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Data models

Two types of data models are the hierarchical model and the network pre relational models. They both have their disadvantages compared to the relational model. The relational model was revolutionary with the advantage of relations and organization and has since made the network and hierarchy model fall off the face of modern databases.

There were many disadvantages of the hierarchical model. According to the book, “One disadvantage was the hierarchical model was only really operated at a physical level and made it almost impossible for programmers to write high level code”(Garcia-Molina, D.Ullman and Widom, 2020). Another disadvantage of the hierarchical model is data duplication. Dr. Labouseur informed the class in his video that the hierarchical data model has a problem of duplicate data (Labouseur, 2020). This can mean inconsistency in our model can lead us to wrong decisions based on the information provided (Labouseur, 2020).

The disadvantage of the network model was we still had to write programs to manipulate and interact with the data (Labouseur, 2020). It was similar to the hierarchy model but there were many more connections in the graph. This was a step up to the

hierarchy model. It was still hard to see relations compared to the relational model in a visual view point.

Compared to the relational model, the hierarchical model and the network pre-relational model are at a disadvantage. The relational model provides limited operations to use on the data and therefore quite useful (Garcia-Molina, D.Ullman and Widom, 2020). We can use these operations to get information. This information can be obtained very fast too. According to the book, “limitations turn into features and we can implement languages, such as SQL which in return can do the work of thousands of lines of C in just a few lines of SQL.” (Garcia-Molina, D.Ullman and Widom, 2020) This makes the relation model so great. We can use SQl to speed up our software and also speed up the work of programmers (Garcia-Molina, D.Ullman and Widom, 2020).

I believe that the XML as a model for data storage would be really confusing and not very organized to the eye. For example, it looks like a bunch of nested tags and hard to find what we are looking for. On the other end, if data were to be in tables, then the data would look very organized and easily deciphered. In the table we can see things that line up easily and things that fit in a column. In the XML model, It’s hard to see columns and how they line up.

Works Cited

1) Labouseur, A., 2020. *DBMS :: History And Types Of Databases*. [online] Vimeo.

Available at: <https://vimeo.com/449093735/c056109b26> [Accessed 29 August 2020].

2) Garcia-Molina, H., D.Ullman, J. and Widom, J., 2020. *Database Systems The Complete Book*. 2nd ed. Upper Saddle River: Pearson Prentice Hall.