



# Spreadsheets – An Introduction

## Connect

Ask your elder about shopping bills from two different stores. One bill should be handwritten and the other one should be printed. Fold and paste them below.

Calculate the bill and check if its total is correct or not. Which one will be easier to recalculate if you wish to change the number of items in either of the bills?

## Learn

You will learn about:

- ✦ Getting started with Excel 2013
- ✦ Components of Excel 2013 window
- ✦ Entering data in a worksheet
- ✦ Navigating through a worksheet
- ✦ Save, open, close and exit a worksheet

## Task

Your school is organizing the Annual Carnival next month. All the students are excited as it is going to be a fun-filled event. A lucky draw will be held at the end of the carnival, and the winner will get exciting prizes.

As the carnival is only a month away, you have been given the responsibility to sell minimum 20 tickets. The cost of one ticket is ₹ 50. You need to organize the details of the people who have purchased the tickets.

	A	B	C	D	E	F	G
1	S. No	Date	Name	Phone Number	Address	No. of Tickets	Amount



## INTRODUCTION

A spreadsheet is a program used for calculating or accounting, analyzing and recording data arranged in rows and columns. These values can be easily manipulated using arithmetic operators. Excel 2013 is a spreadsheet software of the Office 2013 suite. It is popularly used in schools and offices. This application software is used to store, organize, manipulate and analyze data. The data is arranged in a grid made of rows and columns. The data can be text, numbers, date or time. The best thing about using this spreadsheet is that you can experiment with numbers without having to do all the calculations over and over again. Other popular electronic spreadsheet software include Lotus 1-2-3, OpenOffice Calc and Quattro Pro.

### Explore

#### Activity 1

Find about more uses of Excel 2013, apart from the examples given below.

- Calculations
- Address books
- Budgeting
- Making inventory

## STARTING EXCEL 2013

To start Excel 2013, follow the steps:

**Step 1:** Click the Start button. (Fig. 6.1).

**Step 2:** Click All Apps.

**Step 3:** Click Microsoft Office 2013 and from the list, select Excel 2013.

The Excel 2013 spreadsheet will appear.

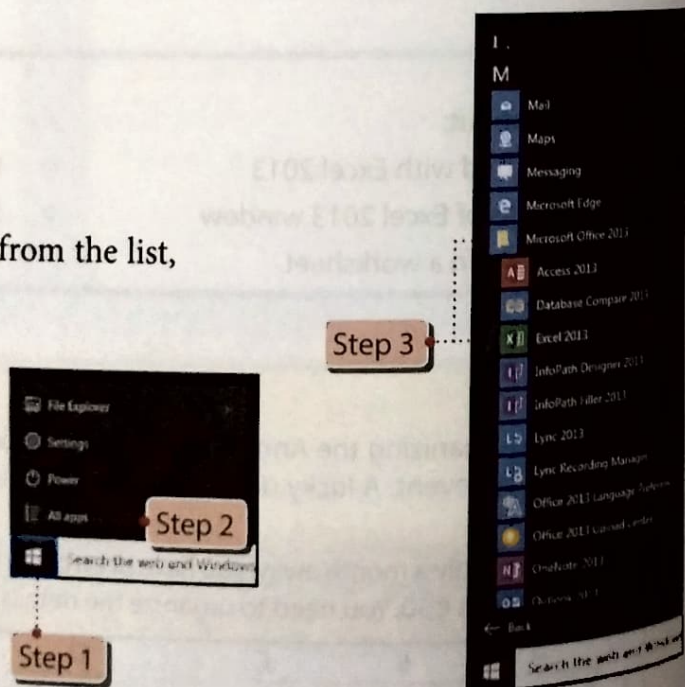


Fig. 6.1 Starting Excel 2013



Excel 2013's new start screen helps you get to work more quickly. A range of templates appears to help quickly start a project.

You will see templates for budgets, calendars, forms, and reports, and more (Fig. 6.2).

