Program 6: Cleaning Data Containing Date and Time Values: use of DATEVALUE function, DATEADD and DATEDIF, TIMEVALUE functions.

DATEVALUE function

STEP 1: Add two helper columns named "Date Value" and "Date Format"

Text Date	Date Value	Date Format
5/6/2017		
2/7/2018		
1/8/2015		
12/8/2014		

Have added two helper columns

STEP 2: Type the DATEVALUE function

Text Date	Date Value	Date Format
5/6/2017	=DATEVALUE(	
2/7/2018	DATEVALUE(date_text)	
1/8/2015		
12/8/2014		

STEP 3: Insert the DATE_TEXT parameter

Text Date	Date Value	Date Format
05/06/2017	=DATEVALUE(B5)	
02/07/2018	DATEVALUE(date_text)	
01/08/2015		
12/08/2014		

Type the Formula

STEP 4: DATEVALUE will return the result

Text Date	Date Value	Date Format
05/06/2017	42861	
02/07/2018		
01/08/2015	DATEVALUE has returned a serial number	
12/08/2014		

STEP 5: Drag the formula to other rows to repeat

Text Date	Date Value	Date Format
05/06/2017	42861	
02/07/2018		
01/08/2015	Drag the '+' icon	
12/08/2014		

Text Date	Date Value	Date Format
05/06/2017	42861	
02/07/2018	43138	
01/08/2015	42012	
12/08/2014	41981	

STEP 6: Apply a date number format

Text Date	Date Value	Date Format
05/06/2017	42861	42861
02/07/2018	43138	43138
01/08/2015	42012	42012
12/08/2014	41981	41981

Have copied the Date value output to this column

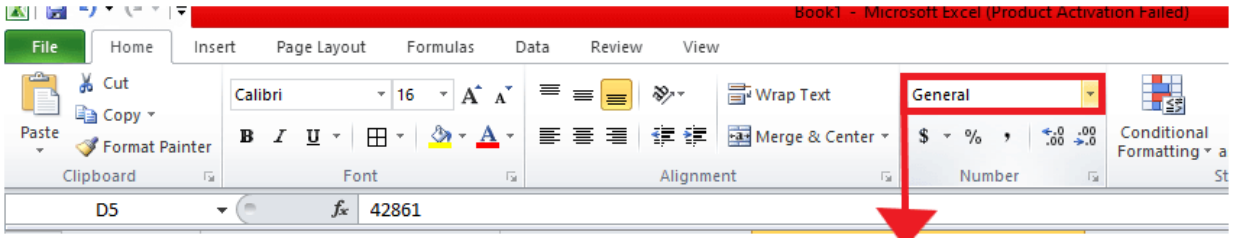
STEP 7: Select the cells to which we want to apply the date number format.

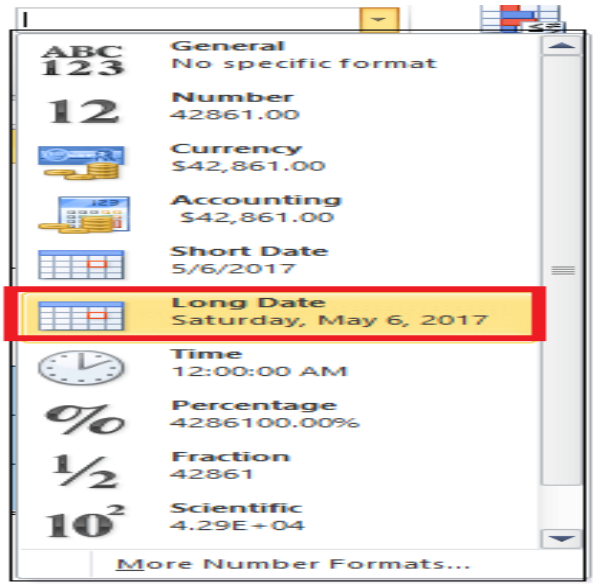
Text Date	Date Value	Date Format
05/06/2017	42861	42861
02/07/2018	43138	43138
01/08/2015	42012	42012
12/08/2014	41981	41981

Select the cells

ed alue this

Go to Home-> Number. In the Number section we will find a white dropdown box. Click on it





We will notice the DATEVALUE serial number is converted to long date format.

