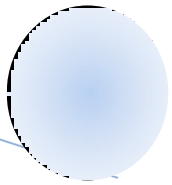
Hidden Gems of Microsoft Excel

Ambily K K



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Preface

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About the Author

Ambily working as a Solution Architect in an MNC in India; she provides Microsoft Technology consultation. Technology adoption and learning is her key strength and sharing technology is her passion. Her blog is at http://ambilykk.com.

What this book covers

Most of us spend 50-60% of time performing data processing using tools like Office. Most of the data processing processes are never audited or optimized. Unfortunately, most of this work is being done in the most inefficient way. Most of us never spend any time to understand the useful features of office tools, which will improve the productivity and reduce the time we spent on repetitive tasks.

I will be writing series of small books on the hidden and most useful features in Excel, PowerPoint and Word and explain the same with scenarios. Office has 9000+ features and most users use around 200 of them. I am trying to map some of these features to the business needs. This will be the first book in this series, addressing few of the Microsoft Excel features.

- Read Data for Visually Impaired
- Find the Row/Column Difference without formulas
- Create template with formulas
- Remove Blanks
- Merge data using Paste Special
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- Summary from different sheets
- Pivot report from multiple excel work books or files
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- Trace Error
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Feedback

Feedback from readers is always welcome. Please share what you like, dislike and want to see as part of the next book. I will be addressing all relevant feedbacks in subsequent books.

Share your feedbacks to author.ambily@outlook.com

Introduction

Microsoft Excel is one of the feature packed product from Microsoft. Excel features varies from normal calculations to business intelligent implementation using Power tools and complete application development using office apps and Macros. The usage of excel is evident from the fact that none of the modern technologies replaced the use of Excel and most of the offline business activities are handled through excel only. Moreover, excel is widely used as a reporting option for many of the enterprise solutions.

In this book, we will be talking about selected number of excel features, which can improve the productivity and usage of excel.

Read Data for Visually Impaired

Speak Cells: Speak Cell feature will use the system audio and read the data either in column wise or in row wise.

Speak Cells is one of the rarely used and a very useful feature for the visually impaired people. Speak cells feature use the system audio to read the content. By default this feature will not be displayed on Excel, you need to enable the same by adding the speak cell icons to the Quick Access Toolbar or Custom Toolbar.

Steps:

1. Select the **More Commands…** option from Quick Access Toolbar. Otherwise, select File-> Options.

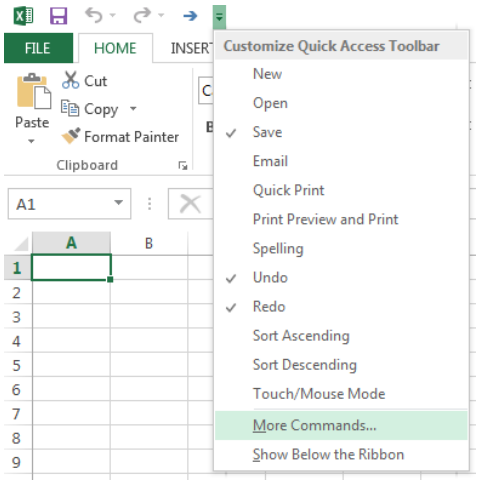


Figure 1: More Commands

2. Select **Customize Ribbon** option from the ***Excel Options*** screen

3. Select **All Commands** from the ***Choose Commands from*** dropdown box
4. Add **New Group** or **New Tab** using the options available
5. Select **Speak Cells** command and add to new Tab or New Group.