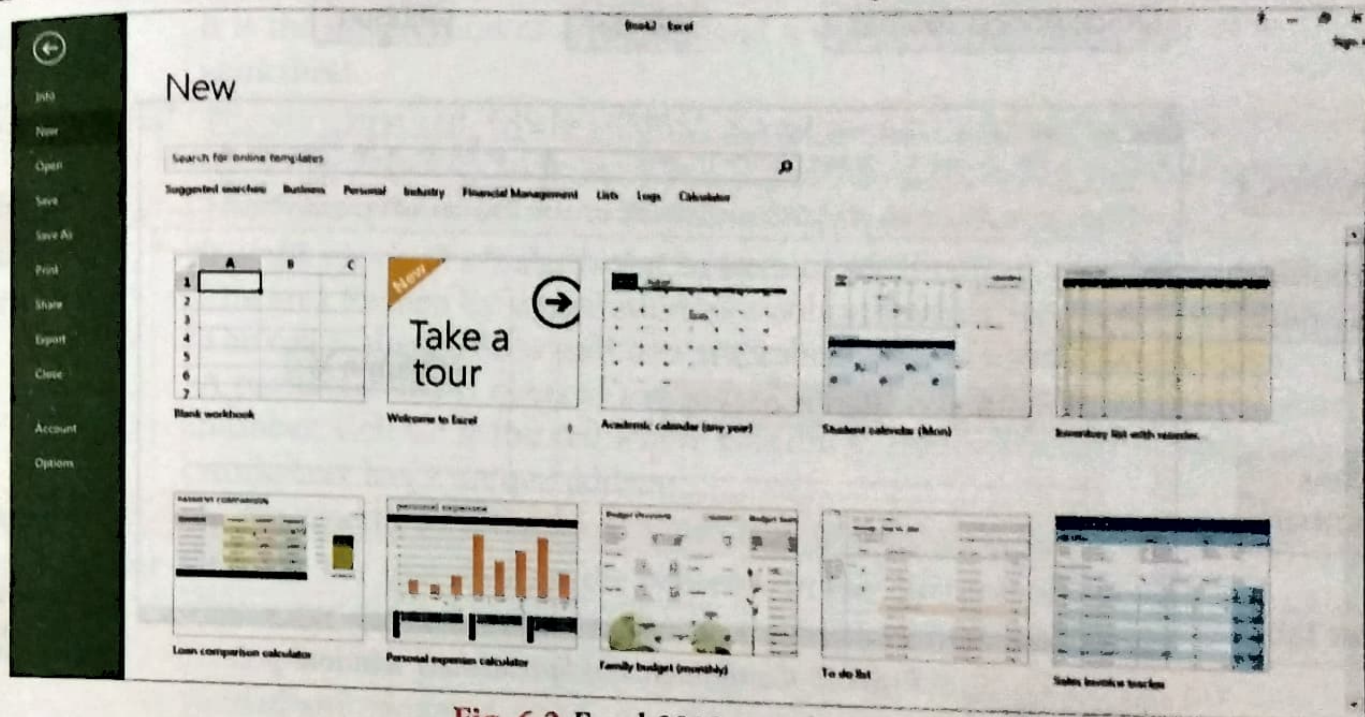
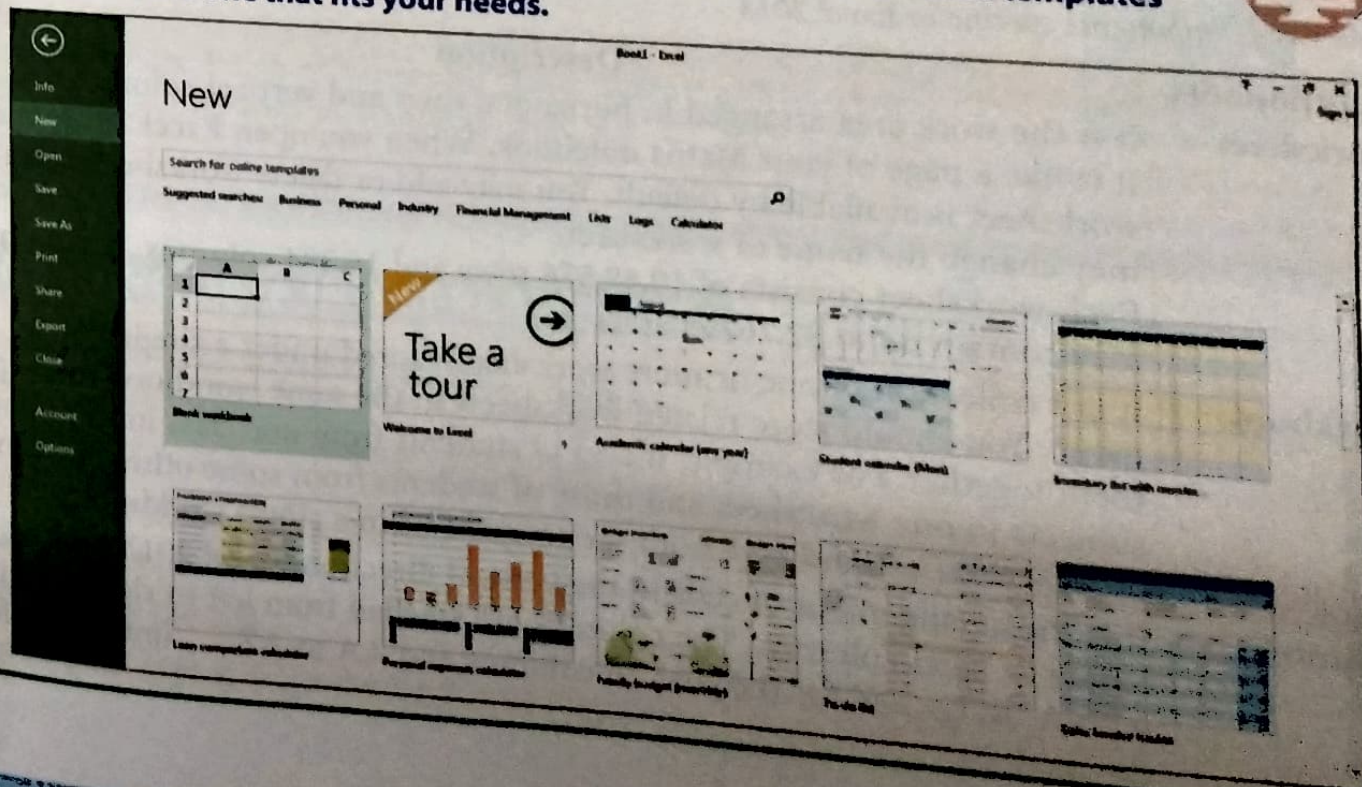


Fig. 6.2 Excel 2013 templates

## Activity 2

## Explore

When you first open Excel 2013, the software opens a new workbook. If you want to create a new document from a template, explore the installed templates and choose the one that fits your needs.



