Reading 2

Skills:

- Details

- Vocabulary in context

Getting started: Do you know what a database is?

DATABASES

A **database** is a collection of related data, and the software used in data bases to store, organize and retrieve the data is called the **database management system,** or **DBMS.** However, we often use the word *database* to cover both meanings. A data base can manage any type of data, including text, numbers, images, sound, video and hyperlinks (links to websites).

Information is entered into the database via **fields.** Each field holds a separate piece of information, and the fields are grouped together in **records.** Therefore, a record about an employee might consist of several fields which give their name, address, phone number, date of birth, salary and length of employment with the company.

Records are grouped together into **files** which hold large amounts of information. Files can easily be **updated** - you can always change fields, add new records or delete old ones. An electronic database is much faster to consult and update than a card index system and occupies a lot less space. With the right software, you can keep track of stock, sales, market trends, orders and other information that can help your company stay successful.

LIVEWORKSHEETS

A database program lets you create an **index** - a list of records ordered according to the content of certain fields. This helps you to **search** the data base and **sort** records into numerical or alphabetical order very quickly.

Modern databases are **relational** - that is, they are made up of related files: customers and orders, vendors and purchases, students and tutors, etc. Two database files can be related as long as they have a common field. A file of students, for example, could include a field called *Tutor ID* and another file with details of the tutors could include the same field. This key field can be used to relate the two files. Databases like Oracle, DB2 and MySQL can manage these relationships.

A database **query** function allows you to extract information according to certain conditions or criteria. For example, if a managing director wanted to know all the customers that spend more than €8,000 per month, the program would search on the name field and the money field simultaneously.

The best database packages also include **network** facilities, which can make businesses more productive.

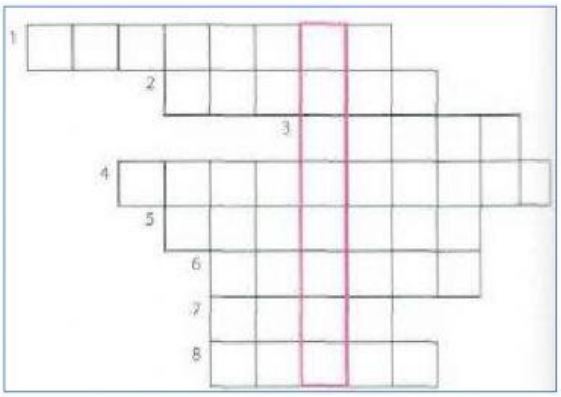
For example, managers of different departments can have direct access to a common data base. Most aspects of the program can be protected by user-defined passwords and other **security devices.** For example, if you wanted to share an employee's personal details but not their commission, you could protect the commission field.

**Adapted from Infotech. Cambridge University Press.*

Complete these statements about databases using information from the text.

1. A database management system is used to _____
2. Information is entered into a database via _____
3. Each field holds _____
4. *Updating* a file means _____
5. Some advantages of a database program over a manual filing system are: _____
6. Access to a common data base over a network can be protected by using _____

Solve the clues and complete the puzzle.



1. A collection of data stored in a PC in a systematic way.
2. A unit of a data base file made up of related fields.
3. A single piece of information in a record.
4. A _____ database maintains separate, related files, but combines data elements from the files for queries and reports.
5. Some companies have several computers sharing a data base over a _____
6. To look for specific information, for example the name of an employee
7. To classify records into numerical or alphabetical order.
8. A tool that allows you to extract information that meets certain criteria.

LIVEWORKSHEETS