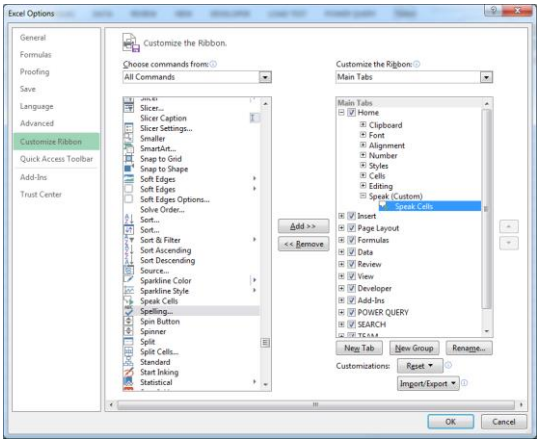


Figure 2: Speak Cells Command

6. Click **OK**
7. Point to the cell and select the Speak cell option.

Related to Speak Cells command, there are few more commands to control the reading order, which can be added to the ribbon by selecting **Commands Not in the Ribbon** option under the ***Choose Commands from*** dropdown box.

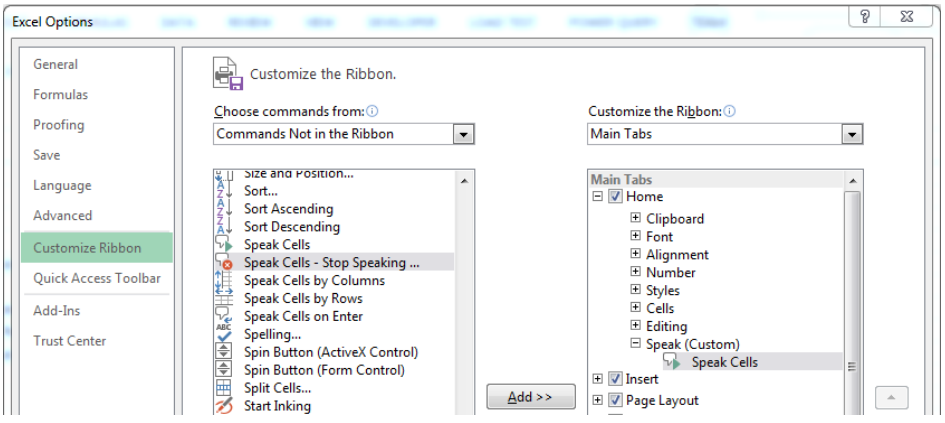


Figure 3: Speak Cells - Other Commands

Select the commands and add the ribbon and click on OK to continue.

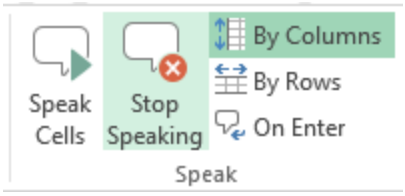


Figure 4: Speak Cells Commands

Speak Cells by Columns: This command change the order of reading; now it read the content in the column order

Speak Cells by Rows: This is the default selection, where the content will be read in row order

Speak Cells by Enter: Content will be read on enter. When the user press on enter key, content on the current cell will be read

Speak Cells- Stop Speaking: Stop reading the content

Find the Row/Column Difference without formulas

Go To Special: Go To Special is not only used for moving to a particular cell, it can also be used in multiple ways. **Go To** command is available as part of the Quick Access Toolbar on top of the menus.

