2 Electronic Spreadsheets

This chapter will cover the following:

- What spreadsheets are
- Special features of a spreadsheet
  - Workbook, worksheets, cells, columns, rows
  - Name boxes
  - Functions, formulas
  - Data selection
  - Graphs
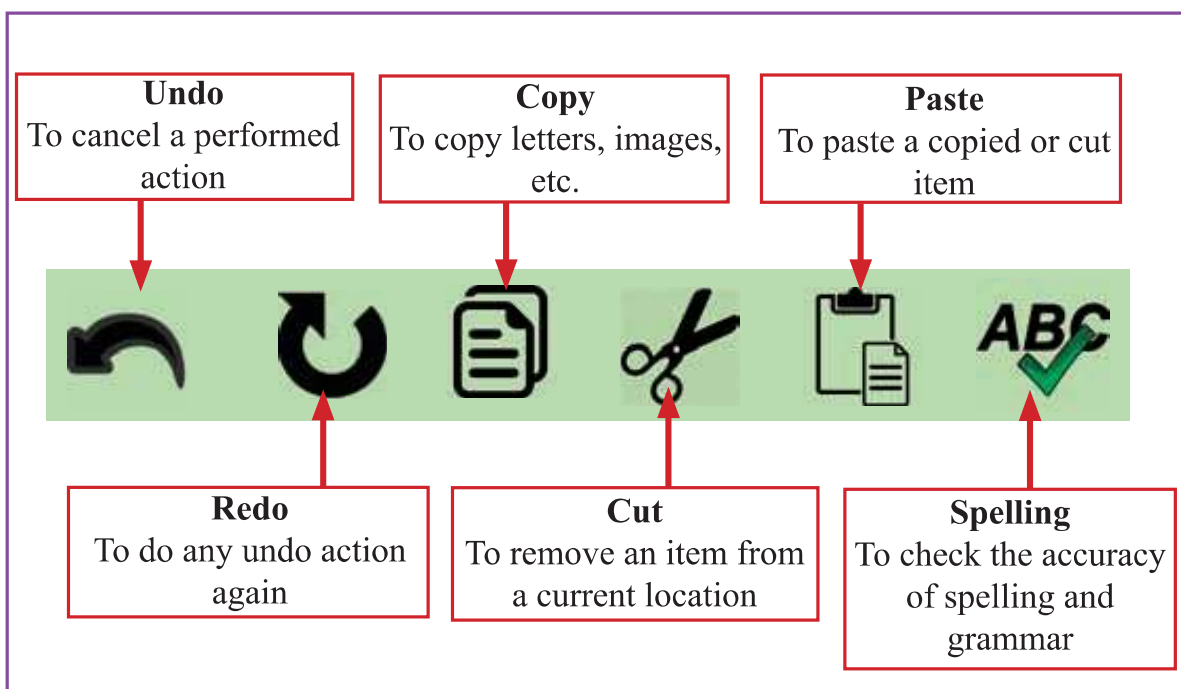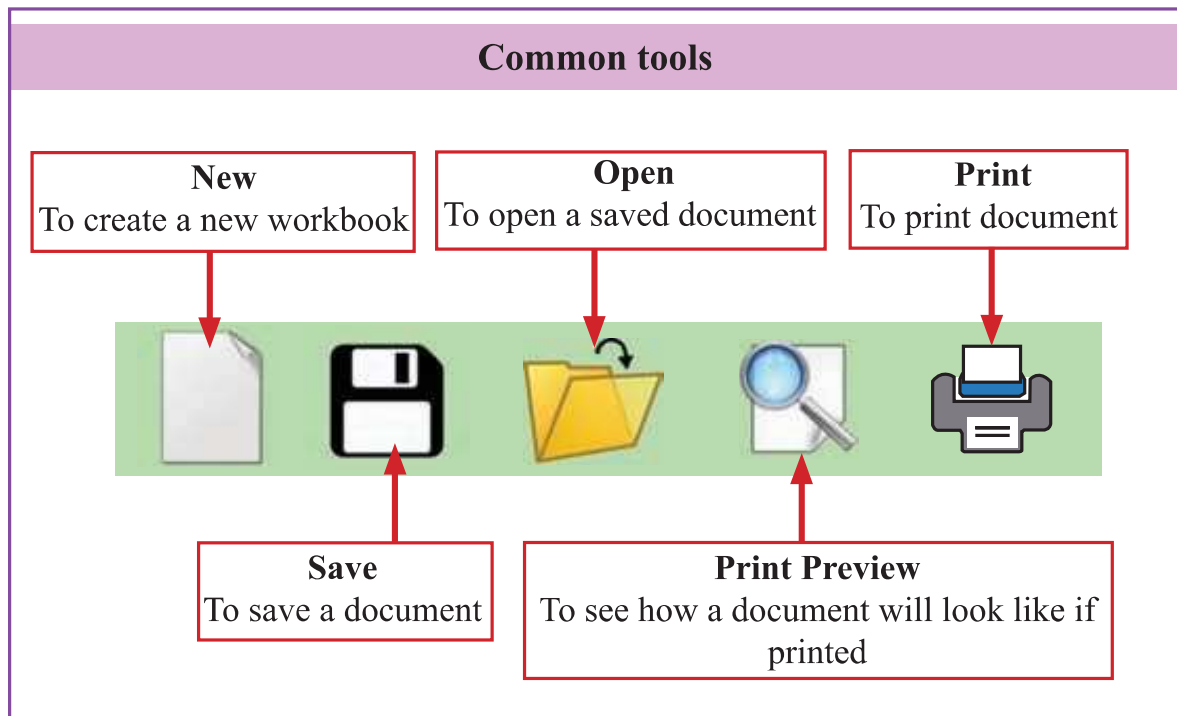
2.1 What are spreadsheets?

