Discussion 6.1 What are Databases?

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A picture containing diagram

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What is a Database? A databased is a set “data typically stored electronically in a computer system.” (Oracle, n.d.) Which is typically ran by a DBMS Database Management System. Often data is structured in rows and columns (Oracle, n.d.) within in tables to make finding of information more efficient. A common way to store data is with SQL Structured Query Language. Databases are used to store lots of information.

According to geeks for geeks, there are a few types of databases that are common. Hierarchical databases, network databases, object oriented databases, relational databases and NoSQL databases. Hierarchical Databases have a hierarchy and are organized by the rank or parent they belong to.

Graphical user interface, diagram

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(GeeksforGeeks, 2021) A Network database is very similar to a hierarchical database with a twist, “child records are given freedom to associate with multiple parent records.” (GeeksforGeeks, 2021)

Graphical user interface, diagram, application

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(GeeksforGeeks, 2021)

Object Oriented Database looks how JavaScript objects are set up, the information is stored to represent the object. (GeeksforGeeks, 2021) Which Geeks for Geeks suggests that “the workload on the database is substantially reduced.” (GeeksforGeeks, 2021)

Graphical user interface

Description automatically generated

(GeeksforGeeks, 2021)

A relational database geeks for geeks suggests this database is most mature. (GeeksforGeeks, 2021) it’s a very popular choice to use. “every piece of information has a relationship with every other piece of information.” (GeeksforGeeks, 2021) Notice in the picture how all the arrows are drawn together, representing the relationship.

Table

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(GeeksforGeeks, 2021)

Lastly we have a NoSQL database. Which is a non-Structured Query Language. It is a tool for storing and grabbing data. It is considered to be a simple design which has good control over the data. Apparently MongoDB is in this category. An advantage of NoSQL is how large the database can be. A few disadvantages according to geeks for geeks is that is is open source. There is no GUI. Not a good backup system and the vast size of the file. (GeeksforGeeks, 2021)

References:

GeeksforGeeks. (2021, September 13). *Types of Databases*. Retrieved February 6, 2023, from <https://www.geeksforgeeks.org/types-of-databases/>

Oracle. (n.d.). *What Is a Database?* Retrieved February 6, 2023, from https://www.oracle.com/database/what-is-database/