# COMPONENTS OF A SPREADSHEET WINDOW

Excel 2013 interface is similar to other Office 2013 applications (Fig. 6.3).

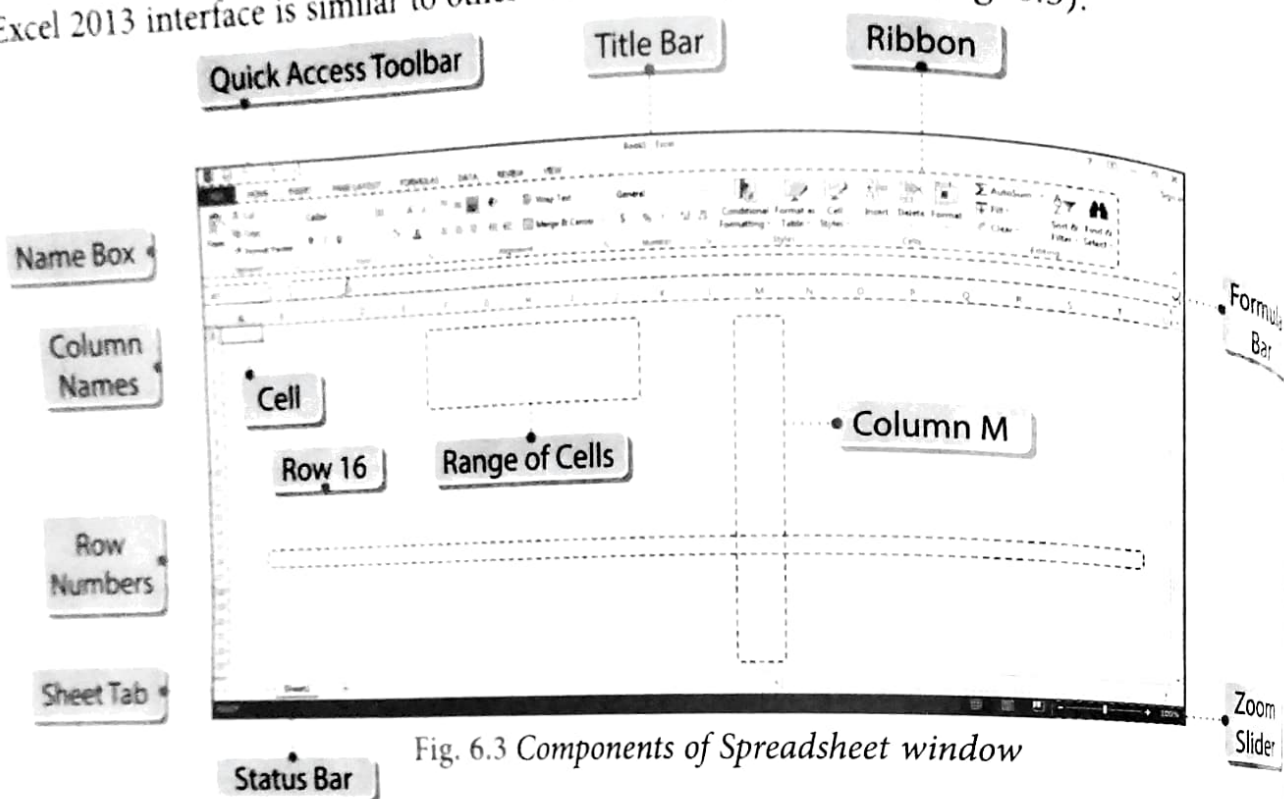


Fig. 6.3 Components of Spreadsheet window

Quick Access Toolbar, Ribbon, Title Bar, Status Bar, Zoom Slider perform the same functions as discussed while learning about other Office 2013 applications.

The components of a spreadsheet are listed in Table 6.1.

Table 6.1 Components specific to Excel 2013

Components	Description
Worksheet	It is the work area arranged in horizontal rows and vertical columns. It is like a page of your Maths notebook. When you open Excel 2013, one worksheet is available by default. You may add or delete worksheets. You may change the name of worksheet. Each worksheet consists of 10,48,576 rows and 16,384 columns. A column may contain up to 32,767 characters.
Workbook	It is a collection of one or more worksheets stored under a single file name. You should store related worksheets in the same workbook to keep them together. For example, marks of students from one class in different subjects in one worksheet and those of students from some other class in other worksheet and save both the worksheets in a single workbook.
Columns	It is the arrangement of cells in the vertical direction. Excel 2013 uses letters to label columns. The columns are labelled from left to right starting with A, B, C ... Z for the first 26 columns and AA to AZ .... until XFD the next 26.



<b>Rows</b>	It is the arrangement of cells in the horizontal direction. Excel 2013 uses numbers to label rows. The rows are numbered from top to bottom starting from 1, 2, 3 .... 10, 48, 576.
<b>Cell</b>	It is the intersection of a column and a row. It is the basic unit of a worksheet.
<b>Cell Address</b>	The very first cell, where column A and row 1 intersect is referred to as A1. This is the cell address. A cell is identified by using the cell address. The column label always comes first and then row number.
<b>Range of cells</b>	It is the group of cells adjacent to each other forming a rectangular shape. The area formed by intersection of a column and a row is known as <b>cell</b> . The cell is the smallest unit in a worksheet that is used to store data. A particular cell is referred using the column letter followed by the row number. Cell C3 is the cell where column C intersects row 3. Each cell in a worksheet has a unique address.
<b>Name Box</b>	It displays the location of an active cell, that is, outlined in black.
<b>Formula Bar</b>	It is the bar that displays the contents in the current cell. It also consists of Enter and Cancel buttons.
<b>Sheet Tab</b>	It displays the name of your worksheet. Additional worksheet tab can be added and renamed.
<b>Active cell</b>	It refers to a cell that is currently selected. You can see a rectangular box around it.

