Work Area 5 Filing System Documentation and Databases

2.11 USE BASIC DATABASE SKILLS TO ENTER INFORMATION IN A DATABASE

- LO018: Demonstrate the ability to enter, edit, organise and store accurate and relevant data in an existing database system (electronic or manual).

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Module Details

Work Area Code:	5
Work area title:	Filing System Documentation and Databases
Unit Code:	2.11
Unit Title:	USE BASIC DATABASE SKILLS TO ENTER INFORMATION IN A DATABASE
Learning Outcomes Nos:	LO018
Learning Outcomes titles:	• Demonstrate the ability to enter, edit, organise and store accurate and relevant data in an existing database system (electronic or manual).
Recommended Duration:	1 hour
Trainer:	

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What is a database

- A database is an organised amount of relevant data. Data is stored within the data structures of the database. In case of ISO systems these documents are also part of the system and they have their own code.
- Companies and organisations may use the following types of databases
  - A customers database
  - A suppliers database
  - An employees database

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Do you use Databases?

- **Do you use databases?**
- **What for?**
- **How do they help us?**

Group discussion

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What is a database? VIDEO

- https://www.youtube.com/watch?v=t8jgX1f8kc4

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TERMS: RELATIONAL

- A relational database employs the **relational model**, in which the data is organized into sets of tuples, and the tuples organized into relations.
- imposes structure on its contents
- a primary key is a single attribute, or combination of attributes, which can be used to uniquely identify a row of data in a given table
  - E.g. vendor ID, user ID, email address, or combination of attributes considered together such as first name, last name, and city of residence, all considered together as a single entity
- A foreign key is an attribute or collection of attributes from one relational table whose values must match another relational table's primary key.
  - A common use for such an organizational scheme would be to link a street address in one table to a city in another, and perhaps to a country in a third.

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TERMS: SQL vs. no SQL

- SQL is a relational database query and manipulation language.
- Allows for the creation of databases and tables, and the manipulation and query of data.
- NoSQL is an umbrella term, one which encompasses a number of different technologies.
- **not relational**

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Information in a database

- For each piece of data in a database we keep several characteristics (fields).
- For example a customer database will include the following information on customers
  - Name,
  - Surname,
  - Job Title,
  - Department,
  - Address,
  - Telephone Number,
  - Etc.

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Where the data is stored

- A database could be a manual database or an electronic one
  - A collection of business cards for example can be considered as a database
  - However we usually refer to the term database when we are handling an electronic database.

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Different forms of electronic database

- An excel spreadsheet could be used as an electronic database
  - For example to create a customers database
- Through MS Word you can also create a very simple electronic database
  - Very useful in the case of mail merge
- Ms Access is the professional tool for handling databases (in MS Office). Other tools are also available.
  - More than storing and displaying information
  - You can also query the database and print professional reports or make mass changes to the database.

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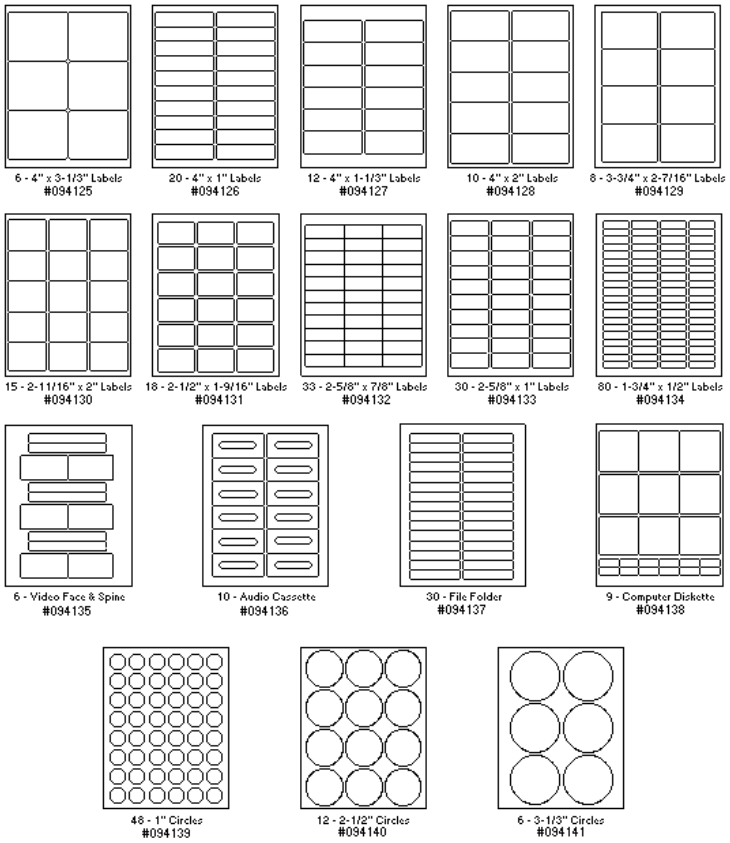
Activities you can perform through a database

- Even the simplest form of database
  - Find information,
  - Print labels,
  - Perform mail merge to crease mass mailing letters,
  - etc.



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Important skills needed

- Attention to detail, attention to detail, attention to detail
  - You should aim for zero mistakes in your data
  - Rubbish in = Rubbish Out
  - It takes a second to check your data
    - Mistakes may cost a fortune
    - Thus, accuracy is IMPERATIVE!

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How to, step-by-step

1. **Determine the purpose of the database**
2. **Find and organize the information required**
3. **Divide the information into tables**
4. **Turn information items into columns** - Decide what information needs to be stored in each table. Each item becomes a field, and is displayed as a column in the table.
5. **Specify primary keys** - Choose each table's primary key.
6. **Set up the table relationships**
7. **Refine the design**
8. **Apply the normalization rules** - Apply the data normalization rules to see if tables are structured correctly. Make adjustments to the tables, as needed.

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Keep it up to date

- Updating your records
  - helps you comply with the rules,
  - benefits you by avoiding wasting resources contacting someone who has 'gone away'.
  - check client details regularly, updating your records as soon as you become aware of changes.
- Delete with caution!
  - Make sure first that a change has been made (e.g. contact by phone for an address change)

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Methodological tool

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Create a simple travel agent's database

EUPANEXT_LO18_M01

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- Explain what a database system is.
- Describe key principles of database systems.
- Name different types of databases that a company may keep
- Explain the importance of accuracy in databases.
- Describe methods of keeping the database up to date.

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Well Done!

You have completed this unit

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