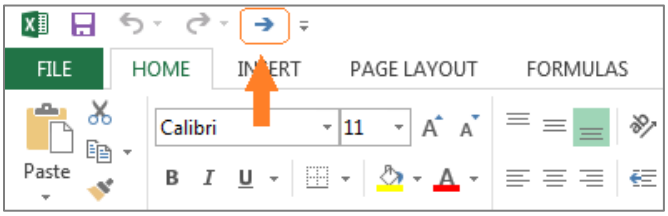


Figure 5: Go To Special

Column Difference

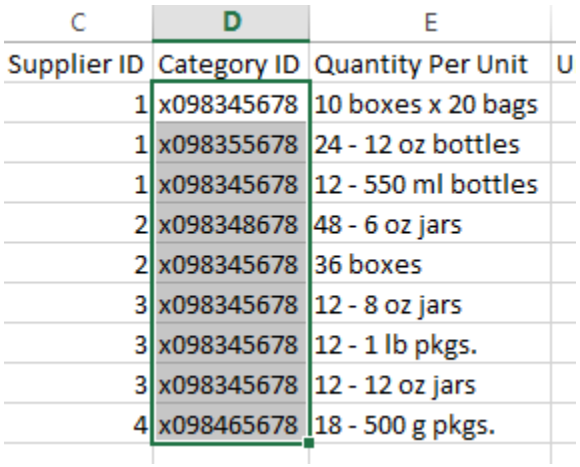
Consider the following table, where Category ID values looks similar. For understanding whether the Category IDs are similar or not, one can use filter, sorting or any conditional statements. If our requirement is to highlight the different values in the list, we can use a conditional formatting to achieve the same.

But, if we want to see the difference or do some corrective action, then it will be easy to use the **Go To Special** command with ***Column differences*** option.

Product ID	Product Name	Supplier ID	Category ID	Quantity Per Unit	Unit Prize
1	Chai	1	x098345678	10 boxes x 20 bags	18
2	Chang	1	x098355678	24 - 12 oz bottles	19
3	Aniseed Syrup	1	x098345678	12 - 550 ml bottles	10
4	Chef Anton's Cajun Seasoning	2	x098348678	48 - 6 oz jars	22
5	Chef Anton's Gumbo Mix	2	x098345678	36 boxes	21.35
6	Grandma's Boysenberry Spread	3	x098345678	12 - 8 oz jars	25
7	Uncle Bob's Organic Dried Pears	3	x098345678	12 - 1 lb pkgs.	30
8	Northwoods Cranberry Sauce	3	x098345678	12 - 12 oz jars	40
9	Mishi Kobe Niku	4	x098465678	18 - 500 g pkgs.	97

Steps:

1. Select the Category ID values alone



C	D	E	
Supplier ID	Category ID	Quantity Per Unit	U
1	x098345678	10 boxes x 20 bags	
1	x098355678	24 - 12 oz bottles	
1	x098345678	12 - 550 ml bottles	
2	x098348678	48 - 6 oz jars	
2	x098345678	36 boxes	
3	x098345678	12 - 8 oz jars	
3	x098345678	12 - 1 lb pkgs.	
3	x098345678	12 - 12 oz jars	
4	x098465678	18 - 500 g pkgs.	

