

Spreadsheet

Spreadsheet

- Is an application software that analysis and storage of data in tabular form.
- Can be used for creating data models, using functions, adding formulae, sort data, filter data, testing data and creating graph charts...etc

- **Cells:** a cell is a box in which you can enter a single piece of [data](#), is the intersection between a row and a column on a spreadsheet, identified by a letter and number such as A1
- **Rows:** rows are "horizontal" collections of items belonging to a certain category, identified by numbers.
- **Columns:** Columns are the vertical lines of data that stretch from the top of the spreadsheet to the bottom , identified by letters.
- **Sheets:** a combination of rows and columns together can be divided to one page or more.
- **Tabs:** used to identify the sheet name, which can be renamed, copied, moved and deleted
- **Chart:** is a graphical representation of data, in which "the data is represented by symbols, such as bars in a bar chart, lines in a line chart, or slices in a piechart".

the importance of accurate data entry in spreadsheets

- When we enter correct data, so correct results will be obtained.
- **How To Help Minimize Errors in Data Entry:**
by using Validation, verification.

- ***Formula:*** used to perform calculations, begins with equal sign.
- ***Function:*** a function is a preset [formula](#), Functions make it easier to carry out, begins with equal sign
- ***absolute reference:*** absolute reference remain constant when a formula is copied to another cell.
- ***relative reference:*** Relative references change when a formula is copied to another cell.
- ***Ranges:*** an number of cells selected together for later use.
- ***Named cell:*** cell can be identified by a name for later use
- ***named range:*** number of cells (range) can be identified by a name for later use.
- ***nested formulae/functions:*** With nested functions one or more functions are placed inside a main function.

Order of operations

ORDER OF OPERATIONS

- (P) **Parenthesis** Symbol: ()
- E^x **Exponents** Symbol: ^
- M/D **Multiply or Divide** Symbol: * /
*from left to right in the problem
- A/S **Add or Subtract** Symbol: - +
*from left to right
* *of course*

Testing data

- **Testing data:** means checking that the data model formulas and functions are work correctly.
- **Test data** is the data that is used in tests of a software system.
 - *expected outcome:* the supposed results after using a data model.
 - *actual outcome:* the existing and current results after using a data model.
 - *Normal data:* acceptable, valid data/data, inside the given range
 - *Abnormal data:* outside the limits of acceptability/validity
 - *Extreme data:* at the limits of acceptability/validity

Sample of test plan

Cell reference					
Formula tested					
Test data	Why chosen	<i>expected outcome</i>	<i>actual outcome</i>	Tested formula works Y/N	Remedial action