Text Date	Date Value	Date Format
05/06/2017	42861	Saturday, May 6, 2017
02/07/2018	43138	Wednesday, February 7, 2018
01/08/2015	42012	Thursday, January 8, 2015
12/08/2014	41981	Monday, December 8, 2014

DATEADD and DATEDIF

The Microsoft Excel DATEADD function returns a date after which a certain time/date interval has been added.

The DATEADD function is a built-in function in Excel that is categorized as a Date/Time Function. It can be used as a VBA function (VBA) in Excel. As a VBA function, we can use this function in macro code that is entered through the Microsoft Visual Basic Editor.

Program for DateAdd

```
Sub Date_Datesub ( )

Mydate = #016/01/2024#

MsgBox Mydate
```

‘adding days, months and year

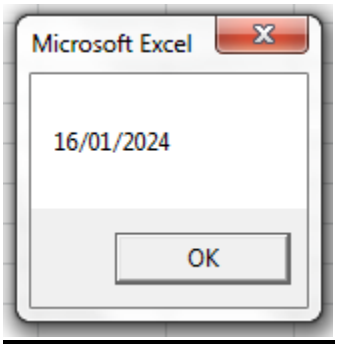
MsgBox DateAdd (“yyyy”, 1, mydate)

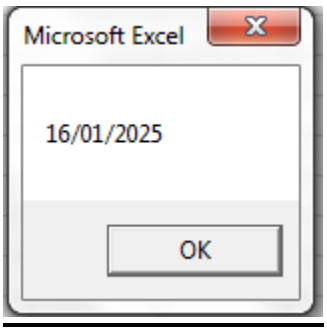
MsgBox DateAdd (“m”, 1, mydate)

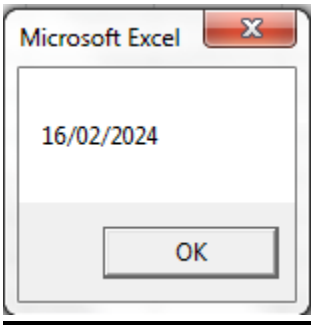
MsgBox DateAdd (“d”, 1, mydate)

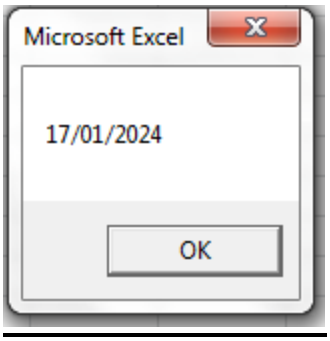
End Sub

Output









DATEDIF

Calculates the number of days, months, or years.

	A	B	C	D	E
1	**Sl.No**	**Name**	**Date Of Birth**	**Age**	
2	1	Kaushal	01/01/1996	=datedif(C2,today(),"y"	
3	2	Amit	02/05/1997	DATEDIF()	
4	3	Sumit	03/10/1998		
5	4	Babuna	4/15/1999		
6	5	Sonu	5/20/2000		
7	6	Prashant	6/25/2001		
8	7	Suraj	7/30/2002		
9	8	Montu	08/03/2003		
10	9	Shivam	9/18/2004		
11	10	Surya	10/22/2005		

	A	B	C	D	E
1	**Sl.No**	**Name**	**Date Of Birth**	**Age**	
2	1	Kaushal	01/01/1996	28	
3	2	Amit	02/05/1997	26	
4	3	Sumit	03/10/1998	25	
5	4	Babuna	15/04/1999	24	
6	5	Sonu	20/05/2000	23	
7	6	Prashant	25/06/2001	22	
8	7	Suraj	30/07/2002	21	
9	8	Montu	08/03/2003	20	
10	9	Shivam	18/09/2004	19	
11	10	Surya	22/10/2005	18	
12					

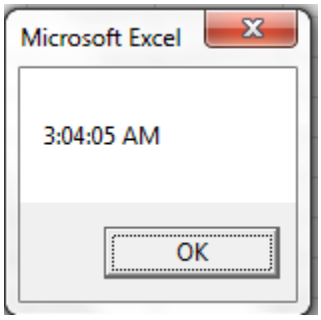
TIMEVALUE functions

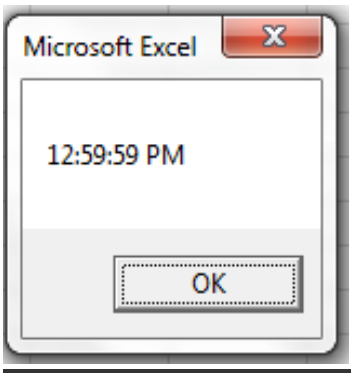
Returns a Variant (Date) containing the time. The required timeargument is normally a string expression representing a time from 0:00:00 (12:00:00 A.M.) to 23:59:59 (11:59:59 P.M.), inclusive. However, time can also be any expression that represents a time in that range.