Figure 6: Category ID selection

2. Select **Go To** option from Quick Access Toolbar.

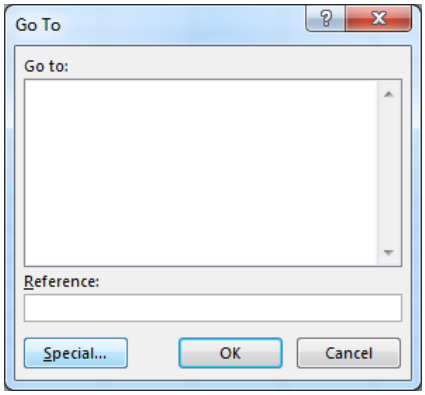


Figure 7: Go To

3. Click '**Special…'** button to continue. Select the ***Column differences*** option from the **Go To Special** window

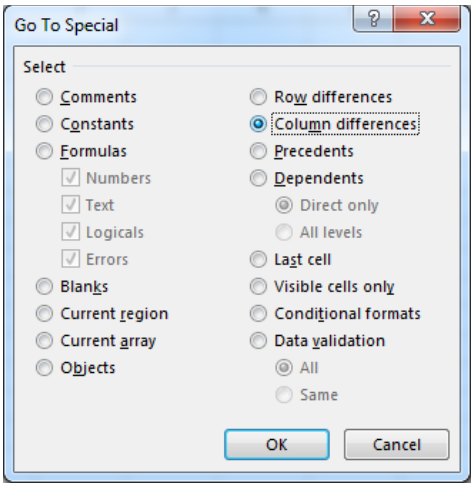


Figure 8: Go To Special

4. Click OK to continue. Observe that all the cells with a different value compared to the first cell get selected.

Supplier ID	Category ID	Quantity Per Unit
1	x098345678	10 boxes x 20 bags
1	x098355678	24 - 12 oz bottles
1	x098345678	12 - 550 ml bottles
2	x098348678	48 - 6 oz jars
2	x098345678	36 boxes
3	x098345678	12 - 8 oz jars
3	x098345678	12 - 1 lb pkgs.
3	x098345678	12 - 12 oz jars
4	x098465678	18 - 500 g pkgs.

Figure 9: Column Difference

5. Select any operation like Highlight to apply on the selected cells

Supplier ID	Category ID	Quantity Per Unit
1	x098345678	10 boxes x 20 bags
1	x098355678	24 - 12 oz bottles
1	x098345678	12 - 550 ml bottles
2	x098348678	48 - 6 oz jars
2	x098345678	36 boxes
3	x098345678	12 - 8 oz jars
3	x098345678	12 - 1 lb pkgs.
3	x098345678	12 - 12 oz jars
4	x098465678	18 - 500 g pkgs.

Figure 10: Highlighted Column Difference

Shortcut

1. **Ctrl+G** or **Ctrl+g** – Launch the Go To window
2. **Alt+S** or **Alt+s** – Launch Go To Special window
3. **Alt+M** or **Alt+m** – select Column differences option
4. **Enter** – select OK

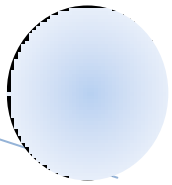
Row Difference

Consider the following product table, where the original and actual unit prize for each product looks similar. For understanding the difference between these two columns, we can use a subtraction along with conditional formatting to find the difference.

Product ID	Product Name	Quantity Per Unit	Original Unit Prize	Actual Unit Prize
1	Chai	10 boxes x 20 bags	987.23	987.23
2	Chang	24 - 12 oz bottles	234346.67	234346.67
3	Aniseed Syrup	12 - 550 ml bottles	23456.34	23456.34
4	Chef Anton's Cajun Seasoning	48 - 6 oz jars	13214.34	13214.34
5	Chef Anton's Gumbo Mix	36 boxes	1232546.56	1233546.56
6	Grandma's Boysenberry Spread	12 - 8 oz jars	232434.45	232434.45
7	Uncle Bob's Organic Dried Pears	12 - 1 lb pkgs.	121323.87	121423.87
8	Northwoods Cranberry Sauce	12 - 12 oz jars	343464.12	343464.12
9	Mishi Kobe Niku	18 - 500 g pkgs.	346457.78	346457.78

Instead of adding formulas and formatting, use the **Go To Special** command to quickly find the difference.

Steps:



1. Select the values in the Original Unit Prize and Actual Unit Prize column, except column names.
2. Click on **Go To** command available in **Quick Access Toolbar**
3. Select **Special** button on the Go To window to launch the **Go To Special** window
4. Select the **Row differences** option or **W** and click **OK**
5. Click on Fill Color to high light the difference

Original Unit Prize	Actual Unit Prize
987.23	987.23
234346.67	234346.67
23456.34	23456.34
13214.34	13214.34
1232546.56	1233546.56
232434.45	232434.45
121323.87	121423.87
343464.12	343464.12
346457.78	346457.78