### Tech Fact

The first electronic spreadsheet was **VisiCalc**. It was co-created by Daniel Bricklin and Bob Frankston in the early 1980s. Daniel Bricklin is often referred to as 'The Father of the Spreadsheet'.



*Daniel Bricklin (Left)  
Bob Frankston (Right)*

## ENTERING DATA IN A SPREADSHEET

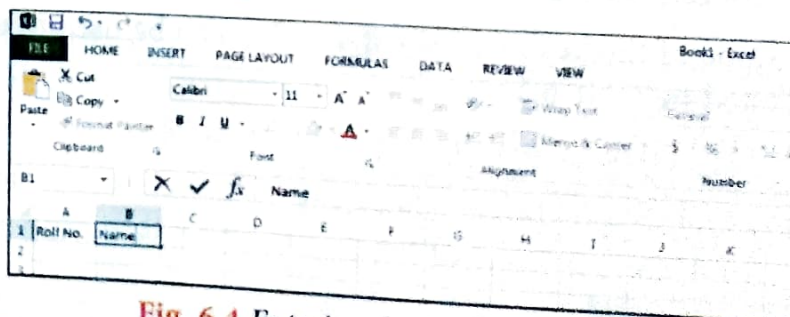
There are different ways to enter data in a Excel 2013 spreadsheet:

- In an active cell
- In the formula bar

To enter data in an active cell:

**Step 1:** Click the cell.

**Step 2:** Start typing from the keyboard (Fig. 6.4).



**Fig. 6.4** Entering data in a spreadsheet



To enter data into the formula bar:

Step 1: Click the cell where you would like to enter the data.

Step 2: Place the cursor in the **Formula Bar**.

Step 3: Type in the data from the keyboard.

## TYPES OF DATA

You can enter numbers, text, date, time and formulas in a cell (Table 6.2).

Table 6.2 Types of data in Excel 2013

Types of Data	Description	Example
Numbers	Numbers include numerals from 0 to 9, symbols such as +, -, *, /, . (decimal point). You may also use \$ (dollar), % (percentage), , (comma) with number values. By default, the numbers are right aligned in a cell.	Examples of number values are: 678; 75,000,000; \$6.50 and so on.
Text/String	It is a combination of letters, numbers, symbols or spaces. By default, text is left aligned in a cell. Text is used for heading, titles, names and so on, in a worksheet.	Examples of text entries: Marks sheet; Names; Expenses; (T_09959_097); S. No. and so on.
Date and Time	You can enter date, 6/18/2015 and time, 1:30:09 PM in a cell. The format of data and time displayed can be changed.	By default, date and time entries are right aligned in a cell.
Formula	It is a mathematical expression which includes numbers and mathematical operators in order to perform calculations. All formulas begin with = sign.	Example of formulas: = (67 + 987); =(B8 - N8)

## NAVIGATING THROUGH A SPREADSHEET

Some of the keyboard shortcuts that can be used to easily move around the spreadsheet are listed in Table 6.3.

Table 6.3 Moving around the spreadsheet using a keyboard

Keyboard Shortcuts	Action
Cursor Control keys	Move the up, down, left and right the current cell
Tab	Next cell in the row

<b>Shift + Tab</b>	Previous cell in the row
<b>Shift + Home</b>	One cell up in the column
<b>Enter</b>	One cell down in the column
<b>Ctrl + Home</b>	Cell A1 of the current worksheet
<b>Page Up</b>	One screen up
<b>Page Down / Alt + Page Up</b>	One screen down
<b>Alt + Page Down</b>	One screen left
<b>Hold down Shift + arrow keys</b>	A range of cells
<b>Ctrl + A</b>	All cells on a worksheet

### Activity 3

Explore

What will you do to move the cell pointer to a particular cell in a worksheet, without clicking the mouse?

## UNDO CHANGES

In Excel 2013, there is a quick and easy shortcut to undo mistakes.

To undo a mistake or the last action, select **Undo** option on **Quick Access Toolbar** (Fig. 6.5).

Notice that your last change was just undone.

Continue clicking until all your mistakes have been undone.

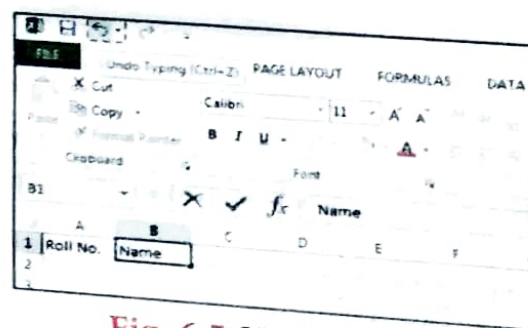


Fig. 6.5 Undo Option

## REDO CHANGES

Sometimes, you accidentally undo your last action. To undo the **Undo** command, select the text and click **Redo** option on **Quick Access Toolbar** (Fig. 6.6).