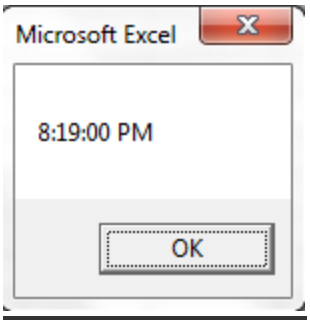
Program for TimeValue

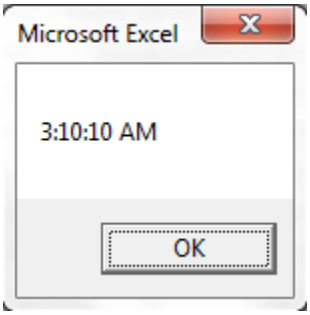
```
Sub time_timeserial_Timevalue ( )
MsgBox TimeSerial (3, 4, 5)
MsgBox TimeSerial (12, 59, 59)
MsgBox TimeValue (“20:19”)
MsgBox TimeValue (“3:10:10”)
MsgBox TimeValue (“12:10:8”)
End Sub
```

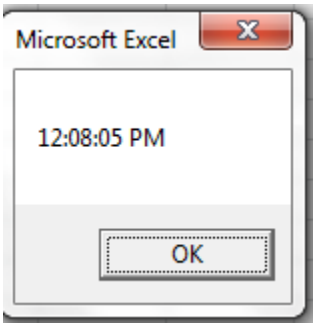
Output






Microsoft Excel
8:19:00 PM
OK


Microsoft Excel
3:10:10 AM
OK

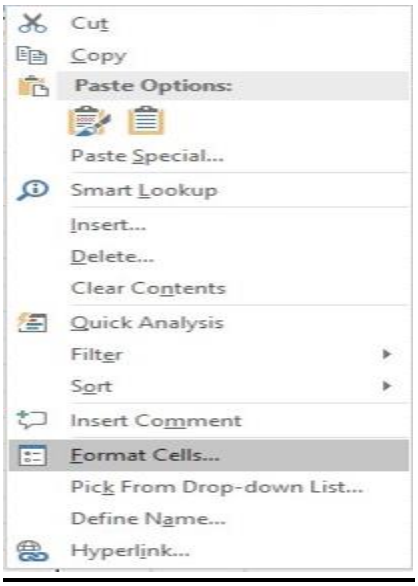

Microsoft Excel
12:08:05 PM
OK

Program 7: Conditional Formatting: formatting, parsing, and highlighting data in spreadsheets during data analysis.

Step 1:

Formatting

Excel has a large number of additional formatting options, and while there are useful shortcuts on the "Home" tab on the toolbar, the most comprehensive list of options can be found by right-clicking on our selected cell or cells and selecting "Format Cells…" from the drop-down menu

