

Lesson:



Introduction to MS Excel



Agenda for this session

- Introduction to MS Excel and Spreadsheet Operations

What is MS Excel?

MS Excel is a spreadsheet operations software developed by Microsoft. It is part of the Microsoft Office Suite, which also includes applications like Microsoft Word (for text editing), Microsoft Powerpoint (for making presentations) and so on

What are spreadsheet operations?

This is the genius of Excel. Let us assume you are a bank. A customer comes in to see how much money is in his account. You know he has deposited 20000 Rs and earned an interest of 1200 Rs. So you can calculate the amount in his account by adding them. The final number is 21200 Rs. Easy enough right?

Now let's assume 200 customers come in for their bank balances. Imagine how much time it will take you to do this addition manually in a calculator!

This is where spreadsheets help – spreadsheets are basically arranged into rows and columns, where these values are entered, and operations like addition, subtraction etc can be performed for a large number of values very easily. Confused? Let's see this in action.

In the case we have discussed so far, let's take an example –

	A	B	C	D
1	Customer Number	Amount Deposited	Interest Amount	Total Amount in Account
2	Customer 1	24485	1754	
3	Customer 2	20931	1996	
4	Customer 3	23127	1030	
5	Customer 4	22962	1434	
6	Customer 5	18138	1646	
7	Customer 6	15145	1121	
8	Customer 7	24812	1284	
9	Customer 8	20525	1450	
10	Customer 9	23130	1069	
11	Customer 10	24273	1861	
12	Customer 11	15237	1673	
13	Customer 12	17722	1754	
14	Customer 13	21108	1411	
15	Customer 14	16731	1962	
16	Customer 15	15269	1217	
17	Customer 16	20979	1393	
18	Customer 17	23996	1967	

The A, B, C etc that you see on the top are called the columns, and the 1, 2, 3 on the left are the rows. We will learn more about this below.

But for our example, here we do not need to add each value in column B with its corresponding value in column C. We just need to define that column D will be the sum of Column B and C, and the spreadsheet will perform this for as many customers as you want.

	A	B	C	D
1	Customer Number	Amount Deposited	Interest Amount	Total Amount in Account
2	Customer 1	24485	1754	26239
3	Customer 2	20931	1996	22927
4	Customer 3	23127	1030	24157
5	Customer 4	22962	1434	24396
6	Customer 5	18138	1646	19784
7	Customer 6	15145	1121	16266
8	Customer 7	24812	1284	26096
9	Customer 8	20525	1450	21975
10	Customer 9	23130	1069	24199
11	Customer 10	24273	1861	26134
12	Customer 11	15237	1673	16910
13	Customer 12	17722	1754	19476
14	Customer 13	21108	1411	22519
15	Customer 14	16731	1962	18693
16	Customer 15	15269	1217	16486
17	Customer 16	20979	1393	22372
18	Customer 17	23996	1967	25963

This is the power of spreadsheet operation. There are even more benefits, which we will understand later.

Is Excel the only option?

MS Excel is a paid software, and hence can be costly to use. Many organizations give their employees Excel licenses so they can perform data analysis. But Excel is not the only Spreadsheet software out there. Here are some free alternatives to Excel -

- Google Sheets – This is a very popular online spreadsheet software which is completely free to access, and has all the features that a business analyst needs to get started on Excel. You can access Google sheets with your google account at sheets.google.com
- Libre Office – This is a free spreadsheet software that is free to download and install. You can download Libre Office from <https://www.libreoffice.org/download/download-libreoffice/>

You can buy MS Excel from <https://www.microsoft.com/en-in/microsoft-365/excel>

Getting into MS Excel

Workbook vs Worksheet

When you open Excel, you are presented with the opening screen of Excel. Here you can go to New -> Blank Workbook to get started on your Excel journey. Similarly on Google Sheets, you can go to sheets.google.com and click on Blank Workbook.

This opens a new Excel File on your system. Every file is called a workbook.

When you open your first workbook, you will find an empty spreadsheet on your screen. This is named as "Sheet 1" by Excel, but you can double click on the name and rename it to whatever you want.

22			
23			
24			
25			
26			

◀ ▶
Sheet1
⊕

If you click on the "+" sign, it will open Sheet 2. Each of these sheets are called worksheets. Worksheets are spreadsheets within a single Excel workbook. Within a workbook, worksheets can easily interact with each other and take data from other worksheets. This makes it very useful to have a master Excel workbook, and perform all your operations on multiple worksheets.

You can also have multiple workbooks interact with each other, but that is complicated, and not recommended when you have to share files with others.

Cells

As we already discussed, a worksheet is made up of rows and columns. Every intersection of a row and column is called a cell. In a spreadsheet, values are stored in a cell. Cells are addressed by cell references – If a cell falls under column A, and row 10, the reference for that cell is A10. We will learn more about cell references in the next class.

Range

When multiple cells that come next to each other are selected, it is called a cell range. We discussed that A10 will be a cell. If we select all the cells from A10 to A20, it will be a range of cells, represented by A10:A20

A
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

Another example is A2:E2

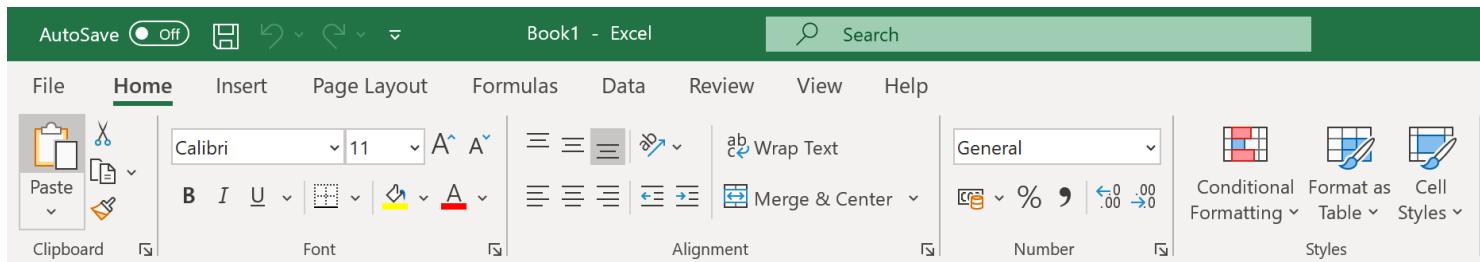
	A	B	C	D	E
1					
2					
3					
4					

Ranges can go across multiple rows and columns as well. This is B1:C4

	A	B	C	D
1				
2				
3				
4				
5				
6				

Navigating MS Excel

When you open Excel, you will see this at the top



You can explore Excel yourself to see the various features of Excel, but here is some information to get you started.

- File tab lets you save your workbook, open a different workbook, start a new workbook, print etc.
- Home tab contains all your formatting features – you can select font, color of a cell, cell borders, how text appears within a cell, and so on.
- Insert tab lets you insert some useful things into your worksheet, like charts, pivot tables, and so on.
- Page layout tab lets you plan margins, size of each cell, and so on
- Formulas tab lets you insert formulas that are very important to performing any operation on Excel.
- Data tab lets you perform operations on manipulating the data – like removing duplicates, analysis, and so on.
- The review tab lets you check the grammar, review your work, and limit access of who uses the sheet.
- The view tab lets you zoom in, arrange your worksheet etc.
- Help tab lets you get help from Microsoft when you are stuck somewhere.

For a business analyst, the most useful tabs are the Home tab, Insert tab, and the Data tab.

Navigating a worksheet