Figure 11: Highlighted Row Difference

Shortcut

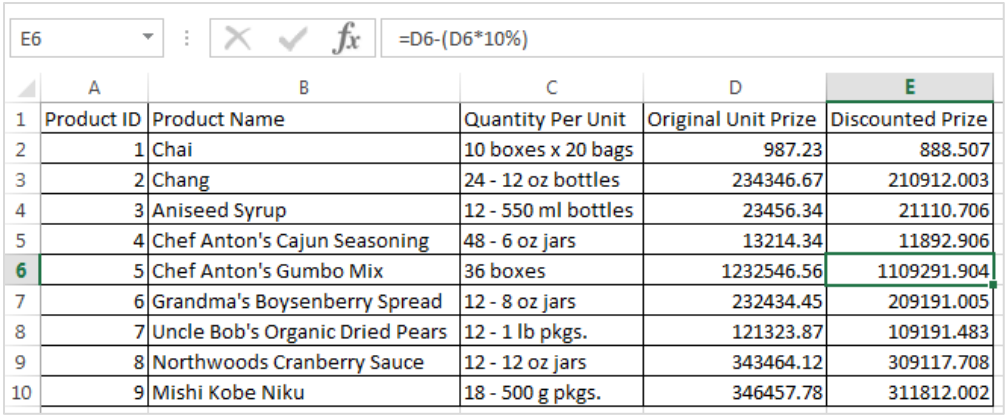
1. **Ctrl+G** or **Ctrl+g** – Launch the Go To window
2. **Alt+S** or **Alt+s** – Launch Go To Special window
3. **Alt+W** or **Alt+w** – select Row differences option
4. **Enter** – select OK

Create template with formulas

Go To Special: Go To Special can be used for removing constants.

This feature is very much helpful, when you want to send a formatted excel without any data to different people. Just like we are using master tax calculation sheets, where all formats and formulas will be there. If you have such page with data, using this option, you can remove all constants and send the worksheet with only formulas.

Consider the following table, where the discounted prize is calculated as 10% reduction in actual prize.



E6 =D6-(D6*10%)

	A	B	C	D	E
1	Product ID	Product Name	Quantity Per Unit	Original Unit Prize	Discounted Prize
2	1	Chai	10 boxes x 20 bags	987.23	888.507
3	2	Chang	24 - 12 oz bottles	234346.67	210912.003
4	3	Aniseed Syrup	12 - 550 ml bottles	23456.34	21110.706
5	4	Chef Anton's Cajun Seasoning	48 - 6 oz jars	13214.34	11892.906
6	5	Chef Anton's Gumbo Mix	36 boxes	1232546.56	1109291.904
7	6	Grandma's Boysenberry Spread	12 - 8 oz jars	232434.45	209191.005
8	7	Uncle Bob's Organic Dried Pears	12 - 1 lb pkgs.	121323.87	109191.483
9	8	Northwoods Cranberry Sauce	12 - 12 oz jars	343464.12	309117.708
10	9	Mishi Kobe Niku	18 - 500 g pkgs.	346457.78	311812.002

Figure 12: Input Data set

Here, the formula is only in one column and we will be able to keep the formula and remove the other contents. Consider a sheet with multiple formulas spread across the sheet. It will be difficult to locate the cells with formula and remove only the value fields to generate a template.

Go To Special provides an option to remove only the constants in a sheet and keep the formulas. This will enable quick creation of a template out of an existing sheet.

Steps:

1. Select the rows, except the header row
2. Select **Go To** command to launch to Go To Window
3. Select **Special** button to launch the Go To Special Window
4. Select **Constants** option and click on **OK** to continue

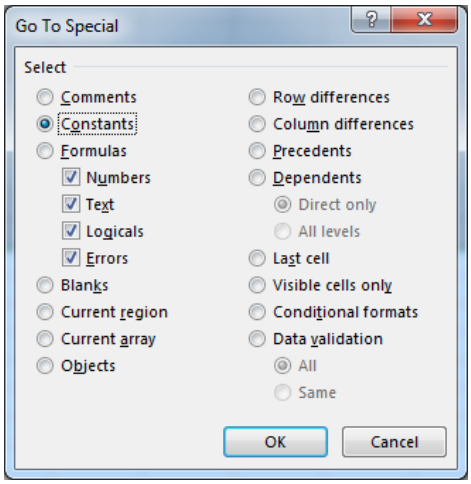
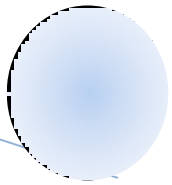


Figure 13: Go To Special



All constants are selected; press on Delete key to remove the constants. Delete will delete only the constants cells and keep the formulas across the selected area.

