

USING A RELATIONAL DATABASE FOR BUSINESS ADVANTAGES

L.O 6.3: Identify the business advantages of a relational database.

Many business managers are familiar with Excel and other spreadsheet programs they can use to store business data. Although spreadsheets are excellent for supporting some data analysis, they offer limited functionality in terms of security, accessibility, and flexibility and can rarely scale to support business growth. From a business perspective, relational databases offer many advantages over using a text document or a spreadsheet, as displayed in Figure 6.12.

Increased Flexibility

Databases tend to mirror business structures, and a database needs to handle changes quickly and easily, just as any business needs to be able to do. Equally important, databases need to provide flexibility in allowing each user to access the information in whatever way best suits his or her needs. The distinction between logical and physical views is important in understanding flexible database user views. The *physical view of information* deals with the physical storage of information on a storage device. The *logical view of information* focuses on how individual users logically access information to meet their own particular business needs.

In the database illustration from Figure 6.10, for example, one user could perform a query to determine which recordings had a track length of four minutes or more. At the same time, another user could perform an analysis to determine the distribution of recordings as they relate to the different categories. For example, are there more R&B recordings than rock, or are they evenly distributed? This example demonstrates that although a database has only one physical view, it can easily support multiple logical views that provide for flexibility.

Consider another example—a mail-order business. One user might want a report presented in alphabetical format, in which case, the last name should appear before first name. Another user, working with a catalog mailing system, would want customer names appearing as first name and then last name. Both are easily achievable but different logical views of the same physical information.

Increased Scalability and Performance

In its first year of operation, the official website of the American Family Immigration History Center, www.ellisland.org, generated more than 2.5 billion hits. The site offers immigration information about people who entered America through the Port of New York and Ellis Island between 1892 and 1924. The database contains more than 25 million passenger names that are correlated to 3.5 million images of ships' manifests.⁴

The database had to be scalable to handle the massive volumes of information and the large numbers of users expected for the launch of the website. In addition, the database

FIGURE 6.12

Business Advantages of a Relational Database