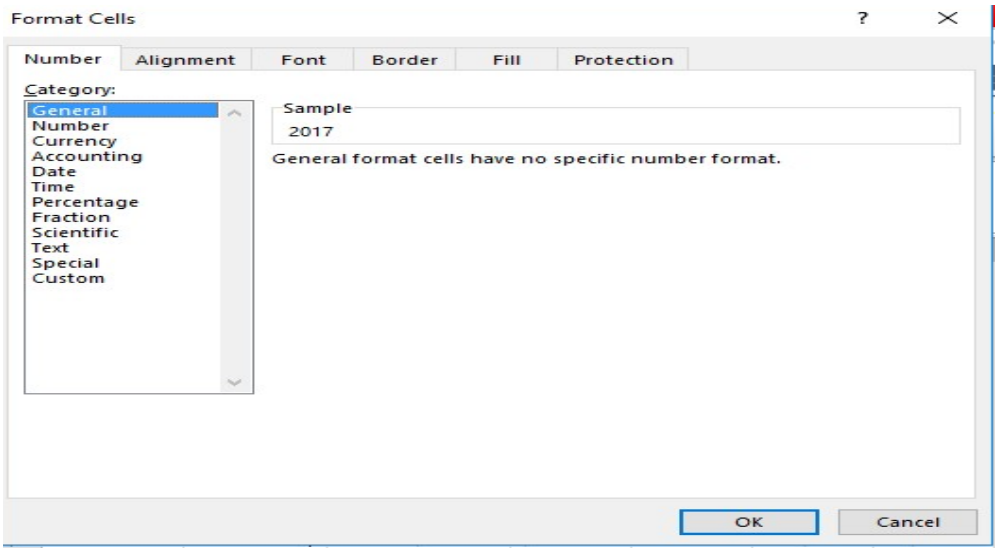


This will give us a dialog box with the following tabs: "Number", "Alignment", "Font", "Border", "Fill", and "Protection"

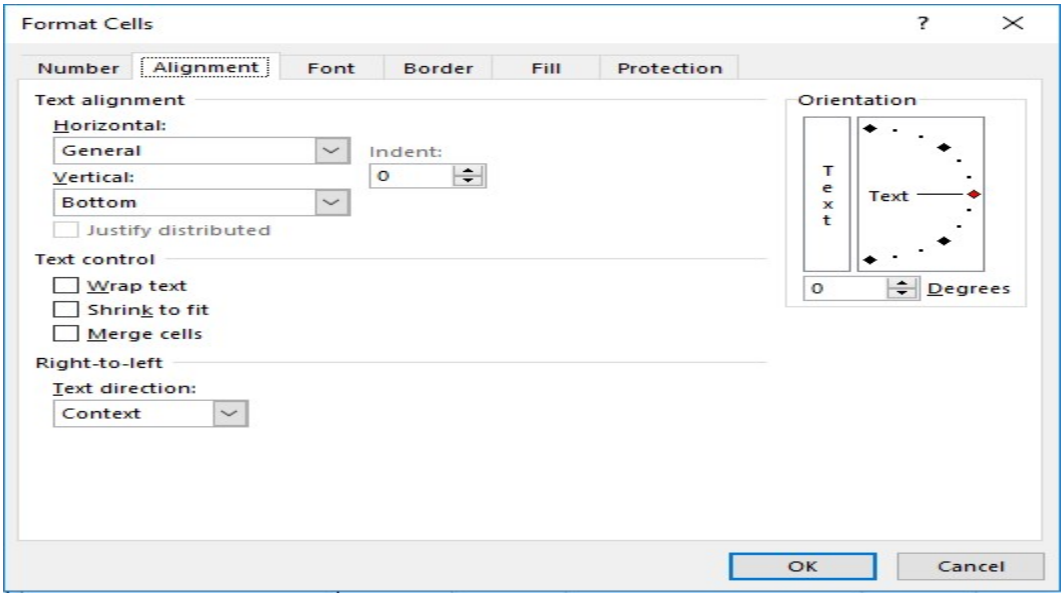
Number: This provides a list of formats for how numbers will display in the cells selected. These are probably the most useful to know:

1. Number: if we are working with non-whole numbers (e.g. Grade averages, percentages), we can select this option and limit the number of decimal places to something consistent.
2. Currency: if we are working with money, we can select this and pick the currency value and number of decimal places to display.