Remove Blanks

Go To Special: This feature will help us in removing blank rows /columns in a sheet.

If we have a huge dataset with multiple blank rows and required to remove the blank rows and/or rows with blank cells, then we can use the '**Go To Special'** feature. Consider the following table with few blank rows and cells.

Product ID	Product Name	Quantity Per Unit	Original Unit Prize
1	Chai	10 boxes x 20 bags	987.23
2	Chang	24 - 12 oz bottles	234346.67
3	Aniseed Syrup	12 - 550 ml bottles	23456.34
4	Chef Anton's Cajun Seasoning	48 - 6 oz jars	13214.34
5	Chef Anton's Gumbo Mix	36 boxes	1232546.56
6	Grandma's Boysenberry Spread		232434.45
7	Uncle Bob's Organic Dried Pears	12 - 1 lb pkgs.	121323.87
8	Northwoods Cranberry Sauce	12 - 12 oz jars	343464.12
9	Mishi Kobe Niku	18 - 500 g pkgs.	346457.78

Steps:

1. Select the table
2. Select **Go To** command to launch to Go To Window
3. Select **Special** button to launch the Go To Special Window
4. Select **Blanks** option and click on **OK** to continue

	Product ID	Product Name	Quantity Per Unit	Original Unit Prize	Discounted Prize
1	1	Chai	10 boxes x 20 bags	987.23	888.507
2	2	Chang	24 - 12 oz bottles	234346.67	210912.003
3	3	Aniseed Syrup	12 - 550 ml bottles	23456.34	21110.706
4					
5	4	Chef Anton's Cajun Seasoning	48 - 6 oz jars	13214.34	11892.906
6	5	Chef Anton's Gumbo Mix	36 boxes	1232546.56	1109291.904
7	6	Grandma's Boysenberry Spread		232434.45	209191.005
8	7	Uncle Bob's Organic Dried Pears	12 - 1 lb pkgs.	121323.87	109191.483
9					
10	8	Northwoods Cranberry Sauce	12 - 12 oz jars	343464.12	309117.708
11	9	Mishi Kobe Niku	18 - 500 g pkgs.	346457.78	311812.002
12					

Figure 14: Dataset with blanks

Rows with blank cells are selected. Right click and select **Delete** from the context menu to remove the blank rows.

Merge data using Paste Special

Paste Special: Paste Special feature have many options inside to enable to quick operations.

Consider the scenario where a salesman, who needs to travel across the country, wants to fill his attendance. He filled the details in the following format.

Bombay	
Date	Attendance
Thu, 01-Jan	
Fri,02-Jan	P
Mon,05-Jan	P
Tue,06-Jan	
Wed,07-Jan	
Thu, 08-Jan	H

Singapore	
Date	Attendance
Thu, 01-Jan	H
Fri,02-Jan	
Mon,05-Jan	
Tue,06-Jan	P
Wed,07-Jan	P
Thu, 08-Jan	

Now he wants to merge these two sheets.

