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CMPT 308

Data Models

A hierarchical database model is one where the data is organized into a structure that resembles a tree. This is extremely beneficial as the data is stored as records in the database, linked to one another links. You can think of records as the row in the hierarchical model referred to as tuples.

A network model is one conceived to be more flexibal than the hierarchical model. The way we represent objects and their relationships here is through a feature known as the schema. In the schema, object types are nodes and relationship types are arcs. This allows for us to bypass the restrictions held up by a hierarchy.

While both models have their pros and cons, neither model can live up to that of the relational model. In this approach, data is represented as tuples or rows, and grouped into relations. This use of primary and foreign keys helps clean up the most complex of DBMS's.

The idea of using XML as a model for data storage has never crossed my mind but, I can see the benefits of using an XML database model when dealing with information that does not only include SQL. Data in this model can be easily queried, transformed, and exported due to the abundance of sparse data.