A spreadsheet means an electronic version of the paper based accounting sheets used by accountants in the past.

An electronic spreadsheet is an interactive computer application for organization, analysis and storage of data in a tabular form. Data are entered in cells of a table and the spreadsheet provides the facility of functions, formulas, sorting and charting.
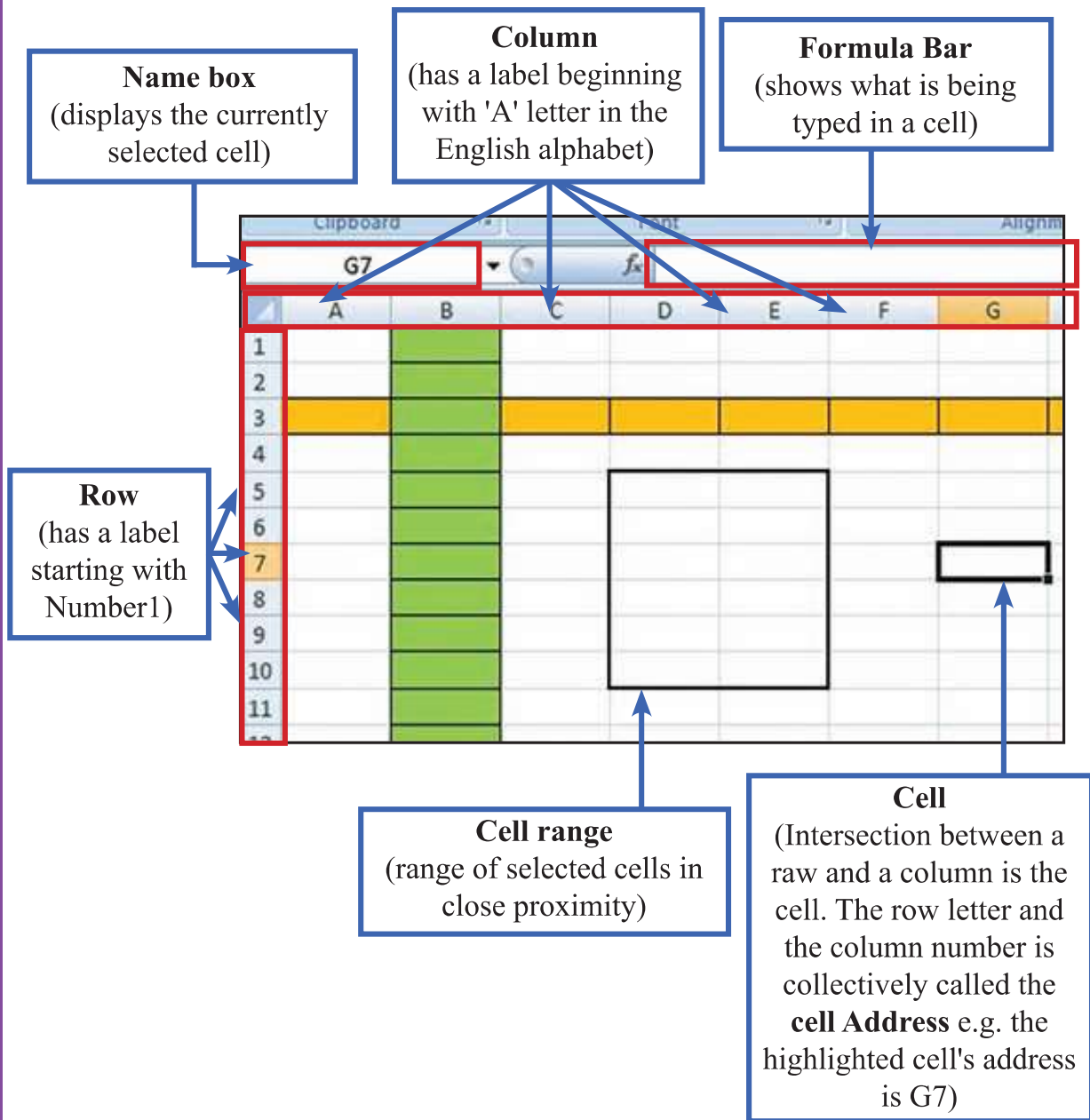
In electronic spreadsheets, *workbooks* can be used for document creation. A workbook may contain multiple *worksheets*.