Notice that your last undo was reverted.

Continue clicking until all your accidental undo(s) have been redone.

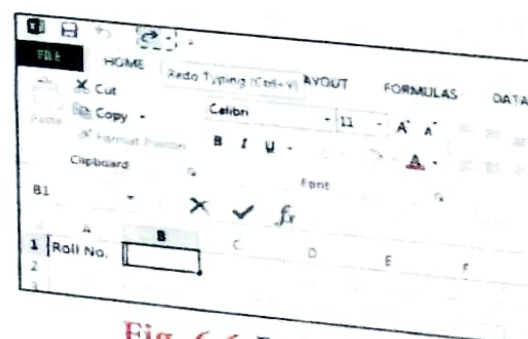


Fig. 6.6 Redo Typing



## Activity 4

You are required to sell 20 tickets. To maintain the record of cash and names of the people, you need to enter it in a spreadsheet.

Open Excel 2013. Enter the data.

Some people may want to buy more than one ticket. In such a case, make an entry but you need to retype their names and other details.

Also, identify each type of data in each column.

The screenshot shows an Excel spreadsheet with the following data:

S. No.	Name	Phone Number	Address	No. of Tickets	Amount
1	Dr. Jai D. Sharma (Mr)	9876543210	123, 4th Street, Mumbai	1	50
2	Dr. Jai D. Sharma (Mr)	9876543210	123, 4th Street, Mumbai	1	50
3	Dr. Jai D. Sharma (Mr)	9876543210	123, 4th Street, Mumbai	1	50
4	Dr. Jai D. Sharma (Mr)	9876543210	123, 4th Street, Mumbai	1	50
5	Dr. Jai D. Sharma (Mr)	9876543210	123, 4th Street, Mumbai	1	50
6	Dr. Jai D. Sharma (Mr)	9876543210	123, 4th Street, Mumbai	1	50
7	Dr. Jai D. Sharma (Mr)	9876543210	123, 4th Street, Mumbai	1	50
8	Dr. Jai D. Sharma (Mr)	9876543210	123, 4th Street, Mumbai	1	50
9	Dr. Jai D. Sharma (Mr)	9876543210	123, 4th Street, Mumbai	1	50
10	Dr. Jai D. Sharma (Mr)	9876543210	123, 4th Street, Mumbai	1	50

## WORKING WITH SPREADSHEETS

When you open Excel 2013, by default, you have one worksheet in a workbook. While working, you can insert more worksheets, switch between different worksheets, reposition, add, rename or delete a worksheet.

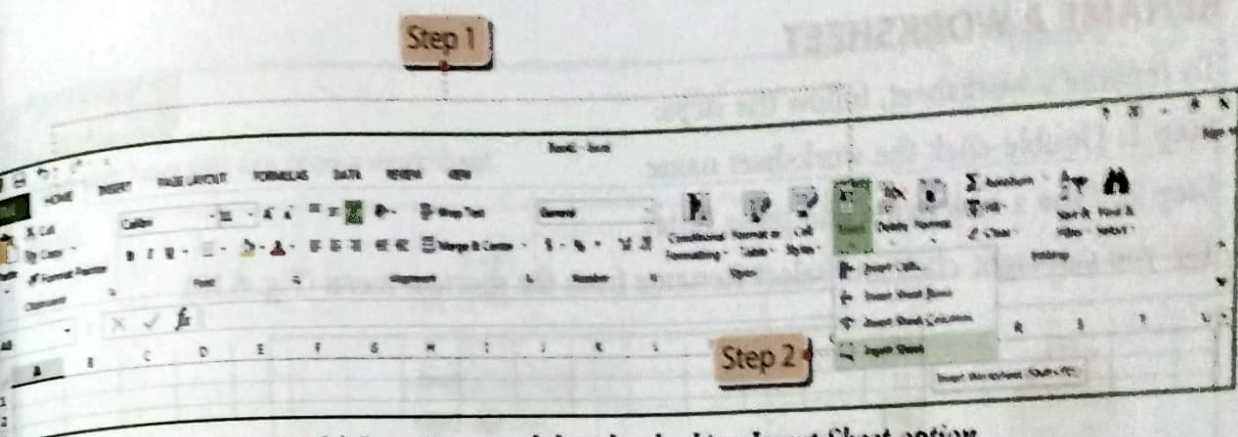
### INSERTING A NEW WORKSHEET

To insert a worksheet, follow the steps:

Step 1: On the HOME tab, in the Cells group, click the down arrow next to Insert button.

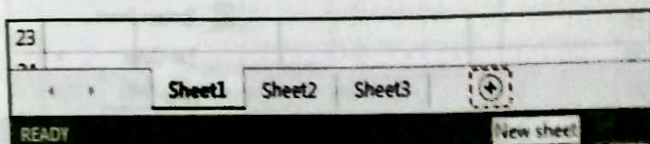
Step 2: Click the Insert Sheet option (Fig. 6.7 (a)).





**Fig. 6.7 (a)** Inserting a worksheet by checking Insert Sheet option

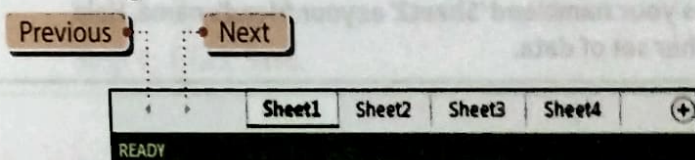
Or you can click the New sheet button (Fig. 6.7 (b)).



