

4.10: Enterprise Databases

Small and large organizations utilize enterprise databases for managing when collecting large complex data. An enterprise database is robust enough to handle multiple users' queries successfully simultaneously and can handle a range of 100 to 10,000 users at a time. (Technopedia, 2020). Computers have become networked and are now joined worldwide via the Internet, and a class of databases has emerged that can be accessed by two, ten, or even a million people. These databases are sometimes installed on a single computer to be accessed by a group of people at a single location or a small company. They can also be installed over several servers worldwide, meant to be accessed by millions in large companies. These relational enterprise database packages are built and supported by companies such as Oracle, Microsoft, and IBM. The open-source MySQL is also an enterprise database. Open-source databases are free and can be shared, storing vital information in software that the organization can control. An open-source database allows users to create a system based on their unique requirements and business needs. The source code can be customized to match any user preference. Open-source databases address the need to analyze data from a growing number of new applications at a lower cost. The deluge of social media and the Internet of Things (IoT) has ushered an age of massive data that needs to be collected and analyzed. The data only has value if an enterprise can analyze it to find useful patterns or real-time insights. The data contains vast amounts of information that can overload a traditional database. The flexibility and cost-effectiveness of open source database software have revolutionized database management systems. (Omnisci, 2020).

📌 Sidebar: What Is Metadata?

The term metadata can be understood as “data about data.” For example, when looking at one of Year of Birth's values in the Students table, the data itself may be “1992”. The metadata about that value would be the field name Year of Birth, the last updated time, and the data type (integer). Another example of metadata could be for an MP3 music file, like the one shown in the image below; information such as the song's length, the artist, the album, the file size, and even the album cover art is classified as metadata. When a database is being designed, a “data dictionary” is created to hold the metadata, defining its fields and structure.

4.10.1: Data Governance

Data governance is the process of taking data and managing the availability, integrity, and usability in enterprise systems. Proper data governance ensures the data is consistent, trustworthy, and secured. We are in a time when organizations must pay close attention to privacy regulations and increasingly need to rely more on data analytics to optimize decision making and optimize operations. Data governance can be used at both the micro and macro levels. When we refer to micro, the focus is on the individual organization to ensure high data quality throughout the lifecycle to achieve optimal business objectives. The macro-level refers to cross-border flows by countries which are called international data governance.

4.10.2: References

Omnisci (2020). *Definition of an Open Source Database*. Retrieved September 1, 2020, from <https://www.omnisci.com/technical-glossary/open-source-database#:~:text=An%20open%20source%20database%20has,is%20protected%20to%20prevent%20copying.>

Technopedia, (2020) *Definition of Enterprise Database*. Retrieved September 1, 2020, from <https://www.techopedia.com/definition/31683>

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