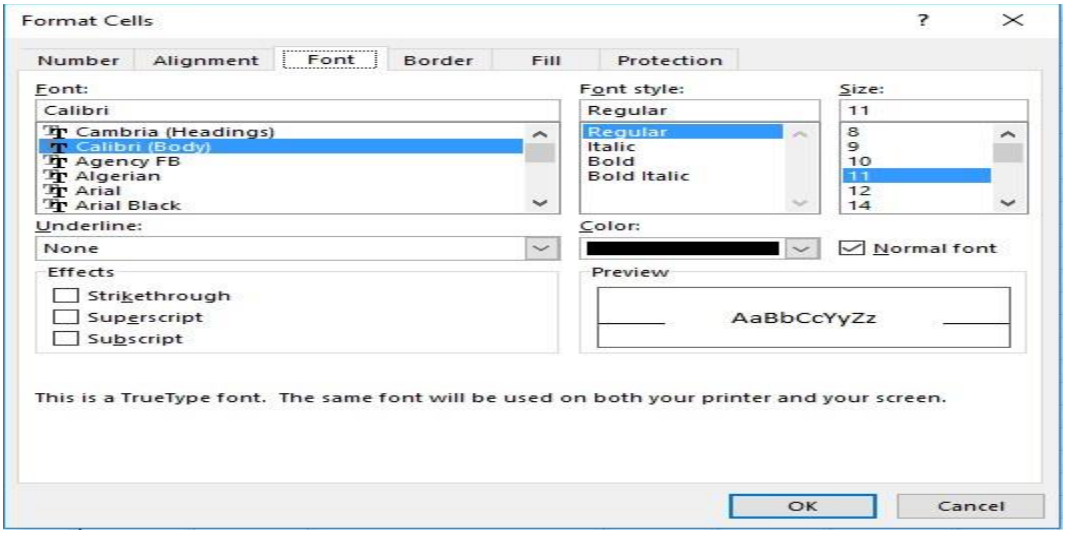
3. Date: select this to pick how we want dates displayed. Any date entered will automatically be revised to conform to that format.
4. Text: select this if we are entering numbers that we want to display exactly as entered. Excel will sometimes alter large numbers to scientific notation or remove leading zeros. If we have a number that is meant to identify something (e.g. an ID number, or an invoice number), this will prevent Excel from displaying the number any way other than how we entered it.



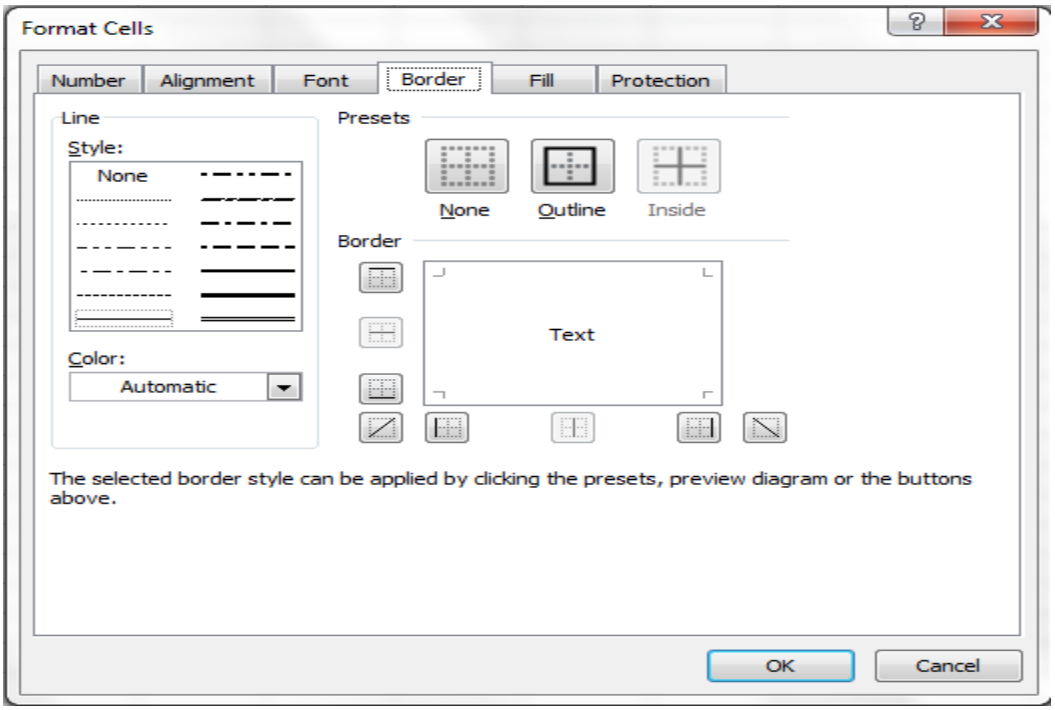
Alignment: This gives us given a number of options for aligning text within each cell selected, and controlling how it fits within each cell



