

# USING EXCEL AS A DATABASE

## CHAPTER-02

### LEARNING IN THIS CHAPTER

*Using a Form to enter data*

*Adding, Searching, and Deleting a record in a Form e Sorting and Filtering data*

*Using Advanced Filter and Data Validating Adding Subtotal in Database Analysing data with PivotTable*

A database is a collection of information related to a particular object, such as maintaining addresses and phone numbers, a list of library books, keeping students' record pertaining to academic and co-curricular achievements keeping employees' information, etc. It helps the users to organise, retrieve, sort, and edit data as per their requirement

Database consists of fields and records. In simple terms, records refer to rows and fields refer to columns in Excel. FIELD: A column within a database that contains only similar type of data is called Field. For example, Roll Name, Address are different fields.

RECORD: A row in a database is called a Record that consists of the

information about one person or one object. For example, in the given figure the data-101, Anju, 75, 82, 90, 247, 82.33 of one student, forms an record.

FIELD NAME: It is a column label for the field in a database. All the field names appear in one row. For example - Roll No, Name, English,

Hindi, Math, Total, Per are the field names in the given database. > USING A FORM TO ENTER DATA

***A Form is a window that contains numerous fields to enter, modify, and view one record at a time.***

Each field hold field name so that any user who views the form or enter data in it, gets an idea of its contents. Forms often cont Command buttons and other controls that perform various tasks.

elect the Quick Access Toolbar option in the left pane.

Click on the drop-down arrow of Choose commands from the list box.

Select Commands Not in the Ribbon option from the drop-down list and choo the Form command.

> Click on the Add button. Click OK and you will find the Form button

the Quick Access Toolbar.

### **ADDING A NEW RECORD IN A FORM**

Using the data form, we can add a new record in the database. Follow these steps enter new records:

- Click on the cell A1. Select the Form button on the Quick Access Toolbar. The Sheet1 dialog box appears. It contains the record of the first student in your database.
- To add a new record, click on the New button.
- Type the data in the respective fields of the Form. Matte
- After you have finished typing data, press Enter key to add the row to the bottom of the range or table.
- You can move to the previous or next record by clicking on the Find Prev and Find Next buttons respectively.
- Click on the Close button to close the data form.

### **SEARCHING A RECORD**

This option is used to search the records with specific values.

Click on the Form button. Then click on criteria and give specified condition in field.

### **DELETING A RECORD**

To delete a particular record: Click on the Form button. In Sheet1 dialog box, move to the desired record by clicking either on Find button or Find Next button

After selecting it, click on the Delete button. Excel prompts you to confirm the operation. You cannot undo row deletion after you confirm it

### **SORTING DATA**

Sorting means, arranging the data either in an ascending or descending order. In a worksheet, data can be sorted rows on the basis of text, numbers or dates. Once the data is organised, it becomes easy to work on it.

Follow these steps to sort the given data:

- Open any worksheet and select the cell range that you want to sort.
- Click on any cell, say 82. Now select the Sort button in the Sort & Filter group
- in the Data tab. The Sort dialog box appears and the entire database gets selected.
- Click on the Sort by drop-down arrow and select the field on the basis of which you want to sort the data. example, select the Name field.
- Select the Values option from the Sort On drop-down list. Select the sorting order from the Order drop-down list. If Sort by contains alphanumeric data then A to Z option
- gets selected automatically. In case, Sort by contains

numeric data then Smallest to Largest option gets selected.

- Select the My data has headers checkbox to exclude the first row, containing the column headings for sorting. Otherwise, uncheck the checkbox to include the first row headings in sorting. Click OK. The database will be sorted in descending order on the basis of Name field.

In Excel, you can also sort more than one column. For example, after sorting by Name, you want to arrange the list by Roll No.

**To sort by more than one column, follow the given steps.**

Click on the Add Level button in the Sort dialog box. A new

level gets added below the first level. Select the column name as Roll No in the Then by drop-down list and order of sorting as Largest to Smallest in the Order drop-down list in the new level. Click OK.

Select the cell A1 and press Ctrl-V. Type the criteria which you want to match in the row below the column labels. Type 10000 under the field name Salary Le, D2.

Click on a cell within the data range. Select Data tab and click on the Advanced button in the Sort & Filter group.

You will notice the range is already defined in the List range:

**Advanced Filter**

Criteria range: Select Copy to another location radio button in the Action section of Copy Advanced Filter dialog box

- Unique records only
- Define the Criteria range box, by entering the reference of the criteria range, including the field names.

Define the range of the target location where the filtered rows will be copied in the Copy to box. Click OK. The data will get filtered according to the specified condition and be copied in the place, which you have defined in the Copy to box.

In Microsoft Excel, you can also filter and sort the data by cell colour.

### **USING DATA VALIDATION**

Data Validation is used to restrict the type of data or value that users enter a cell. Let us use data validation to restrict the data entry to whole numbers between 0 and 100.

▶ Select the cell range E5:E13. Choose Data tab > Data Validation in the Data Tools group. The Data Validation dialog box appears. The Settings tab is selected by default.

- In Allow drop-down list, select the Whole number option.
- In Data drop-down list, between option is selected by default. In Minimum: text box, type 0, and in Maximum text box, type 100.
- Click on the Input Message tab. In Title: text box, type 'Validation'. In Input message box, type 'enter between 0 and 100.'
- Select the Error Alert tab and type 'Input is wrong' in Error message box. Click on OK to close the dialog box.
- If you try to enter data beyond the specified limit in the selected range, an error message will be displayed. Click on Retry to enter another value in the cell.

Data Validation is used to restrict the type of data or the values that users' enter into a cell.

The Subtotal feature in a database helps us to manage, analyse, and extract specific information from rows of related data.

**PivotTable is a powerful tool for consolidating, summarising, and presenting the data.**

