

# Paper - what is a database



Databases are widely used in web-sites and internal networks. Originally developed in the 1960's, a database is an application that stores 'data' or 'information' [Rob and Coronel 4]. The components needed, are a database application like MYSQL, or Microsoft's Access, a storage mechanism which is usually a file server or network server such as APACHE or Microsoft IIS or Windows NT. Thus, a database consists of both software and hardware. Generally speaking, databases are comprised of 'tables' full of 'fields'. For example, an online store would have in all likelihood, a database with a minimum of two tables consisting of different fields. As an example of the business use of a database, an online store is a common one, and E-bay is a large database that consists of customers and sale items. It is an also an example of a database with a web-form, that is, a form where a customer can enter their contact information along with the information about the item they want to sell. As a second example that relates to this one, any business needs to track clients or customers and their respective contact information. While the following will expand on the example of an online store, it should be mentioned that most business' have customers and most customers need to be tracked, so this is a second example of a business application. An online store, like E-bay, would need at least two tables of information, and these would be a table that contained customers and their information and financial transactions, and in turn, a store would also minimally have a table that contained all of the items that were for sale. In general, a table is a set of information that has unique and self-contained information. In the case of the store, one wants to establish a 'relational' [O'Neill and O'Neill 15] database - that is, one needs to link up the customers (table 1) with their inventory (e. g. table 2), but one also needs to keep this information apart.

That is, one wants to be able to add customers or add individual items (or edit/delete them) without effecting other information structures or tables. In other words, the separate tables allow for one to add a customer without affecting the inventory and vice-versa. In turn, one also wants to relate these two-tables and this is built into the very functionality of the database [O'Neill and O'Neill 18]. Generally speaking, a relational model that is established – in this instance, between customers and inventory, functions on what is known as 'queries'. A query is a type of search made specific to databases [Rob and Coronel 26]. For example, and in keeping with the online store as a sample, one might want to form a query that asks or searches for all of the customers that live in a particular geographical region. And, this would be an example of a query that only functions with one table. Or, one might want to find all of the customers who have spent over \$ 100 in the last year or all of the customers that bought one particular item. In this latter case of a query, it functions by correlating two-tables of information together. The customers in one table, are correlated to either the amount they spent at the online store in the last year, or they are correlated in this query with a particular item from the online store. This is why databases are called 'relational' – it is because they can relate sets of data from one database to another, or it can relate information contained in the tables of a single database – it can find data using information from several tables or just one table. Finally, databases can generate reports. In keeping with the example of the online store, a report might get generated that creates a sum total of all profit, sales, or transactions on the site. Reports, function on queries but execute multiple queries at once and of course, produce this in a single report. Works Cited: O'Neill, Patrick and O'Neill, Elizabeth. 2001. Database. Principles, <https://assignbuster.com/paper-what-is-a-database/>

Programming and Performance. San Diego: Academic Press. Rob, Peter and Coronel, Carlos. 2009. Database Systems: Design, Implementation and Management. Belmont CA: Thomson Publishing. WHAT IS A DATABASE ?