

# UNIT 6 DATABASE POWER OF EXCEL

## Structure

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## 6.0 INTRODUCTION

Every organization works towards maintaining data of various kinds, e.g., all the details of the employees, sales details, client data, products data. The purpose of storing and maintaining data is to retrieve it later for day-to-day transactions and management planning.

The data which is collected from the source is the raw data. Various operations can be carried out with the data, like, sorting, searching and totaling. This is processed and manipulated to be transformed as **Information**.

The most important database feature of MS-EXCEL is a powerful and simplified tool to store, manage and analyze data.

There are two kinds of databases :

**Internal Database** - Databases created in the worksheet.

**External Database** - Database which is created through other DBMS or RDBMS packages like MS-ACCESS, FOXPRO, dBASE, SQL Server, ORACLE.

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## 6.1 OBJECTIVES

After going through this unit, you will be able to

- create database in the worksheet
- use external databases
- arrange data through sorting techniques.
- add, delete, or edit records in the databases

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## 6.2 DATABASE CONCEPTS

Database is also referred to as a **list** or a **table**. It is an organized collection of information. Each row of the list is called as a **record**, and each column is called as a **field**.

Let's take an example of the employee details as shown below:

| EMPCODE | NAME    | AGE | DEPARTMENT | SALARY |
|---------|---------|-----|------------|--------|
| E001    | Rishi   | 27  | Marketing  | 4500   |
| E002    | Sandeep | 35  | Marketing  | 6000   |
| E003    | Vinita  | 24  | Accounts   | 4000   |
| E004    | Prakash | 23  | Inventory  | 5200   |
| E005    | Aruna   | 23  | Marketing  | 3700   |
|         |         |     |            |        |

In this example, EMPCODE, NAME, AGE, DEPARTMENT and SALARY are the field names. Each row with the data for one employee is the record of that employee. The record contains the data pertaining to the fields.

The field names must be unique and there should not be any blank row between the field names and the records.

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## 6.3 CREATING DATABASE

In MS-EXCEL, database can be created in two ways :

1. Enter the data in the form of table in the worksheet. You can enter the data as shown. This is the simplest way to create the database.
2. Use Data Form command.

To create database using Data Form command, follow the given steps.

1. Enter the given details :

| IN CELL | ENTER |
|---------|-------|
|---------|-------|

|    |            |
|----|------------|
| A1 | EMPCODE    |
| B1 | NAME       |
| C1 | AGE        |
| D1 | DEPARTMENT |
| E1 | SALARY     |

2. Choose **Data -> Form** command while keeping one of the field name active.
3. The dialog box is displayed, warning you for taking the row of the selected cell as the header row of the database. Click on OK.
4. Another dialog box is displayed, which shows one record at a time. Fill-in the appropriate details in the box against each field name.

The image shows a dialog box titled "Sheet1" with a "New Record" section. On the left, there are five input fields corresponding to the fields defined in the table above: EMPCODE, NAME, AGE, DEPARTMENT, and SALARY. On the right side, there is a vertical column of buttons: "New", "Delete", "Restore", "Find Prev", "Find Next", "Enter", "Close", and "Help".

5. Click on **New**. This will add the entered record in the database.
6. To finish the entry of records, click on **Close**.

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## 6.4 ADDING RECORDS

The records can be added in two different ways :

1. Type the new record entries in the blank row next to the database list.
2. The records can be entered in the way that is similar to the steps of creating a database.
  - a. Activate any cell of the database list.
  - b. Choose **Data -> Form** command.
  - c. Goto the last record and click on **New**.
  - d. Type-in the new record details in the boxes against fields.
  - e. Click on **OK**.

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## 6.5 DELETING RECORDS

The records can be deleted by simply selecting the entire cell range of the record to be deleted and press the **Delete** key. Move the rest of the records on row up. Another way of deleting the records is as follows :

1. Activate any cell from the database list.
2. Choose **Data -> Form** command.
3. Get the record to be deleted by clicking on the **Find Prev** or **Find Next** button.
4. Click on the **Delete** button.

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## 6.6 EDITING RECORDS

The records once entered in the database list can be changed or modified. This can be done by selecting the cell and retyping the data. Another way of doing this is by Data Form:

1. Scroll up or down to select the desired record.
2. Edit the field value.
3. Click on **New** button to update the modification in the record.
4. Click on **Close** once you have finished up the task of modification of records.

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## 6.7 SORTING A DATABASE

To arrange the records in either ascending or descending order of a field is called sorting. To sort a database, first create the given database.

1. Choose **Data -> Sort..** command.
2. In the dialog box as shown below, you can select maximum 3 fields on the basis of which you want to sort your database. The drop-down list of the

|    | A                    | B           | C           | D           | E           |
|----|----------------------|-------------|-------------|-------------|-------------|
| 1  | <b>MONTHLY SALES</b> |             |             |             |             |
| 2  |                      |             |             |             |             |
| 3  | <b>PRODUCT</b>       | <b>QTR1</b> | <b>QTR2</b> | <b>QTR3</b> | <b>QTR4</b> |
| 4  | SHIRTS               | 200         | 230         | 234         | 250         |
| 5  | TROUSERS             | 60          | 75          | 80          | 50          |
| 6  | BLAZERS              | 100         | 143         | 124         | 130         |
| 7  | T-SHIRTS             | 300         | 320         | 290         | 350         |
| 8  | JACKETS              | 600         | 500         | 560         | 690         |
| 9  | JEANS                | 50          | 30          | 60          | 45          |
| 10 |                      |             |             |             |             |

**Sort By** option displays all the field names. Select the field from the list.

The 'Sort' dialog box is shown with the following fields and options:

- Sort By:** A dropdown menu (empty) and radio buttons for  Ascending and  Descending.
- Then By:** A dropdown menu (empty) and radio buttons for  Ascending and  Descending.
- Then By:** A dropdown menu (empty) and radio buttons for  Ascending and  Descending.
- My List Has:** Radio buttons for  Header Row and  No Header Row.
- Buttons on the right: OK, Cancel, Options..., Help.

3. Choose the order in which you want to display records - ascending or descending.
4. Select **Header Row** option given under **My List has**.

5. Click on **OK** and see the results on the worksheet.

**Then By** option is used when you want to sort the database on the basis of more than one fields. The field name chosen for this option will become the secondary field.

**Check Your Progress**

1. What is the significance of formulas in calculations ?

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2. Explain the recalculation feature of MS-Excel.

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3. Give the basic properties of formulas.

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4. What are functions ?

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5. Give two examples for each category of functions.

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6. Differentiate between VLOOKUP() and HLOOKUP() functions.

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7. What is Function Wizard ?

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## **6.8 SUMMARY**

In this session you learned,

1. Database can be created in the worksheet or external databases can also be used.
2. The data can be arranged through sorting techniques.
3. The information matching a certain criteria can be extracted from the database.
4. Records in the database can be added, deleted, or edited.
5. Data Tables help in What-if analysis.
6. Pivot Tables are also used to analyze data.