Database Design Challenges: Conflicting Goals

The Database Design Challenges, as described in Database Systems: Design, Implementation, & Management by Carlos Coronel & Steven Morris, is the compromises that database designers make when they try to adhere to conflicting goals (2018). The specific challenges they describe are design standards, processing speed, & information requirements.

The design standards are what guide the developer when building the database. The design standards are critical to ensuring the final product maintains a well-defined standard while minimizing errors and redundant data in the database (Coronel & Morris, 2018, p. 147).

The processing speed of the database is critical to a large number of organizations. Companies like Amazon, which specialize in cloud computing, have entire data farms of servers with SSD (solid state drives ) to reduce the database’s latency. Another advantage is that it enables the server stacks to auto-shard (Coronel & Morris, 2018, p. 147).

The information requirements are what drive the design of all databases. The information requirements are frequent where compromises are made that contribute to corrupting databases. The most frequent is redundant data that is not a foreign key or fields with numerous amounts of null values.

The last thing that Coronel & Morris mention is that documentation is lacking in database design. I believe that a large amount of technology lacks sufficient documentation. Therefore, the more frequently procedures are documented, the better for Information Technology as a whole.

**References**

Coronel, C., & Morris, S. (2018). *Database systems: Design, implementation, & management* (13th ed.). Cengage Learning.