



**Al-Zahra University, Department of Pharmacy**

**COMPUTER SCIENCE**

**2nd**

**Lecture 3**

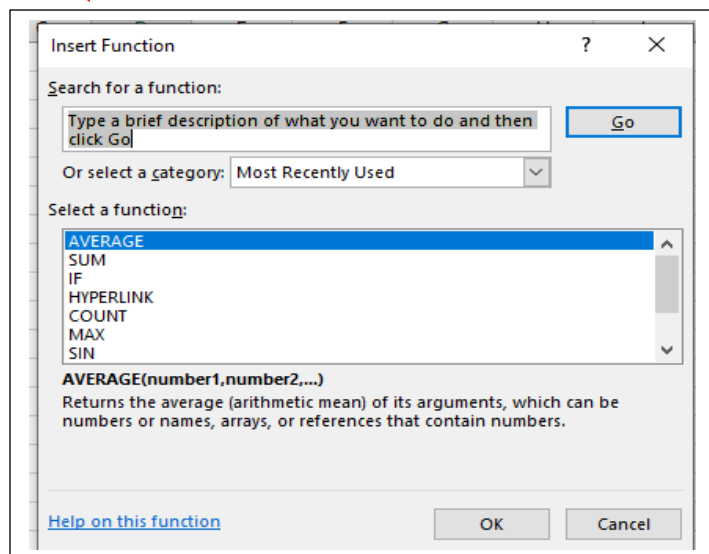
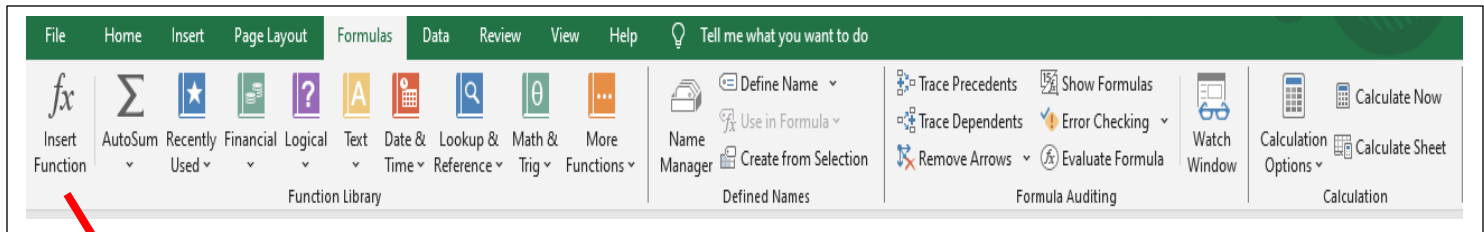
**Microsoft Office Excel**

ASS .Lec : Kawther AL.bayati

ASS .Lec :Zahraa Ali

# Formulas

## Function Library Group



**Average** : This function is used to find the arithmetic mean of a set of numbers .:= AVERAGE(B2:E2)

The screenshot shows an Excel worksheet with the formula bar displaying `=AVERAGE(C2:E2)`. The worksheet contains data in Arabic. The average value 65.66667 is calculated in cell F2.

| Q | P | O | N | M | L | K | J | I | H | G | F        | E      | D      | C      | B       | A |
|---|---|---|---|---|---|---|---|---|---|---|----------|--------|--------|--------|---------|---|
|   |   |   |   |   |   |   |   |   |   |   | المعدل   | مادة 3 | مادة 2 | مادة 1 | الاسم   | ت |
|   |   |   |   |   |   |   |   |   |   |   | 65.66667 | 58     | 79     | 60     | نور على |   |

**SUM** : The addition function is the most important function of the excel function and perhaps the most used function at all, and it adds the numbers .= SUM(C2:F2)

|  | M | L | K | J | I | H | G                            | F      | E      | D      | C      | B          | A |
|--|---|---|---|---|---|---|------------------------------|--------|--------|--------|--------|------------|---|
|  |   |   |   |   |   |   | المجموع                      | 4 مادة | 3 مادة | 2 مادة | 1 مادة | اسم الطالب | ت |
|  |   |   |   |   |   |   | =SUM(C2:F2)                  | 8      | 7      | 5      | 5      | نور محمد   | 1 |
|  |   |   |   |   |   |   | SUM(number1, [number2], ...) | 7      | 8      | 9      | 9      | زيد علي    | 2 |
|  |   |   |   |   |   |   |                              | 4      | 6      | 8      | 5      | احمد حسين  | 3 |
|  |   |   |   |   |   |   |                              | 3      | 5      | 6      | 4      | علا منير   | 4 |

**MAX** : This function is used to find the greatest value of =MAX(C2:E2)

New Microsoft Excel Worksheet - Excel

Sign in

Layout

Formulas

Data

Review

View

Help

Tell me what you want to do

Share

Logical

Text

Date & Time

Lookup & Reference

Math & Trig

More Functions

Name Manager

Define Name

Use in Formula

Create from Selection

Trace Precedents

Trace Dependents

Remove Arrows

Show Formulas

Error Checking

Evaluate Formula

Watch Window

Calculate Now

Calculation Options

Calculate Sheet

Function Library

Defined Names

Formula Auditing

Calculation

=MAX(C2:E2)

| R | Q | P | O | N | M | L | K | J | I | H | G | F         | E       | D       | C      | B       | A |
|---|---|---|---|---|---|---|---|---|---|---|---|-----------|---------|---------|--------|---------|---|
|   |   |   |   |   |   |   |   |   |   |   |   | أكبر قيمة | 35 مادة | 25 مادة | 1 مادة | الاسم   | ث |
|   |   |   |   |   |   |   |   |   |   |   |   | 79        | 58      | 79      | 60     | نور علي | 1 |
|   |   |   |   |   |   |   |   |   |   |   |   |           |         |         |        |         | 2 |
|   |   |   |   |   |   |   |   |   |   |   |   |           |         |         |        |         | 3 |
|   |   |   |   |   |   |   |   |   |   |   |   |           |         |         |        |         | 4 |

**MIN**: This function is used to find the smallest value =MIN( B2:E2 )

New Microsoft Excel Worksheet - Excel

Sign in

Page Layout

Formulas

Data

Review

View

Help

Tell me what you want to do

Share

Financial

Logical

Text

Date & Time

Lookup & Reference

Math & Trig

More Functions

Function Library

Name Manager

Define Name

Use in Formula

Create from Selection

Defined Names

Trace Precedents

Trace Dependents

Remove Arrows

Show Formulas

Error Checking

Evaluate Formula

Formula Auditing

Watch Window

Calculation Options

Calculate Now

Calculate Sheet

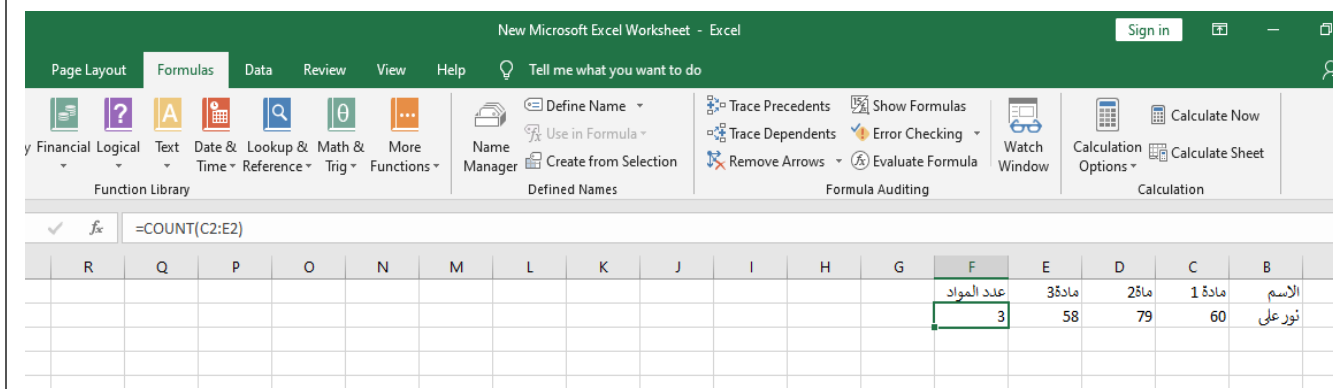
Calculation

fx

=MIN(C2:E2)

|  | R | Q | P | O | N | M | L | K | J | I | H | G | F        | E       | D       | C      | B       | A |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|----------|---------|---------|--------|---------|---|---|
|  |   |   |   |   |   |   |   |   |   |   |   |   | اقل قيمة | 35 مادة | 25 مادة | 1 مادة | الاسم   | ت | 1 |
|  |   |   |   |   |   |   |   |   |   |   |   |   | 58       | 58      | 79      | 60     | نور علي |   | 2 |
|  |   |   |   |   |   |   |   |   |   |   |   |   |          |         |         |        |         |   | 3 |
|  |   |   |   |   |   |   |   |   |   |   |   |   |          |         |         |        |         |   | 4 |
|  |   |   |   |   |   |   |   |   |   |   |   |   |          |         |         |        |         |   | 5 |

COUNT : The COUNT function calculates the number of cells containing numbers =COUNT(C2:E2)



### دالة IF()

تعد الدالة IF() أشهر الدوال الشرطية على الإطلاق وهي تأخذ شرط ما وترجع قيمة معينة حال تحقق الشرط وقيمة أخرى حال عدم تحققه وتأخذ الشكل التالي:

(القيمة حالة عدم تحقق الشرط القيمة حالة تحقق الشرط شرط منطقي) =IF

=IF (logical expression; true; false)

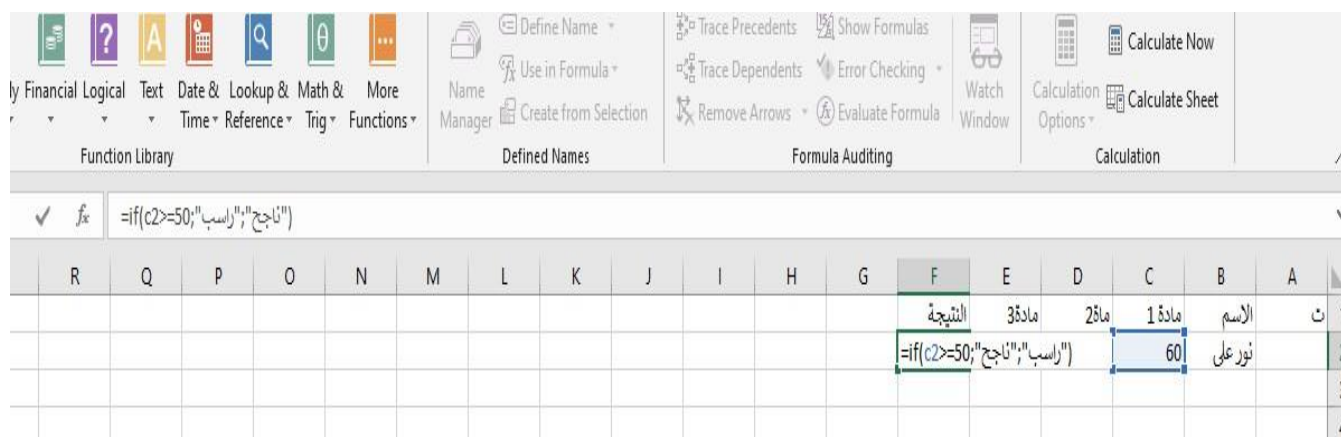
Function :IF()

The IF() function is the most famous conditional function on the length and it takes a condition and returns a certain value once the condition is met

And another value if it is not achieved and takes the following form:

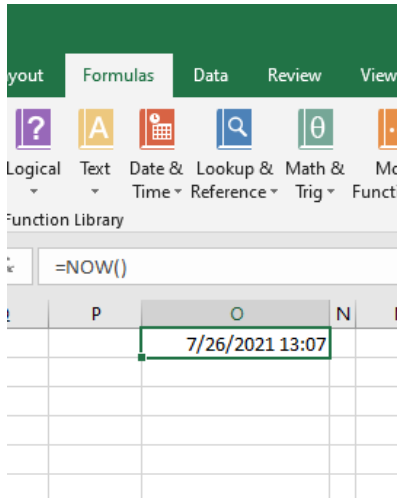
(Value condition non-fulfillment condition value condition condition logical condition) =IF

=IF (logical expression; true; false)



NOW : This function uses to insert time and date in the worksheet and takes

Figure follows =NOW ()



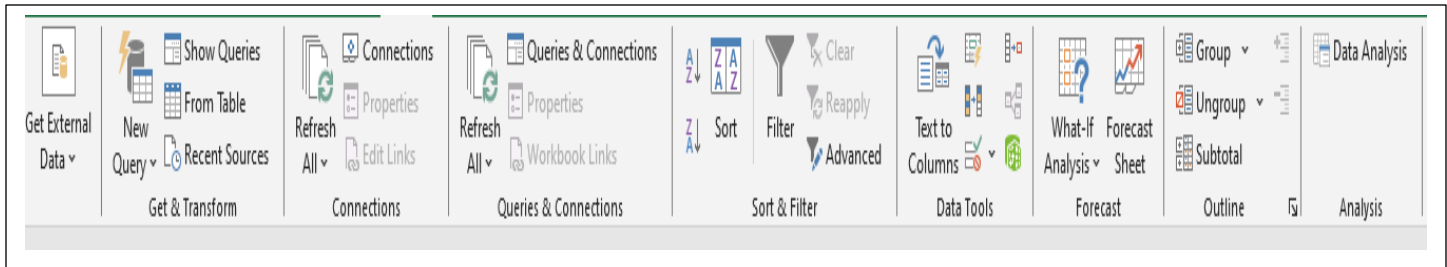
### بعض اخطاء الصيغ في الكسل

1. #####: يعرض هذا الخطأ عندما يكون حجم الرقم اكبر من حجم الخلية ولحل هذا الخطأ يجب تكبير الخلية

2. # NAME: يعرض هذا الخطأ عند كتابة الدالة بشكل غير صحيح

3. #VALUE: يعرض هذا الخطأ عند كتابة ادخال بيانات غير صحيحة

## Data



This tape contains many tools and instructions and we will explain the most important of them:-

**Get data :** This command is located in the data transform & Get group and is used to get data from Different sources file or database

**Refresh all :** This prompt is in the Connections and Queries group and is used to update Data received in the worksheet.

**Connections:** This command is used to show all the links that provide the worksheet with data.

**Properties:** from which the contents that are displayed from the source are determined and how to deal with changing the number of Rows and columns from the source.

### **Sort & Filter Group**

A group of sorting and filtering data, from which we can sort the data ascending or descending, as well as filtering this data And according to specific values to obtain the required data.

### **Outline Group**

Outline group is used to decode and merge a set of rows and columns to handle them as a single structure together

**Group:** (Data collection) is done after selecting the rows and columns to be grouped.

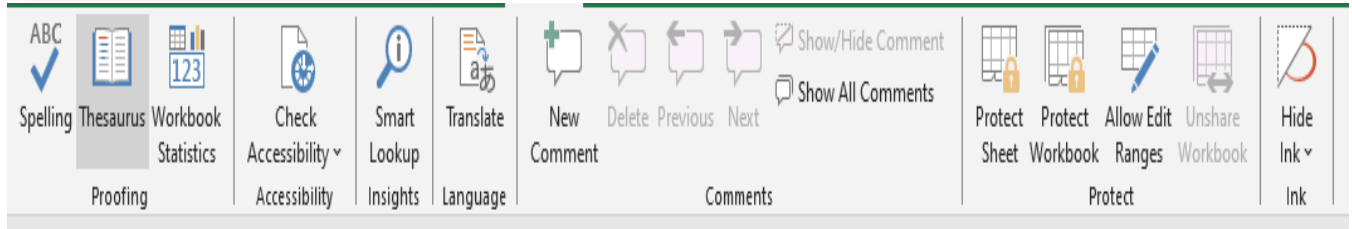
**UN Group:** Used to unlink threaded rows or columns (for removal data collection)

**Subtotal:** is used to partially sum selected data based on a column value Particular.

**Detail:** Show is used to show threaded rows or columns

**Detail :** Hide is used to hide threaded rows or columns.

## Review



**Proofing**, through which we can apply the following:

**Spelling** : is a spelling check used to correct spelling and grammatical errors on a worksheet.

**Research**: Used to search references and dictionaries for translating a word from a particular language into several languages.

**Thesaurus** is used to suggest another word that is synonymous with the word to be changed.

### Language Group

**-Translate** is used to translate the selected text into other languages.

**:Comment Group** Comments group contains special commands

with comments that can be added to the worksheet, which includes the addition

And delete, hide and show as well as investigate between these comments.

- **Comment** :New and uses the new comment addition on the cell specified.

-**Delete** is used to delete the comment from the selected cell.

-**Previous** to move to the previous comment in the worksheet.

**Next** : to move to the next comment in the worksheet.

- **Comment** : Show/Hide uses to show or hide the comment associated with the selected cell.

- **Comments All** :Show is used to show all comments.

With my best wishes