add more information behind it and state that this a character in the game, who is A level 90 Blood Elf mage on the realm Deatheroc, you start to understand the data more. This database would organize the data by realm, level, race and class. Once the data is given more context it starts to have meaning as opposed to having just random numbers and words in a row, we start to understand what is really being stored here and the characteristics of whom we are talking about; even though in this case it is a fictional game character.

Data Models – Database management and creation is as much as science as it is an art. There have been many different theories and ideas of how database information should be stored and compared. One of the firsts in the 1960s was known as the hierarchical model, this model can be best described as a family tree. It starts at top with the general idea, for this case let's stick with World of Warcraft. The top of the tree would be in fact, "Game". Under game you would have players, and then from players that would branch off to certain character traits such as "ID", "Level", "Items" etc.
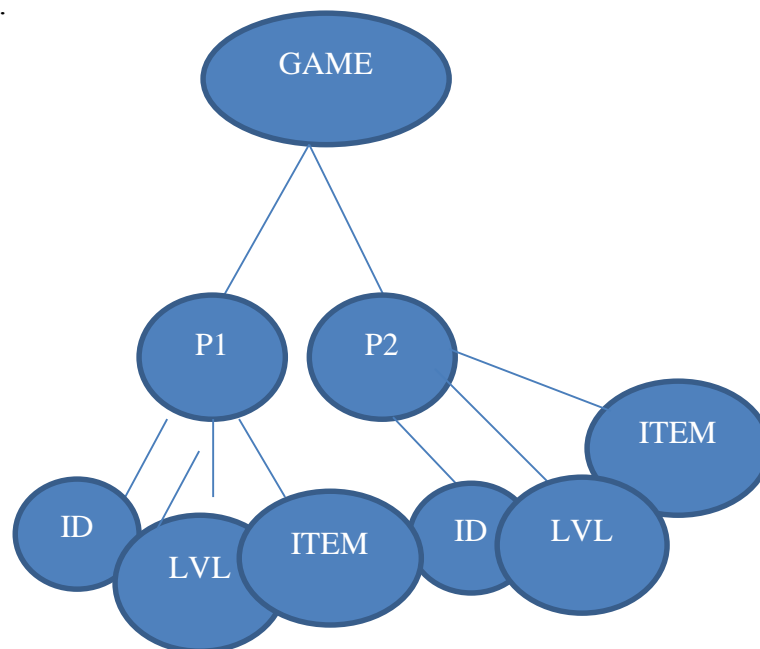
Similar to this model we have the Network model which shows shared information differently than the hierarchical model. Where above it shows item twice, even though it's the same thing, the Network model starts to show the interaction between the two sets of data.

GAME

P1   P2

A   B   C
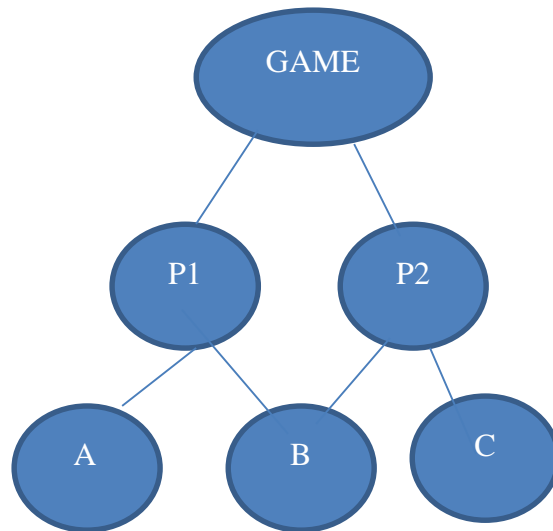
After the hierarchical model, in the 1970s we were introduced to the Relational Model Which was based of the ideas of different tables made up of rows and columns. This Model would take the same information above and spread it out over three tables; Players, Items and then Individuals. Each table would interact in a certain way retrieving information from each other and having "relationships".

IDV

PID	IID
1	A
1	B
2	B
2	C

Players

ID
1
2

Items

A
B
C
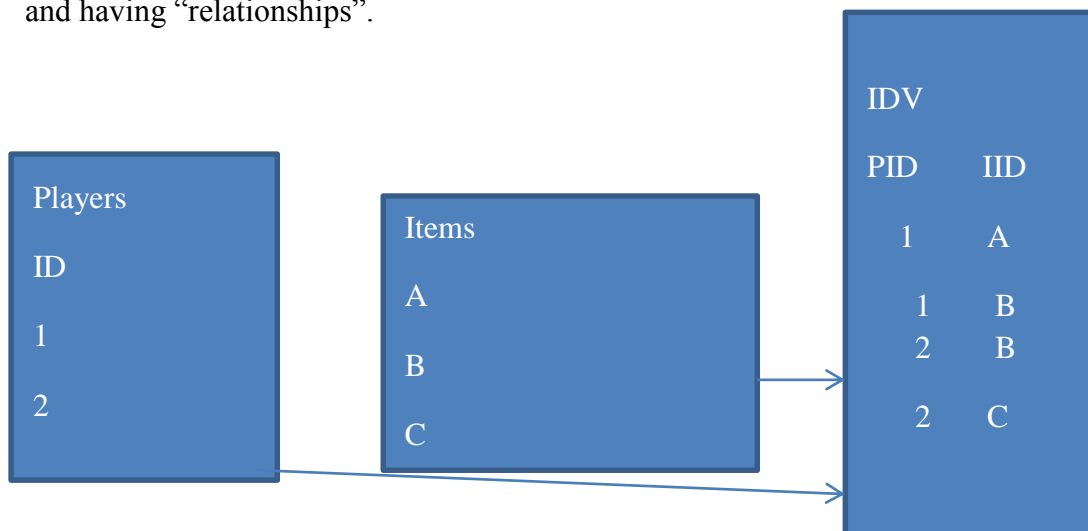
The relational model became the model of choice because it clearly states the data and information in a format that it easier to understand. After researching a little more into XML

storage, I feel as XML is similar to the both the network and hiercahical models in its layout but then brings in the tables and charts to better show its information than the previous models