WEEK 4

June 11, 2005

Introduction

What's a business without data? That is how important data is to an organization. In computing, data is information that has been translated into a form that is more convenient to move or process. Relative to today's computers and transmission media, data is information converted into binary digital form. Database is a collection of data that is organized so that its contents can easily be accessed, managed, and updated (Roman, 1999).

The standard language for making interactive queries from and updating a database is the structured query language (SQL). Several well-known names in the database industry are Oracle, International Business Machines Corp, Microsoft, Sybase, and Computer Associates.

Microsoft Access – An Overview

Microsoft Access is a relational database management system (DBMS). At the most basic level, a DBMS is a program that facilitates the storage and retrieval of structured information on a computer's hard drive(Roman, 1999).

Microsoft generally likes to incorporate as many features as possible into its products. For example, the Access package contains the following elements:

- A relational database system that supports two industry standard query languages: Structured Query Language (SQL) and Query By Example (QBE);
- A full-featured procedural programming language—essentially a subset of Visual Basic,
- A simplified procedural macro language unique to Access;
- A rapid application development environment
- Complete with visual form and report development tools;

- A sprinkling of objected-oriented extensions; and,
- Various wizards and builders to make development easier(Roman, 1999).

Suggestions for Improvements

Microsoft Access presents data in a familiar spreadsheet-like format shown in rows and columns. From this display, you can use something called "Wizards" to create reports, queries, and screens. It takes Access as little as 10 seconds to program a report, run it, and send the results to the printer. If you have an idea but are not sure what to do, instructions called "Cue Cards" will lend a hand. The forms (screens) and reports that Access produces are breathtakingly elegant. They include varying type sizes, and fonts neatly decorated with shaded patterns and borders. For colors, Access includes a color palette and Microsoft graph. For example, suppose you want to see all the journal entries that have passed through the cash account on the balance sheet. Use the mouse to select the account number, debit amount, and credit amount fields (columns). Then key the cash account number and click the Run Query button. Access shows the results posthaste (sometimes). You can save the query or print it on a report (Roman, 1999).

Since it is so precarious, you would not want to make changes to journal entry data. For customer names or other data, you could use "Wizards" to make a data-entry screen (a form) and make changes at will. (Of course, you can prevent this by making the connection to the database read-only.) (Roman, 1999)

As you gain expertise you can experiment with features such as connecting tables through common elements. For example, you might want to associate salary transactions with a particular employee. To do this without Access you would have to know what is meant by a view or, the more complex, SQL language. With Access you simply open both

tables and draw a line between the common element employee numbers, click the mouse to select the column "employee name," and key "Tom" or "Ross" or whatever (Roman, 1999).

Some people might worry that Access will allow unauthorized access to tightly controlled data. This is not true, because Access must follow security procedures just like any other user. Others might contend that Access is not robust enough for so-called industrial-strength systems (a word that implies a certain level of haughtiness). When a report or query is run, the host computer, a mainframe or database server, does most of the calculating and sorting. Access simply requests such data and waits patiently to receive it (Roman, 1999).

Still others might say that Access will clog the computer network with requests for mountains of data in far-away places. Wherever possible, Access uses a clever device called a "dynaset" to retrieve data not in its expansive entirety but by its minimal location (a so-called pointer). Access also uses something called scrollable cursors to retrieve data one screen-load at a time rather than the whole set at once (Roman, 1999).

Of course there is a down side to this analysis, but it is slight. Since Access is tightly integrated with your computer network, any changes in those networks can wreak havoc with data sources (meaning ODBC definitions) you have made. Also, Access forces you to optimally tune your Windows software for the proper buffer size et al. This is not for the faint of heart. Additionally, Access like any other software that relies on the unreliable MS-DOS operating system, can lock up your PC when you try to do too many things at once (Roman, 1999).

It used to be that getting information from a company's database required knowledge of SQL language or programming expertise. This is no longer true, as software like Microsoft

Access is increasingly able to connect to database products like ORACLE, SyBase, RD, and others. If your organization keeps its data in such a place--and it probably does--you might use Access to look into it (Roman, 1999).

Conclusion

It is possible to leverage on the flexibilities of the MS access database system and specifically to a HR department in an organization.

Works Cited

Roman, Steven. Access Database Design and Programming. O'Reilly. 1999.