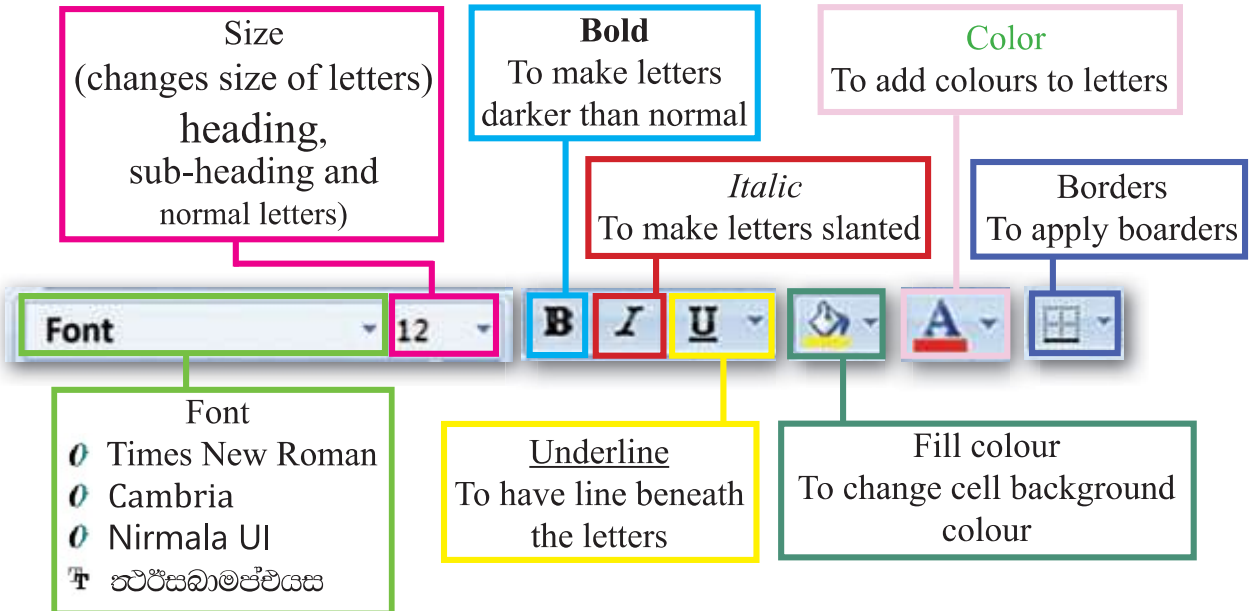Let us learn about the functions provided in spreadsheet package.

Common tools

New
To create a new workbook

Open
To open a saved document

Print
To print document

Save
To save a document

Print Preview
To see how a document will look like if printed

Undo
To cancel a performed action

Copy
To copy letters, images, etc.

Paste
To paste a copied or cut item

Redo
To do any undo action again

Cut
To remove an item from a current location

Spelling
To check the accuracy of spelling and grammar

Special features of a spreadsheet

Name box
(displays the currently selected cell)

Column
(has a label beginning with 'A' letter in the English alphabet)

Formula Bar
(shows what is being typed in a cell)

Row
(has a label starting with Number1)

Cell range
(range of selected cells in close proximity)

Cell
(Intersection between a raw and a column is the cell. The row letter and the column number is collectively called the **cell Address** e.g. the highlighted cell's address is G7)

Cell formatting tools

Size
(changes size of letters)
heading,
sub-heading and
normal letters)

Bold
To make letters
darker than normal

Italic
To make letters slanted

Color
To add colours to letters

Borders
To apply boarders

Font
O Times New Roman
O Cambria
O Nirmala UI
T ජටර්සබාමජ්එියස

Underline
To have line beneath
the letters

Fill colour
To change cell background
colour

Font	▼	12	▼	**B**	*I*	U	▼	◇	▼	A	▼	⊞	▼

Alignment and positioning tools

Middle
(aligns to the
middle)

Orientation
(changes text
direction)

Merge and Center
(to combine multiple
adjacent cells to
single larger cell and
align center.)