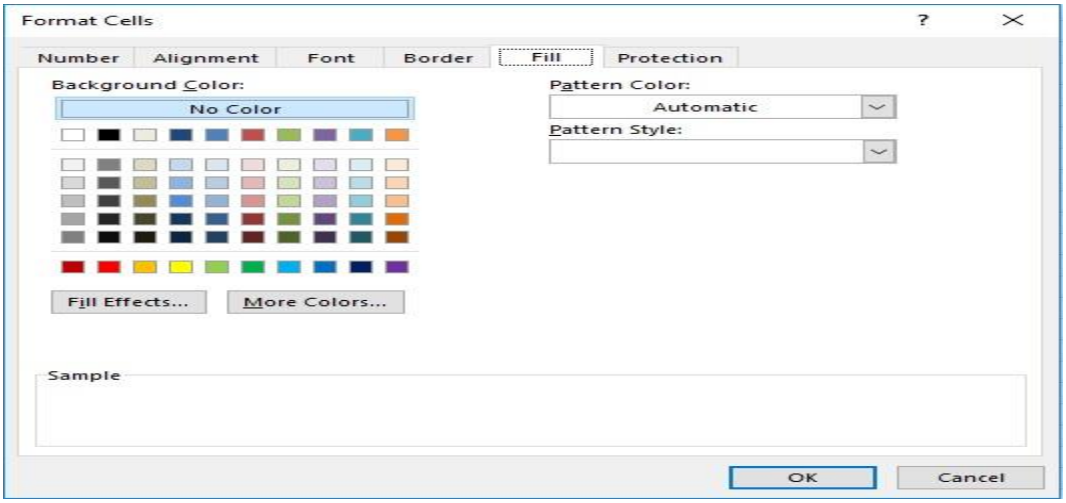
Font: This tab gives us options for altering the appearance and size of text with-in each cell selected.



Border: This determines how the borders between the individual cells appear. We are given options for the style of the border line, its color, and which border is to be altered. Generally, we want to use this for multiple cells as a way of distinguishing columns or rows.



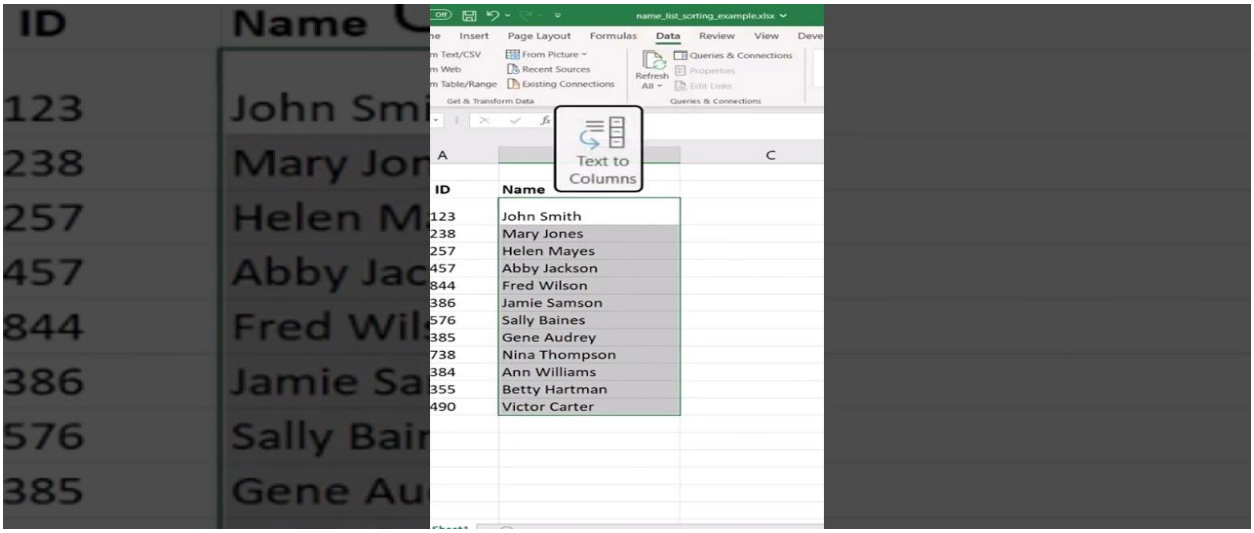
Fill: Determines the background color or pattern of cells selected.



