Welcome

Plan for Today

- Named Ranges or How to write formulas with English
- Using Named Ranges
- Summary and Statistical functions

Where can I find past webinars?

Go to https://theTechMentors.com/Webinars

Named Ranges

Can I write formulas that are closer to English?

Yes. By using **named ranges**, your formulas will be more like plain English.

What is a named range?

Any cell, or group of cells, can be given a name.

How do I create a named range?

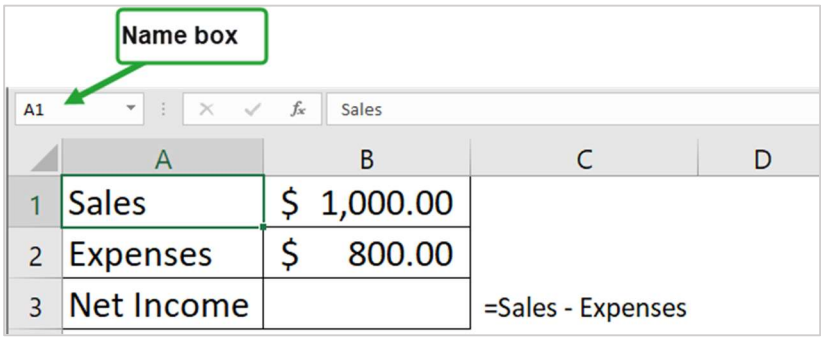
Select the desired cell or range of cells, then in the name box enter the name of the range.

Any rules about naming ranges?

Yes. The name cannot have spaces, commas, nor colons.
Underscores _ and dashes – are allowed.
You cannot use a cell address as a name.

Where is the name box?

The name box is above A1 and to the left of the formula bar.



Exercise 1: Create some named ranges

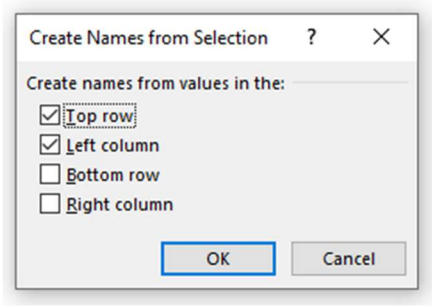
1. Open the **Exercise Files.xlsx** file.
2. Select the **Named Ranges** sheet.
3. Click on B1.
4. In the name box type **`Sales`** and press enter.
5. Click on B2.
6. In the name box type **`Expenses`** and press enter.
7. Click on B3.
8. Enter the formula: **`=Sales-Expenses`** and press enter.

Can I use column headings or row headings for the names of my named ranges?

Yes. Do the following:

1. Select a range of cells including the row or column heading.
2. From the ribbon select **Formulas**, **Defined Names**, **Create from Selection**.

3. In the dialog box select **Top row** for column headings, and **Left column** for row headings then click **OK**.



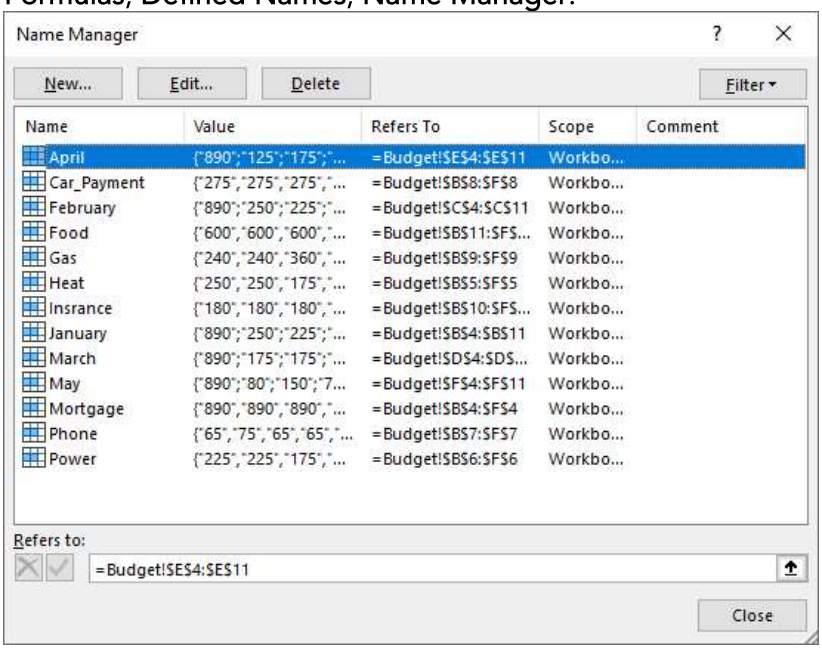
Exercise 2: Set named ranges using row and column headings

1. In the **Exercise Files.xlsx** file, go to the **Budget** worksheet.
2. Select cells **A3** through **F11**.
3. From the ribbon select **Formulas**, **Defined Names**, **Create from Selection**.
4. In the dialog box select **Top row** for column headings, and **Left column** for row headings then click **OK**.

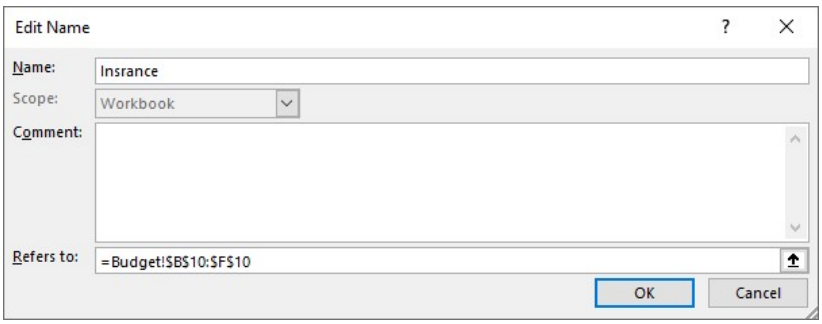
Can I rename a named range?

Yes. You can use the **Name Manager** to modify a named range.

To open the Name Manager from the ribbon, select **Formulas, Defined Names, Name Manager**.



You can then select the named range you want to modify, click the **Edit** button, and change the name, enter a comment, and/or modify the range that the name refers to. When finished click **OK**.



Exercise 3: Rename a named range

1. In the **Exercise Files.xlsx** file, go to the **Budget** worksheet.
2. From the ribbon, select **Formulas**, **Defined Names**, **Name Manager**.
3. Select the **Insrance** named range and click **Edit**.
4. Change `Insrance` to `Insurance` and click **OK**.

Exercise 4: Challenge - Creating named ranges

1. In the **Exercise Files.xlsx** file, go to the **Summary** worksheet.
2. Using the **Create from Selection** method, create named ranges for the row headings (country names) and for the column headings (Countries, Sales Rep, and the months of January through May).

Using Named Ranges

F3 - Using Named Ranges in formulas and functions

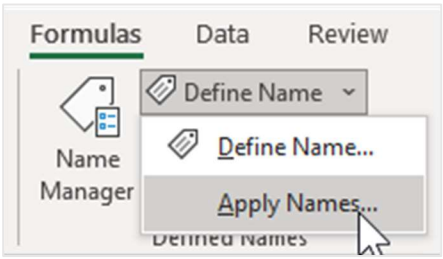
When typing in a formula, you can press F3 to select the name from the Past name dialog box.

F5 – Going to a named range

To go to a named range, simply press F5 or Ctrl G, and select the desired name range.

Applying named ranges to existing formulas

You can apply a named range to existing formulas by selecting **Formulas**, **Defined Names**, **Define Name**, **Apply Names…**



Summary and Statistical Functions

How can I calculate a total?

The **SUM()** function is used to calculate a total.
The **SUM()** function needs at least one argument.
For example, to total the values in cells B2 through B5 you could enter the following:

```
=SUM(B2:B5)
```

The **SUM()** function can also take multiple arguments.
For example, to total a set of numbers in cells B11 through B12 and in E11 through E12 you could enter the following:

```
=SUM(B11:B12,E11:E12)
```

Notice the colon means through, and the comma means separates the first argument from the second.

How can I compute statistical functions like Mean, Median, and Mode?

Mean	The average of a group of numbers	=Average(range)
Median	The number in the middle of all the values	=Median(range)
Mode	The value that occurs most often	=Mode(range)

How can I **count** the **numeric** values in a range?

The **Count()** function can be used to count all the numeric values in a range of cells.

How can I **count all** the **items** in a range?

The **CountA()** function can be used to count all the alpha-numeric (non-blank) values in a range of cells.

How can I **count** the number of **items** in **multiple ranges**?

You can use the Count() and CountA() functions and list each range separated by a comma. For example, if you wanted to count all the numbers between A2 through A20 plus all the numbers between B6 though H10 would you enter the following:

```
Count(A2:A20, B6:H10)
```

How can I calculate the **minimum** value in a range?

The **Min()** function can be used to return the smallest value the selected range(s).

How can I calculate the **maximum** value in a range?

The **Max()** function can be used to return the smallest value the selected range(s).

How can I calculate the second, third, … nth **smallest** value in a range?

The **Small()** function can be used to return the nth smallest value the selected range(s). The Small() function requires two variables. The first is the range of cells to evaluate, and the second argument is for the value you want.

For example, if you want the second smallest value of the data in cells A1 through A100 you would enter the following formula:

```
=SMALL(A1:A100,2)
```

If you want the third smallest value of the data in cells H1 through K25 you would enter the following formula:

```
=SMALL(H1:K25,3)
```

How can I calculate the second, third, … nth **largest** value in a range?

The **Large()** function can be used to return the nth smallest value the selected range(s). The Large() function also requires two variables. The first is for the range and the other is for the value you want.

For example, if you want the tenth largest value of the data in cells B1 through B150 you would enter the following formula:

```
=LARGE(B1:B150,10)
```