**Fig. 6.7 (b)** Inserting a worksheet by clicking New sheet button

## SWITCHING BETWEEN WORKSHEETS

To switch between worksheets, click the desired worksheet tab. When you add a lot of worksheets, all the tabs may not be visible on the screen. Then, click the arrow buttons on the left of Sheet1 tab (Fig. 6.8).



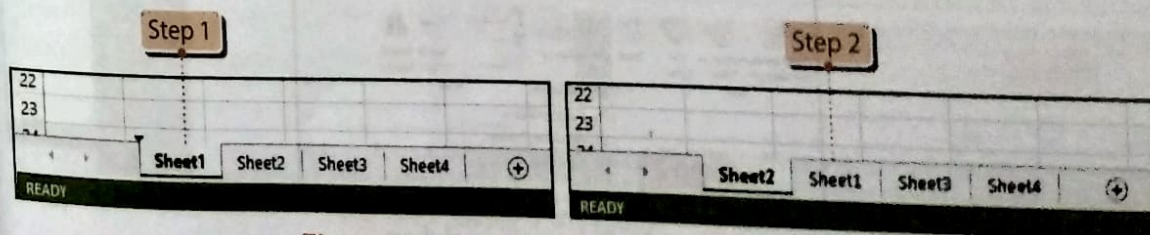
**Fig. 6.8** Switching between worksheets

## REPOSITION WORKSHEETS IN A WORKBOOK

To move worksheets in a workbook, follow the steps:

**Step 1:** Click and hold the worksheet tab that will be moved until an arrow appears in the left corner of the sheet (Fig. 6.9).

**Step 2:** Drag the worksheet to the desired location.



**Fig. 6.9** Repositioning worksheets in a workbook

## RENAME A WORKSHEET

To rename a worksheet, follow the steps:

**Step 1:** Double-click the worksheet name.

**Step 2:** Type a new name and press **Enter**.

Or you can right-click and select **Rename** from the shortcut menu (Fig. 6.10).

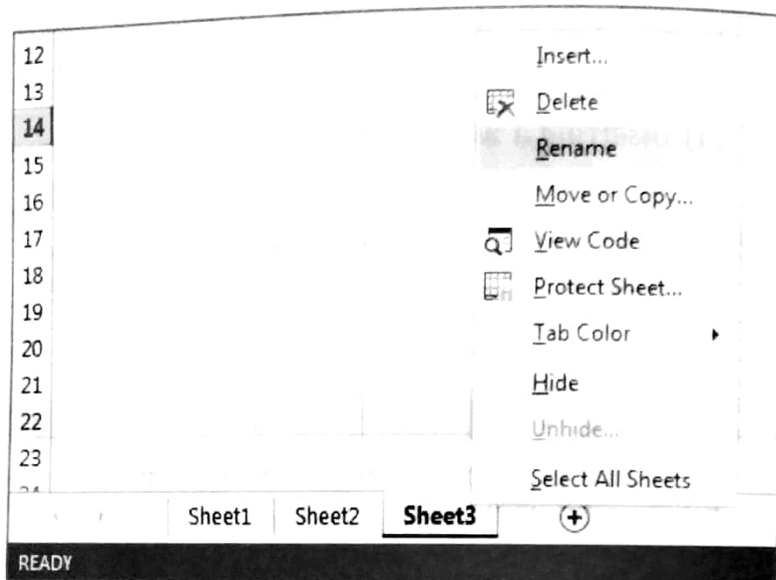


Fig. 6.10 Renaming a worksheet

### Activity 5

Practise

Rename 'Sheet1' as your name and 'Sheet2' as your friend's name. Help him/her enter his/her set of data.



## DELETE A WORKSHEET

To delete a worksheet, follow the steps:

**Step 1:** On the **HOME** tab, in the **Cells** group, click the down arrow next to **Delete** button (Fig. 6.11).

**Step 2:** Click the **Delete Sheet** option.

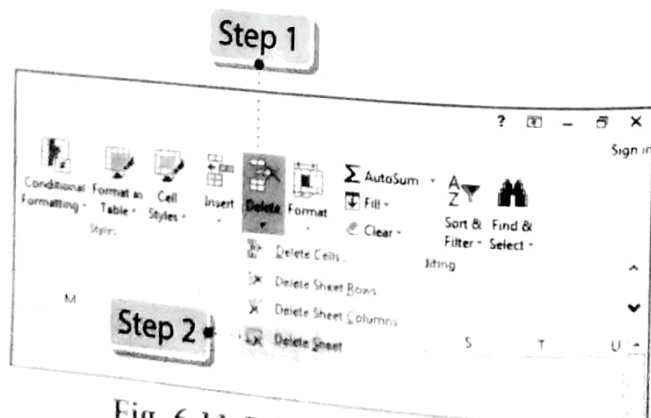


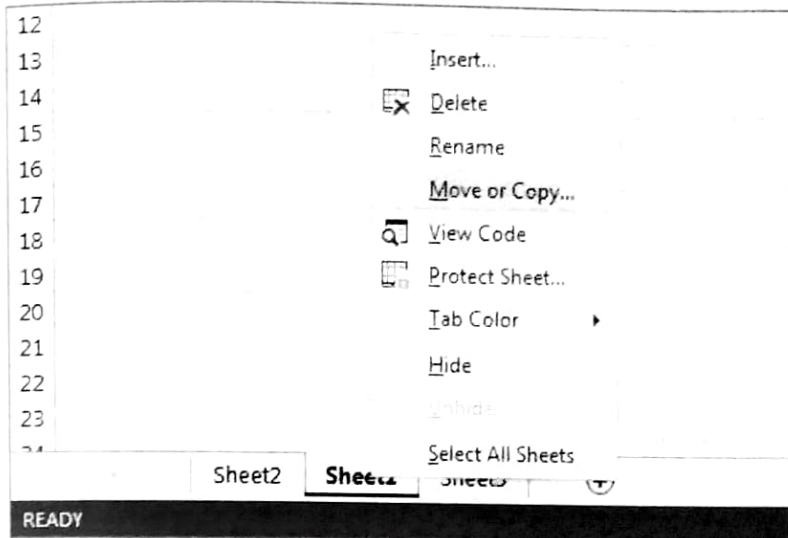
Fig. 6.11 Deleting a worksheet



## Activity 6

Find out how you can copy a worksheet.

Hint:



Explore



## SAVE A WORKBOOK

Step 1

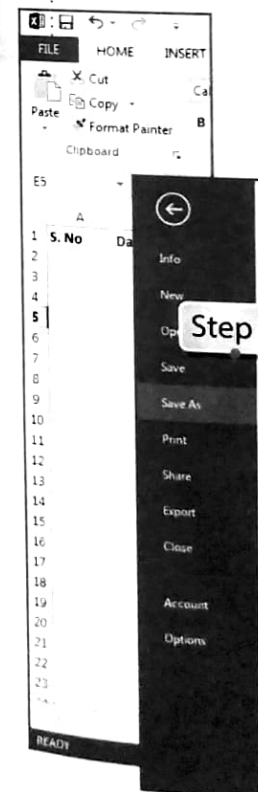
To save a workbook, follow the steps:

**Step 1:** Click FILE menu (Fig. 6.12 (a)).

**Step 2:** Click Save As. The Save As dialog box opens (Fig. 6.12 (b)).

**Step 3:** Type in the name for the workbook.

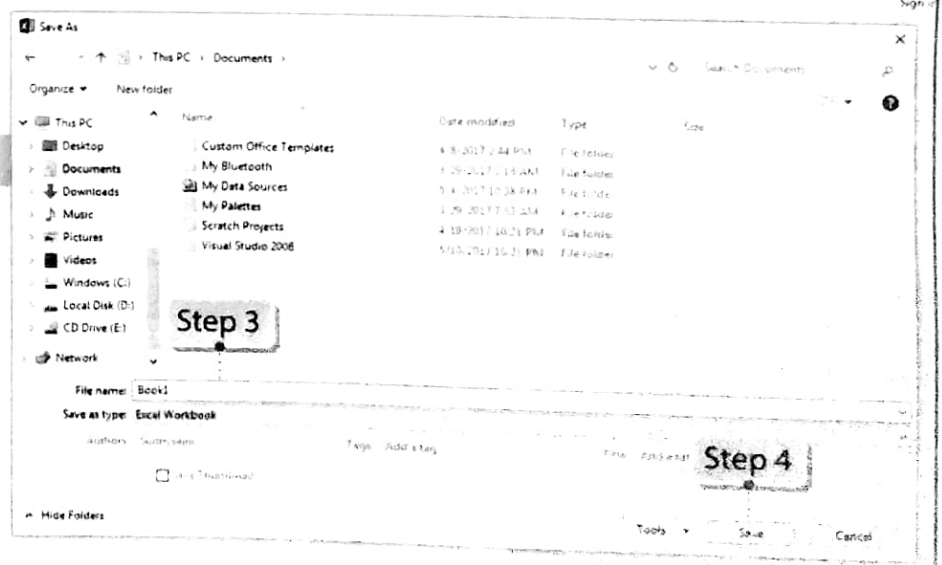
**Step 4:** Click Save.



Step 2

Save As

- OneDrive
- Computer
- + Add a Place



(a)

Fig. 6.12 Saving a workbook

(b)

