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Deciphering Databases: All The Information You Need, At Your Fingertips

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Frequently Asked Questions

“I have to keep track of a lot of stuff. Will a database help?”

“Should I store my contacts in Act! or Access? What’s the difference?”

“My server has something called a SQL database. I know it’s expensive—what can I do with it?”

“My web guy said my data needs to be in XML format. What does that mean?”

Databases can save you time and money. They can automate processes, improving quality and efficiency. They can track records that need to be accessed, even years later, in a way that’s easy to share, copy, transport and store.

So why is there so much confusion over what a database actually is? And why are these benefits so rarely achieved?

Databases Defined

According to the American Heritage Dictionary, a database is “a collection of data arranged for ease and speed of search and retrieval.” That “ease and speed” part sounds pretty good, right? But what does it really mean?

Consider your local grocery store. Is it a database? No? It’s closer than you might think. It contains thousands of food products, grouped by type. Departments and aisles are labeled to help you locate the items on your shopping list. The biggest difference is that a grocery store contains food rather than data. A cookbook is an even closer analogy, a collection of recipes organized with a table of contents and an index.

Most people use databases everyday, whether they realize it or not. Programs such as Outlook, Act! and Goldmine contain an elec-

tronic address book, also known as a contact database. You can store anything from phone numbers and addresses to spouses and birthdays. And you can sort or search your contacts quickly and easily.

Build Or Buy

Here’s where it gets a little tricky: some software programs allow you to *build* databases, but most software programs already *include* databases, ready-made for a specific purpose. Microsoft Access, which falls into the first category, allows you to build any database you like. You can track the weather, your coin collection, or your video library...because it’s a true database program, it’s extremely flexible.

Act!, on the other hand, is a regular software program that already includes a highly specialized contact database. It’s great if you need to manage contacts, and it’s far easier to buy Act! than to build something similar in Access. However, it lacks the flexibility of Access—its focus is limited to contact management, so it won’t work for other types of data. If you need a financial database, try Quicken or QuickBooks. If you want to track your music library, check out iTunes. Each of these software packages includes a specialized database, designed to fill a specific need.

If you can buy software that meets your specific need, it’s generally better and cheaper than building a database from scratch. But when you build it yourself, you can do anything you want—you have complete control.

How do you decide? Balance the pros and cons, as I do each year in my quest for the perfect tomato. Some years, I grow tomatoes from seed. I pick the exact variety I want, and the taste is superb! But oh, the work...misting, watering, transplanting, guarding from squirrels and rabbits, waiting until they ripen...not an easy process. It’s much simpler to settle for

the very good tomatoes that I can buy from the farmers’ market. They may not be my first choice, but most years they are good enough, especially considering the difference in time and effort.

Custom Databases

From time to time, you will need the flexibility of a custom-built database. It can be a complicated process: you must decide how to organize the data you wish to store, and how different items are interrelated. If you want to track all the vegetables at the grocery store, for example, you start with a list of vegetables; you then expand on that by adding a list of each product that contains those vegetables. Then, think about how many different ways you might group vegetables—fresh, frozen, or canned; brand; color; etc.—and how much information you can store about each product—size, weight, UPC code, etc. Databases can get very detailed, very quickly. If you aren’t careful, your database will be plagued with duplicate information, inconsistencies and slow performance.

That’s not all. Imagine a library with no doors. Incredible stores of information, locked inside, inaccessible. Useless, right? Databases require more than just data—you have to create ways to enter, sort, and retrieve the data they contain. With tools like Microsoft Access and FileMaker Pro, you can do a lot without any programming. Industrial-strength solutions like SQL or MySQL must be paired with a programming language like Visual Basic or PHP to develop data entry screens and reports.

State Of The Art Ain’t So Great

Perhaps the biggest headache with databases is getting information from one into another. If you have employees in your HR system, wouldn’t it make sense to automatically enter them in QuickBooks, or your time-tracking software? Data formats, such as XML and SOAP, have been developed to make it

easier to transfer data from one place to another, but they are not universal yet. You know how each cell phone requires different accessories? Likewise, each software program has its own data format, and few programs use these standard, easily transferred formats.

But It Ain't So Bad, Either

Despite that, databases are a powerful tool.

You can organize and manipulate your information nearly any way you want. You can store it, make backups, send it to others, post it on your website, calculate and report trends...you name it, you can do it, with a little time and effort. What records do you want more accessible? What information do you need better organized? What statistics will help you make better business decisions? Ever dreamed of

having all this at your fingertips? Decipher the database code and make it a reality!

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