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Database Systems

Lab One

Short Essay: Data vs. Information

In the world today, there are countless different databases that are in use. They can be anything, let it be information for a company or just a database of random records. A specific database that exists today is the NFL.com database of all NFL players, whether they are playing now, are retired, played for one year, or played for 20 – every player is included. What is stored on this database is the statistics of the players. There is a good amount of data that is inputted into this database, as every different player has a specific value of statistics. The data that is inputted is then organized to information when it is labeled. For example: all of the data entered are just meaningless numbers until they are organized by category (like touchdowns, yards, completions). Once the numbers are given context, they are then understood for what they actually are, and are not just random numbers in the database.

Short essay: Data Models

A hierarchal database model is a database model where the data is organized in a tree-like structure. Each record in the database are connected through links, which are the “tree branches”. Each entity in the database can only have one parent record, but it can have multiple children records. The network model is a database model used as a flexible way of representing objects and their

relationships. It is viewed as a graph where the object types are nodes and the relationship types are arcs, and it is not a hierarchy. These both pale in comparison to the relational model. The relational model is organized in terms of the relation. Users state what information is contained in the database and what information they want, and they let the software take care of describing data structures. XML could be used for data storage, as the entities are also a “tree-like” design. However, in this instance, the user can make a connection from two separate “branches” which you cannot do in the other tree-like models.

Screenshot: