

Microsoft Excel 365: Functions

Welcome

Microsoft Excel 365 Functions

Live Online

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Welcome

- Please unmute your mic and turn your camera on and say hello.
- Please ask questions.
- Tell me once you have finished a practical activity, then we can all move on to the next section.

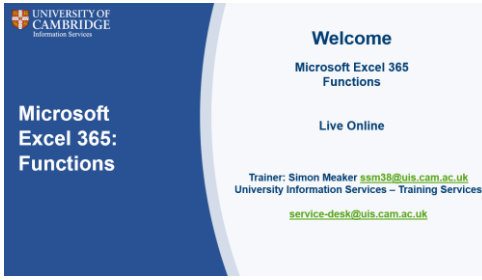
Course Information

Objectives

- How to use Microsoft Excel 365
Formulas & Functions
- Duration
- Delivery Style – demonstrations and practical's

General Information

- Please fill in the Feedback form at the end of the course <http://feedback.training.cam.ac.uk/uis>
- Please ask questions
(This is your course and I want you to get as much as you can out of it)
- If you need assistance with the practical's let me know and we can share desktops



Slides



Files



Learning Paths



General Information

Course Material

Course Information

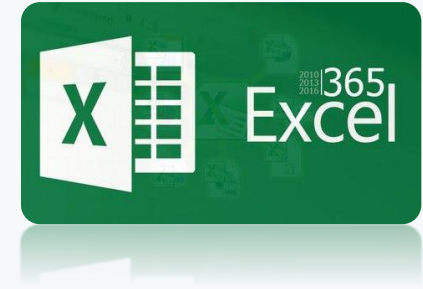
Related Courses

www.linkedin.com/learning

www.training.cam.ac.uk

Which version Are you using?

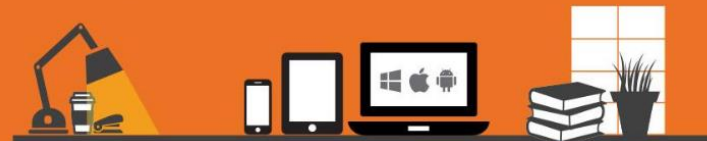
All the exercises will work using the following



Thinking of upgrading?

Staff and students can download Office 365 for free
via this [link](#)

Get Office 365 ProPlus
on your personal devices...



All students, and staff from qualifying institutions: download Office 365 ProPlus free on your personal devices to use while you are at Cambridge.
(Your login will expire 30 days after you leave the University.)

Microsoft Excel 365: Functions

Course Topics

Defined Names

Logical Functions

Lookup Functions

Statistical Functions

Maths Functions

Date and Time Functions

Text Functions

Microsoft Outlook 365: Defined Names

Defined Names - Rules To Follow

There are two important rules to follow when defining names:

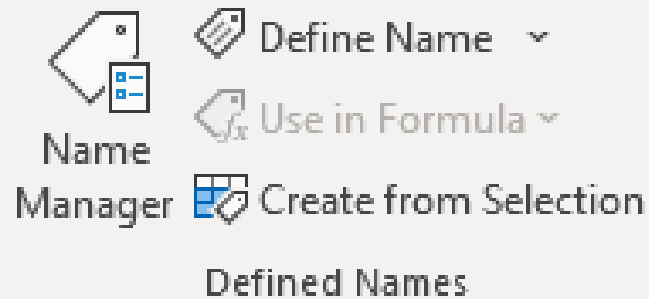
- 1.You can only use letters of the alphabet, numbers, and the underscore character (_) in names. Spaces and other special characters such as &, * or % are not allowed.
- 2.Names must not begin with a number. Use a letter or an underscore as the first character of a name; for example, Year2016 Or _2016.

Microsoft Outlook 365: Defined Names

Demo 1: Defined Names

File 'Defined Names_1' - 'Past 5 Years' worksheet

Formulas



The image shows a screenshot of an Excel worksheet. The active cell is A1. A dropdown menu is open, showing a list of defined names: AUS_Sales, Australia, Last5Years, New_Zealand, NZ_Sales, UK, UK_Sales, Year_1, Year_2, Year_3, Year_4, and Year_5. The worksheet data is as follows:

		Global Enterprise Division
		Clients
		Australia
1		85,000
2		87,000
3		92,000
4		95,000
5		150,000
11		
12	TOTAL :	509,000

Microsoft Outlook 365: Defined Names

Practice Defined Names

File 'Defined Names_1' use 'Past 5 Years' worksheet

Create Defined Names for each of the following:

Australia B6:B10

UK C6:C10

New_Zealand D6:D10

Year_1 B6:D6

Year_2 B7:D7

Year_3 B8:D8

Year_4 B9:D9

Year_5 B10:D10

Microsoft Outlook 365: Defined Names

Practice Defined Names

File 'Defined Names_1' use 'Past 5 Years' worksheet

Use Defined Names in a Formula:

B12 =sum(Australia)

C12 =sum(UK)

D12 =sum(New_Zealand)

Microsoft Outlook 365: Defined Names

Practice Defined Names

File 'Defined Names_3' use 'Past 5 Years' worksheet

Applying Names To Existing Formulas:

Select E6 and Type =sum(B6:D6)

Drag E6 down to E12

Drop arrow, Fill Without Formatting

Delete 0 from E11

Select the range A5:E12

Click on the Formulas tab, drop arrow, Apply Names

Click on all the names until they are all selected

Press OK

See how Year Totals in column E have changed

Microsoft Outlook 365: Defined Names

Practice Defined Names

File 'Defined Names_4'

Creating Names Manually Using The Name Box:

Past 5 Years' worksheet

Select A1:E12 and Name it **Last5Years**

Australia Worksheet

Select B13 and Name it **AUS_Sales**

United Kingdom Worksheet

Select B13 and Name it **UK_Sales**

New Zealand Worksheet

Select B13 and Name it **NZ_Sales**

Microsoft Outlook 365: Defined Names

Practice Defined Names

File 'Defined Names_4' use 'Past 5 Years' worksheet

Defining Names For Constant Values:

Select F5 and type **Tax**

Click on Formulas Tab and click on Define Name

Type **TaxRate** in the Name Field

Tab down to **Refers to** field and type **10%**

Press OK

Select F6 and type **=E6*TaxRate**

See how name is shown for formula

Press Enter and copy down

Microsoft Outlook 365: Defined Names

Practice Defined Names

File 'Defined Names_4' use 'Past 5 Years' worksheet

Using The Name Manager:

Have a look at the Name Manager and see how this can be used to create New names, Edit Names and Delete Names.

Microsoft Outlook 365: Defined Names

In Your Own Time

[LinkedIn Learning - Cert Prep: Excel Associate - Microsoft Office Specialist for Office 2019 and Office 365](#)

By Jennifer McBee

Worth watching whole course to learn a bit more

Section 2 includes:

[Navigate data with named ranges and hyperlinks](#)

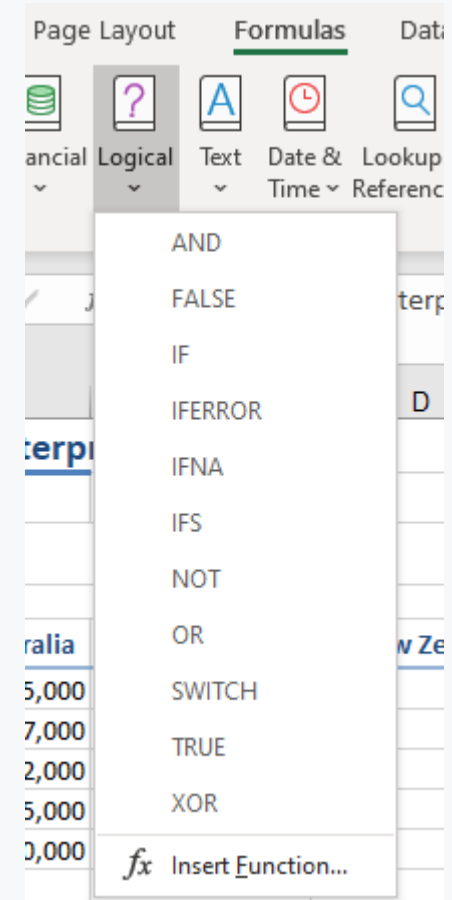
Microsoft Outlook 365: Logical Functions

Demo 2: Logical Functions

File 'Logical Functions_1' - 'IF Function' worksheet

Formulas

=IF(



Microsoft Outlook 365: Logical Functions

Practice using the IF Function

File 'Logical Functions_1' use 'IF Function' worksheet

Select D7

Type =IF(C7>\$E\$2,"Exceeded Target","Below Target")

Press Enter

Copy down formula when complete

Microsoft Outlook 365: Logical Functions

Practice using the IF Function with numbers

File 'Logical Functions_1' use 'IF Function' worksheet

Select E7

Type =IF(C7>=\$E\$2,(C7-\$E\$2)*\$E\$3,0)

Press Enter

Copy down

Microsoft Outlook 365: Logical Functions

In Your Own Time

[LinkedIn Learning - Excel: Advanced Formulas and Functions](#)

By Dennis Taylor

Worth watching whole course to learn a bit more

Section 2 includes:

[Create compound logical tests with AND, OR, NOT, and IF](#)

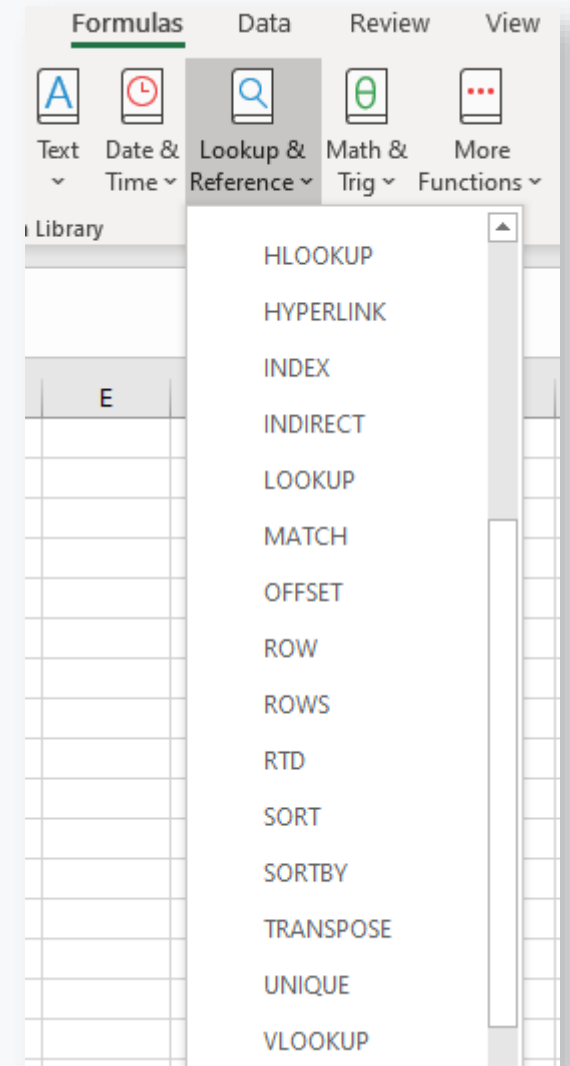
Microsoft Outlook 365: Lookup Functions

Demo 3: Lookup Functions

File 'Lookup Functions_2' - 'Payroll' worksheet

Formulas

**=VLOOKUP(
=HLOOKUP(**



Microsoft Outlook 365: Lookup Functions

Practice using VLOOKUP

File 'Lookup Functions_2' use 'Payroll' worksheet

View Defined Names list and Tax Table

Select Payroll worksheet

Select G5

Type =VLOOKUP(F5,Tax_Table,2)

Press Enter

Copy down

Microsoft Outlook 365: Lookup Functions

Practice using the VLOOKUP cont...

File 'Lookup Functions_2' use 'Payroll' worksheet

Select H5

Type $=F5*G5$

Copy down

Select I5

Type $=F5-H5$

Copy down

Microsoft Outlook 365: Lookup Functions

Practice using the HLOOKUP

File 'Lookup Functions_4' use 'Index' worksheet

Select D15

Type =HLOOKUP(C15,Rate_Type,2,TRUE)

Press Enter

Change the number in C15 and see how it updates

Microsoft Outlook 365: Lookup Functions

Practice using INDEX

File 'Lookup Functions_4' use 'Index' worksheet

Use the **INDEX** function to finish this calculation

Select C18

Type =INDEX(Rate_List,C14,C15)

Press Enter

Then

Select C19

Type =C18*C16

Microsoft Outlook 365: Lookup Functions

In Your Own Time

[LinkedIn Learning - Excel: Advanced Formulas and Functions](#)

By Dennis Taylor

Worth watching whole course to learn a bit more

Section 3 includes:

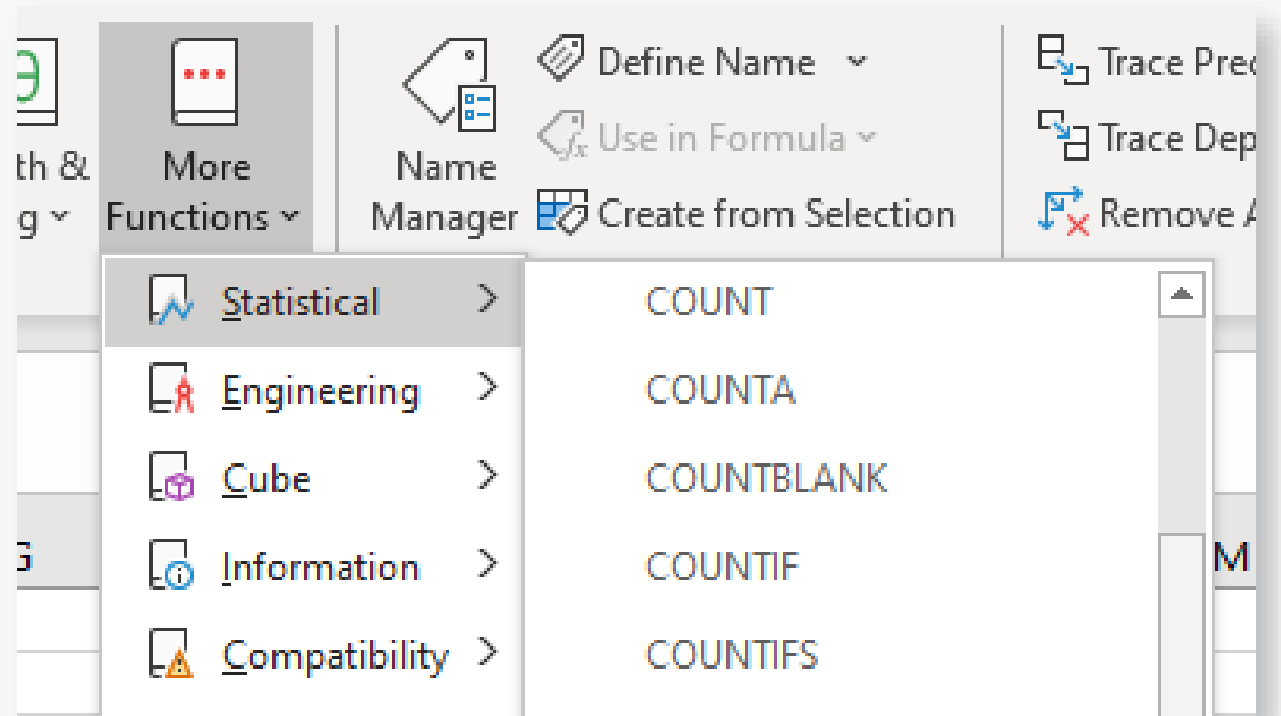
[Explore the VLOOKUP and HLOOKUP functions](#)

Microsoft Outlook 365: Statistical Functions

Demo 4: Statistical Functions

File 'Statistical Functions_2' - 'Sheet1' worksheet

Formulas



Microsoft Outlook 365: Statistical Functions

Practice using COUNT & COUNTA function

File 'Statistical Functions_2' use 'Sheet1' worksheet

Select B13

Type =COUNT(B5:N5)

Press Enter

Select C13

Type =COUNTA(B5:N5)

Select cell F5 and Type Closed

Note how only COUNTA counts text

Microsoft Outlook 365: Statistical Functions

Practice using COUNTBLANK & COUNTIF

File 'Statistical Functions_2' use 'Sheet1' worksheet

Select C13

Type =COUNTBLANK(B6:N6)

Select cell M6 and press Delete

COUNTBLANK Counts the number of empty cells

Select E13

Type =COUNTIF(B5:N5,">30000")

Press Enter

Microsoft Outlook 365: Statistical Functions

In Your Own Time

[LinkedIn Learning - Excel: Advanced Formulas and Functions](#)

By Dennis Taylor

Worth watching whole course to learn a bit more

Section 5 includes more on:

MEDIAN

MODE

RANK

LARGE

SMALL

COUNTBLANK

COUNT

COUNTA

Microsoft Outlook 365: Maths Functions

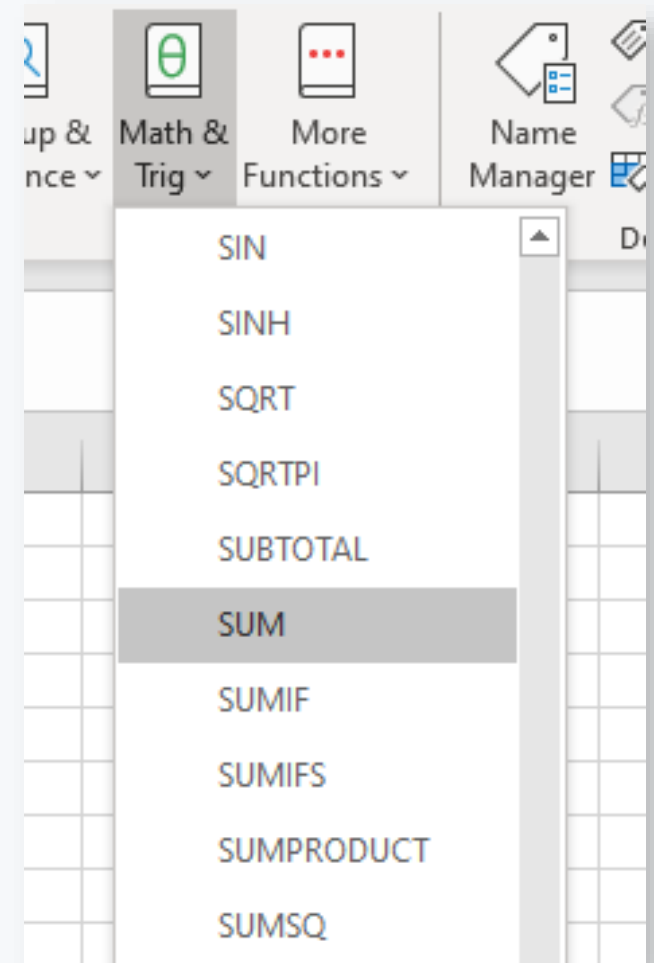
Demo 5: Maths Functions

File 'Maths Functions_11' - 'Sum' worksheet

Formulas

=SUM

=SUMIF



Microsoft Outlook 365: Maths Functions

Practice using SUMIF

File 'Maths Functions_11' use 'Sum' worksheet

Select H2

Type =SUMIF(H9:H110,G2,I9:I110)

Press Enter

Change the type in G2 to see how the total changes

Microsoft Outlook 365: Maths Functions

Practice using SUMIFS

File 'Maths Functions_11' use 'Sum' worksheet

Select N6

```
Type=SUMIFS($I$9:$I$110,  
             $J$9:$J$110,  
             N$5,  
             $H$9:$H$110,  
             $M6)
```

This will add together the Annual Fees for the Gold membership renewals due in January.

Try extending across to February and down to Silver.

Microsoft Outlook 365: Maths Functions

In Your Own Time

[LinkedIn Learning - Excel: Advanced Formulas and Functions](#)

By Dennis Taylor

Worth watching whole course to learn a bit more

Section 4 includes:

SUMIF

SUMIFS

And lots more

Microsoft Outlook 365: Date and Time Functions

Demo 6: Data and Time Functions

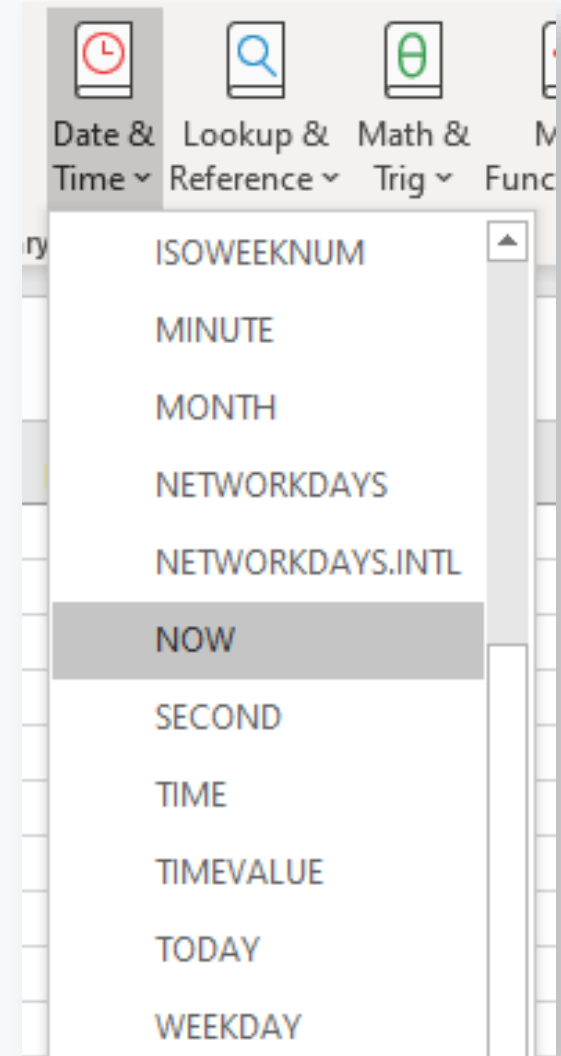
File 'Date And Time Functions_1' - 'Now' worksheet

Formulas

=NOW

=TODAY

=DATE



Microsoft Outlook 365: Date and Time Functions

Practice using NOW

File 'Date And Time Functions_1' use 'Now' worksheet

Select C7

Type =NOW()

Change number format to h:mm AM/PM

Select D7

Type =C7-B7

Change number format to hh:mm

Select range C7:D7 and fill down

Microsoft Outlook 365: Date and Time Functions

Practice using TODAY

File 'Date And Time Functions_1' use 'Today' worksheet

Select C7

Type $\text{=(TODAY()-B7)/365.25}$

Press Enter

Format Custom Number to $\#,##0.0\text{"yrs"}$

Fill down

Microsoft Outlook 365: Date and Time Functions

Practice using TODAY cont...

File 'Date And Time Functions_1' use 'Today' worksheet

Select E7

Type =B7+(D7*365.25)

Press Enter

Format Custom Number to mmmm yyyy

Press OK

Fill Down

Microsoft Outlook 365: Date and Time Functions

Practice using DATE

File 'Date And Time Functions_1' use 'Date' worksheet

Select E7

Type =DATE(D7,C7,B7)

Press Enter

Fill down

The DATE function is used to assemble a date from three separate pieces of data, being the year, month and day.

Microsoft Outlook 365: Date and Time Functions

In Your Own Time

[LinkedIn Learning - Excel: Advanced Formulas and Functions](#)

By Dennis Taylor

Worth watching whole course to learn a bit more

Section 7 includes more:

WEEKDAY

DATEDIF

EDATE

EOMONTH

Microsoft Outlook 365: Text Functions

Demo 7: Text Functions

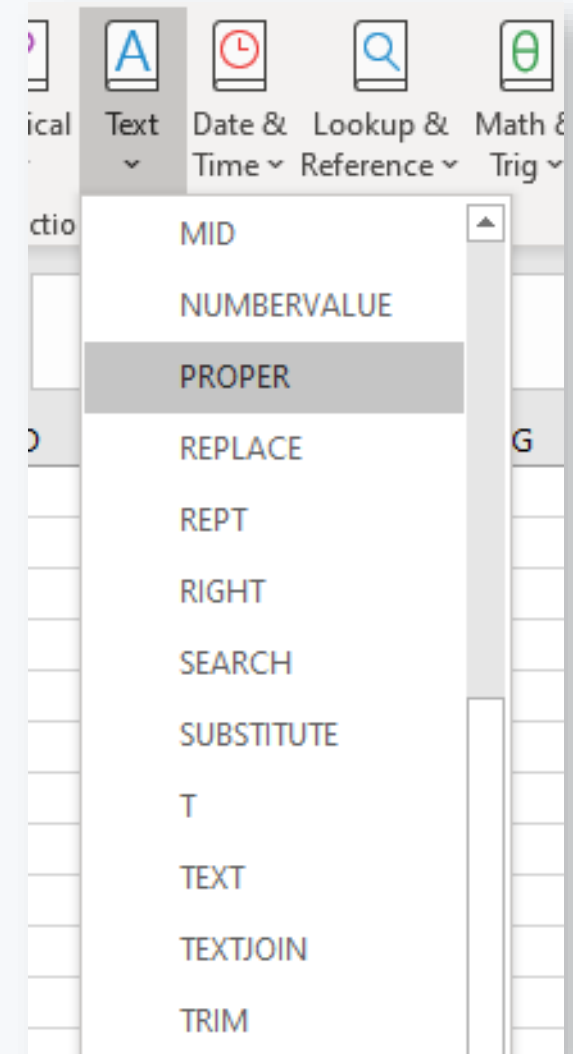
File 'Text Functions_1' - 'Proper' worksheet

Formulas

=PROPER

=UPPER

=LEFT



Microsoft Outlook 365: Text Functions

Practice using PROPER

File 'Text Functions_1' use 'Proper' worksheet

Select F2

Type =PROPER(B2)

Press Enter

Drag across to fill G2

Select F2:G2 and fill down

Microsoft Outlook 365: Text Functions

Practice using UPPER & LOWER

File 'Text Functions_1'

Upper worksheet

UPPER Function

Select F2

Type =UPPER(E2)

Press Enter

Fill down

Lower worksheet

LOWER Function

Select D2

Type =LOWER(C2)

Press Enter

Fill down

Microsoft Outlook 365: Text Functions

Practice using CONCATENATE

File 'Text Functions_1' use 'Concatenate' worksheet

Select D7

Type =CONCATENATE(B2,C2,"@cam.ac.uk")

Press Enter

Fill Down

Microsoft Outlook 365: Text Functions

Practice using Flash Fill

File 'Text Functions_1' use 'Concatenate' worksheet

Try Flash Fill

Delete previous formula from D7 and Column D

Select D7

Type r.wilson@cam.ac.uk

Repeat for m.driscoll@cam.ac.uk until flash fill ghost
image appears

Press Enter

Microsoft Outlook 365: Text Functions

Practice using LEFT & RIGHT

File 'Text Functions_4' use 'LRM' worksheet

Left

Select B2

Type =LEFT(A2,3)

Press Enter

Copy down

Right

Select D2

Type =RIGHT(A2,3)

Press Enter

Copy down

Microsoft Outlook 365: Text Functions

Practice using SUBSTITUTE

File 'Text Functions_4' use 'Substitute' worksheet

Select E2

Type =SUBSTITUTE(D2,"alpheius.com.au","cam.ac.uk")

Press Enter

Copy down

Microsoft Outlook 365: Text Functions

In Your Own Time

[LinkedIn Learning - Excel: Advanced Formulas and Functions](#)

By Dennis Taylor

Worth watching whole course to learn a bit more

Section 9 includes:

FIND

TRIM

TEXTJOIN

REPLACE

And lots more

Thank you



Trainer: Simon Meaker ssm38@uis.cam.ac.uk
University Information Services – Training Services

service-desk@uis.cam.ac.uk