## OPEN A WORKBOOK

### Step 1

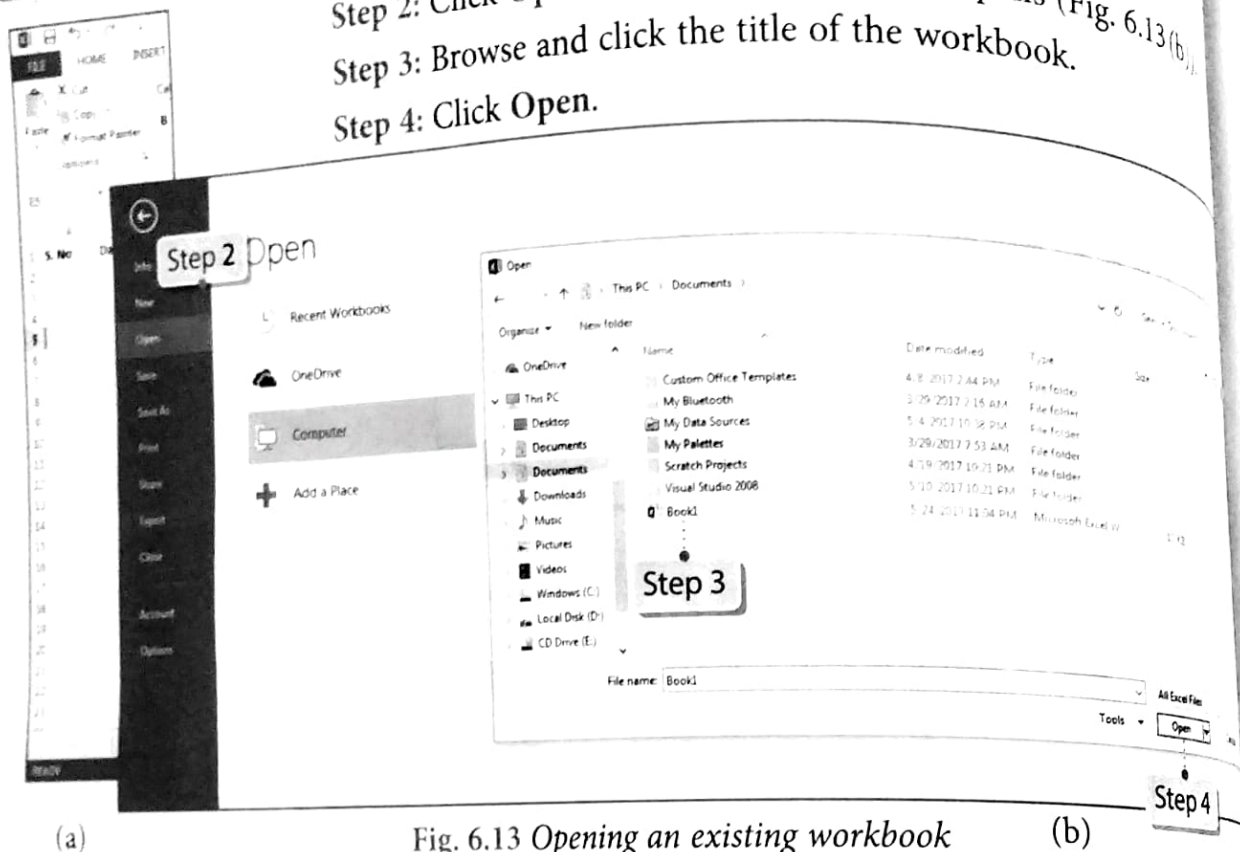
To open an existing workbook, follow the steps:

Step 1: Click the FILE menu (Fig. 6.13 (a)).

Step 2: Click Open. The Open dialog box opens (Fig. 6.13 (b)).

Step 3: Browse and click the title of the workbook.

Step 4: Click Open.



(a)

Fig. 6.13 Opening an existing workbook

(b)

### Tech Help

Press **Ctrl + S** to save the workbook.

Press **Ctrl + O** to open the workbook.

### Activity 7

Discuss

Where are spreadsheets used the most and why?



## EXIT EXCEL 2013

To close Excel 2013, follow the steps:

Step 1: Click FILE menu (Fig. 6.14).

Step 2: Select the Close option.

### Tech Help

To exit Excel 2013, press **Alt + F4**.  
Or

Click the **X** button on top of right corner of the window.

Step 1

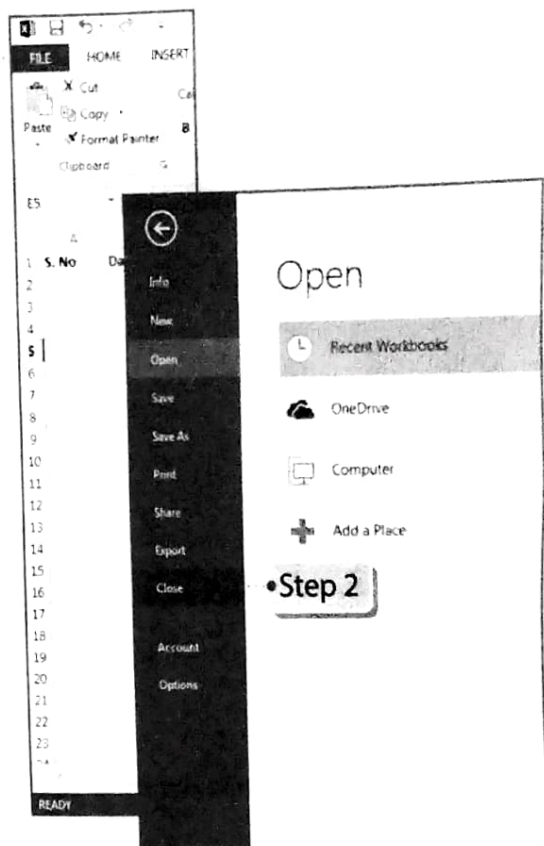


Fig. 6.14 Exiting Excel 2013

### Activity 8

Explore

Can you calculate the data entered in Excel 2013? **HOTS**

### Recap

- ✧ Excel 2013 is a spreadsheet software used to store, organize, manipulate and analyze data.
- ✧ Popular electronic spreadsheet software includes Lotus 1-2-3 and Quattro Pro.
- ✧ Each worksheet consists of 1,048,576 rows and 16,384 columns.
- ✧ A column may contain up to 32,767 characters.
- ✧ Daniel Bricklin is often referred to as 'The Father of the Spreadsheet'.
- ✧ Types of data that you can enter in a worksheet are Numbers, Text, Date and Time, Formula.
- ✧ You can reposition, add, rename, delete and switch between worksheets.