Step 2:

Parsing

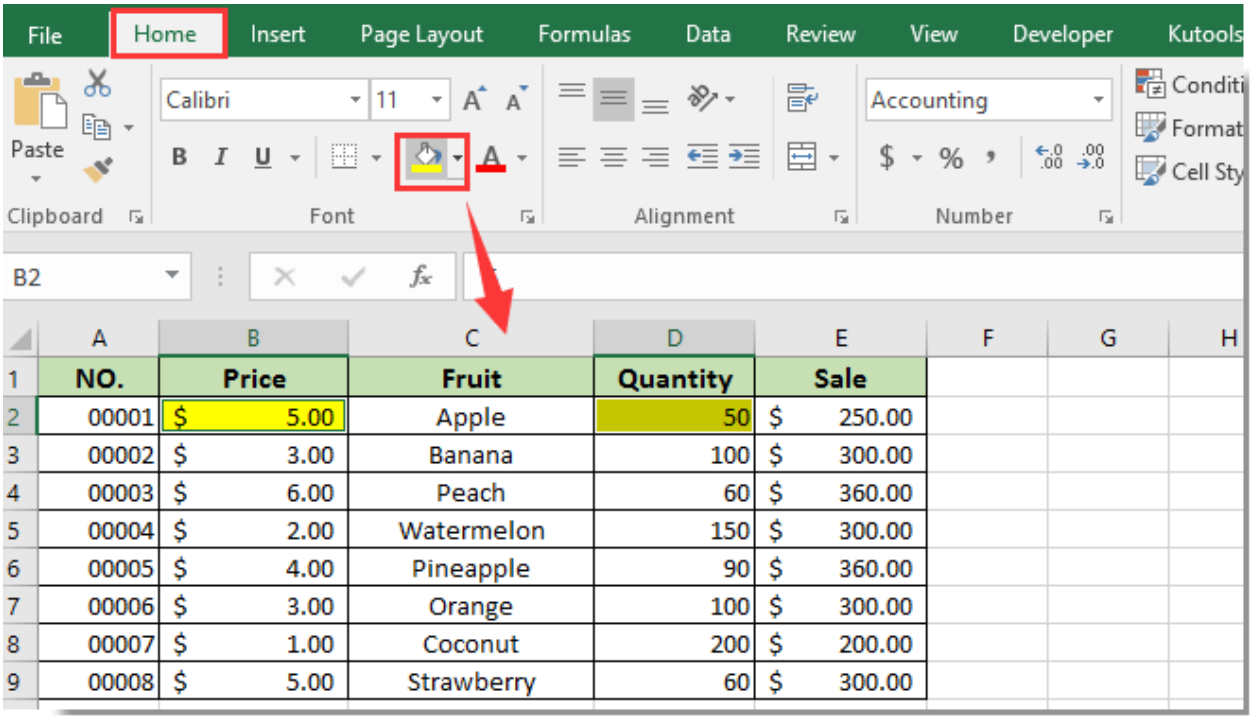
1. Insert our data into an Excel spreadsheet. ...
2. Select the column that contains the data we want to parse. ...
3. Choose the "Data" tab in the ribbon. ...
4. Click the "Text to Columns" option. ...
5. Select "Delimited" in the dialog box. ...
6. Choose a delimiter that exists within our data.



Step 3:

Highlighting Data in Spreadsheets

1. Click Home > New Cell Styles. ...
2. In the Style name box, type an appropriate name for the new cell style. ...
3. Click Format.
4. In the Format Cells dialog box, on the Fill tab, select the color that we want to use for the highlight, and then click OK.
5. Click OK to close the Style dialog box.



	A	B	C	D	E	F	G	H
1	NO.	Price	Fruit	Quantity	Sale			
2	00001	$ 5.00	Apple	50	$ 250.00			
3	00002	$ 3.00	Banana	100	$ 300.00			
4	00003	$ 6.00	Peach	60	$ 360.00			
5	00004	$ 2.00	Watermelon	150	$ 300.00			
6	00005	$ 4.00	Pineapple	90	$ 360.00			
7	00006	$ 3.00	Orange	100	$ 300.00			
8	00007	$ 1.00	Coconut	200	$ 200.00			
9	00008	$ 5.00	Strawberry	60	$ 300.00			