Left align
(aligns left)

Right align
(aligns right)

Centre align
(aligns to middle)

Top
(top align)

Bottom
(bottom align)

Wrap Text
(To make all content
visible within a cell)
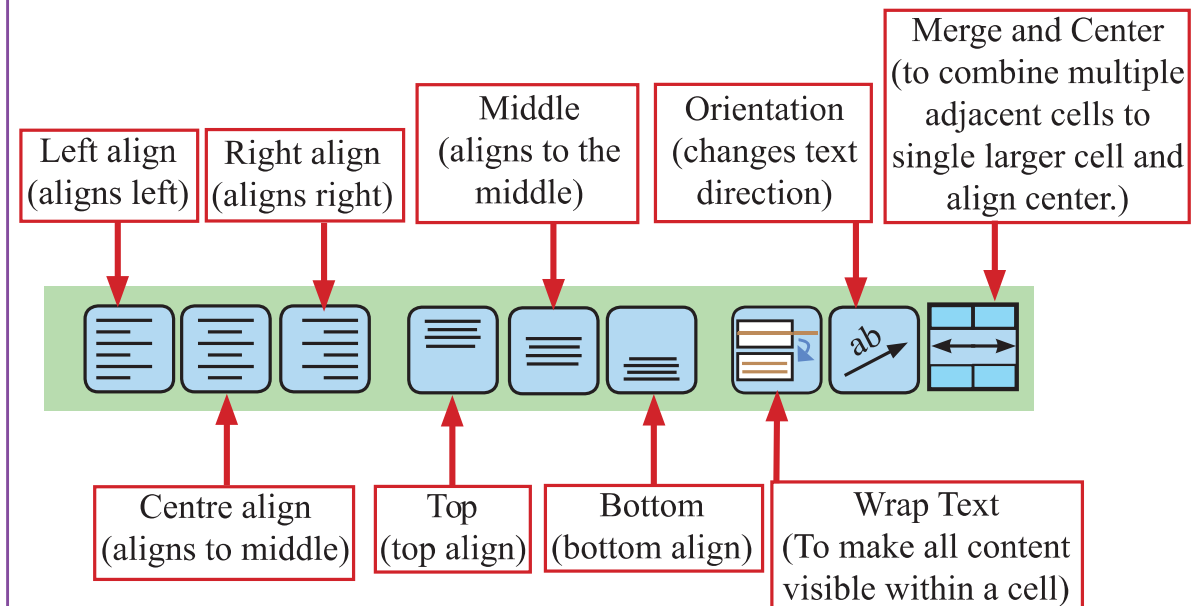
Number tools

Currency | Percentage | Increase and decrease decimals

General

Number	Numbers - e.g. 10, 25, 100, ...
Currency	Money - e.g. Rs. / $ / ¥ - 10.00
Accounting	Lines up currency symbols and decimal points in a column / $ / ¥ - 10.00
Short Date	Short date - e.g. 02 /25/2018 (MM / DD / YYYY)
Long Date	Detailed date - e.g. Tuesday, February 25, 2018
Time	Time - e.g. 1:30 p.m., 10:00 a.m.
Percentage	Percentage - e.g. 23% , 45%, 75%
Fraction	As fractions - e.g. 2/9, 4/5
Scientific	In scientific notation - e.g. 5677=5.68E+03

Symbols used in spreadsheet formula

Used before a formula or function → $=$

Add ← $+$

Subtract → $-$

Multiply ← $*$

Divide → $/$

Function

To find the total of a range of cells → **Sum**

Average ← To find the average of cell range

To find the highest value in cell range → **Max**

Min ← To find the lowest value in a cell range

Charts

Can be used to display spreadsheet date graphically.

Column graph → Column

Line chart → Line

Pie chart → Pie

Bar chart → Bar

Area chart → Area

Scatter chart → Scatter

Other charts → Other Charts

Refer to workbook for Activities from 2.1 to 2.10.

Summary

- A spreadsheet is a document containing rows and columns where functions and formulas could be used for computations and where sorting and charting of data is possible.

- A cell is a specific location defined by the intersection of a row and a column.

- An individual cell is identified by starting with column name 'A' and raw 'number 1'.

- New, Open, Print, Print Preview, Re-do, Undo, Cut, Copy, Paste and Spell check are common tools used in spreadsheets.

- Computations are done using functions/formulas.

- SUM, AVERAGE, MAX, MIN etc. are some basic functions that are available.

- Bar charts, column charts, line charts, pie-charts, etc. could be used for analysis of data.