

# Individual database design paper



To ensure practical use over a long period of, databases ought to be built with high-level of data integrity and the capability to recover data in the event of hardware failure. Data that has been destroyed or corrupted is useless within a business's data system structure. " The database architecture is the set of specifications, rule, and processes that dictate how data is stored in a database and how data is accessed by components of the system (homogeneous. Com). Database architecture type S can be fragmented into three general categories, each of which has numerous subcategories: One Tier, Two Tier which is at the client/server level, and the N Tier which is at the client/server level as well. The Tier One architecture is better suited for a single user and a moderately small amount of data. It is run on a user's local host machine and locates a file that is stored on that workstation's hard disk, hence using a particular physical source to access and process data.

For numerous users and applications of a small scale the Tier Two selectiveness architecture is a better fit compared to the Tier One architecture. Users interface with the graphical user interface or (GUI) to interact and transfer data to and from the database server through a network via the structured query language or (SQL). For the larger scaled programs, the N Tier client/server architecture needs to be implemented. This client/server structure is able to increase to include a middle-level or business level tier, this structure has a server for applications which stores the business logic.

The middle level tier converts and sends client requests in the form of database queries to the database and converts then sends the data coming

from the database into data the client requested and can view. The server and client never truly communicate with one another openly. The database architecture I use at work, I would qualify as Two Tier client/server architecture. When entering or leaving the facility, all personal must have their IDs read at the card reader positioned at all gates and doors.

This data is checked against a central database by going through a middle tier to avoid direct communication with the company's mainframe, both for volume and security means. In a relational database, the data in different tables is mapped with relations. " Information can be accessed or added without reorganizing the tables. A table can have many records and each record can have many fields" (tech-FAQ. Com). Unlike flat databases, data integrity is built into the model at various levels to ensure the between a pair of tables is valid (Dewey. Barry. ND. Du).

Microsoft Access performs an outstanding job of strengthening referential reliability with strong standardization protocols that guarantee table informational and definitions interactions.