Discuss the differences between database and data warehouse. Why do we need data warehouse when database is available?

Transactional databases are designed to make transitional systems run efficiently. Typically, this type of database in an online transaction processing database (OLTP) and it’s usually constrained to one application. Optimized for performing read-write operations of single point transactions, these databases are designed to perform operations with times of less than 1 second (Cardon, 2014).

A data warehouse is a different kind of database, it’s identified as an online analytical processing (OLAP) database and it exists as a layer over one or more OLTP databases or other databases. “The data warehouse takes the data from all these databases and creates a layer optimized for and dedicated to analytics” (Cardon, 2014). Enterprise or dimensional data models are employed in most OLAP database implementations. Late-Binding is another model that is used with these type of implementations.

The OLAP databases are optimized for efficiently, aggregating, reading, and retrieving, large data sets. To do this, data is de-normalized and organized specifically to facilitate reporting and analysis.

REFERENCES

Cardon, D. (2014). Database vs. Data Warehouse: A Comparative Review. Retrieved March 19, 2016, from <https://www.healthcatalyst.com/database-vs-data-warehouse-a-comparative-> review