Steps:

1. Copy the Attendance details from one table
2. Point in the first cell of the second table
3. Right click and select **Paste Special** from the context menu
4. Check the **Skip blanks** option

5. Click OK.

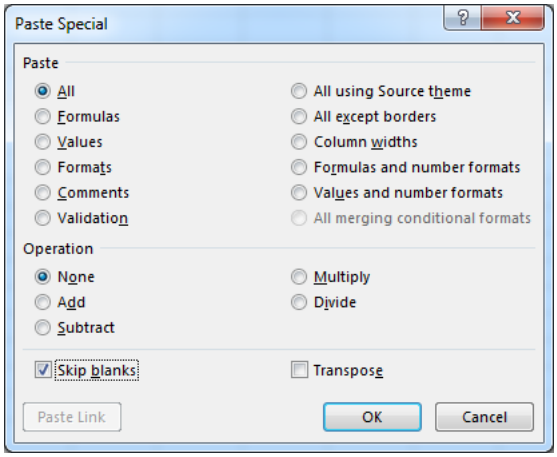


Figure 15: Skip blanks

Result:

Bombay	
Date	Attendance
Thu, 01-Jan	
Fri,02-Jan	P
Mon,05-Jan	P
Tue,06-Jan	
Wed,07-Jan	
Thu, 08-Jan	H

Singapore	
Date	Attendance
Thu, 01-Jan	H
Fri,02-Jan	P
Mon,05-Jan	P
Tue,06-Jan	P
Wed,07-Jan	P
Thu, 08-Jan	H

Inline data modification with Math operation

Consider the scenario, where we want to change the price to 5.5 times of the existing Price. Place the modified Price data in the Price column itself.

Product ID	Product Name	Quantity Per Unit	Unit Prize
1	Chai	10 boxes x 20 bags	987.23
2	Chang	24 - 12 oz bottles	234346.67
3	Aniseed Syrup	12 - 550 ml bottles	23456.34
4	Chef Anton's Cajun Seasoning	48 - 6 oz jars	13214.34
5	Chef Anton's Gumbo Mix	36 boxes	1232546.56
6	Grandma's Boysenberry Spread	12 - 8 oz jars	232434.45
7	Uncle Bob's Organic Dried Pears	12 - 1 lb pkgs.	121323.87
8	Northwoods Cranberry Sauce	12 - 12 oz jars	343464.12

9	Mishi Kobe Niku	18 - 500 g pkgs.	346457.78

Steps:

1. Place 5.5 in a cell.
2. Copy the value
3. Select the values under the Unit Price column
4. Right click and select **Paste Special** option from context menu
5. Select **Multiply** option under Operation
6. Click OK

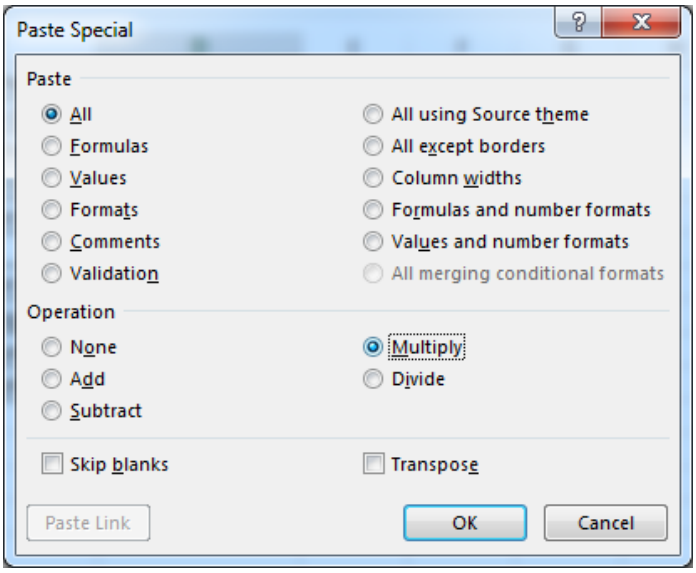


Figure 16: Paste Special

Observe the new values in the Unit Price column, which will be modified by multiplying 5.5.

Product ID	Product Name	Quantity Per Unit	Original Unit Prize
1	Chai	10 boxes x 20 bags	5429.765
2	Chang	24 - 12 oz bottles	1288906.685
3	Aniseed Syrup	12 - 550 ml bottles	129009.87
4	Chef Anton's Cajun Seasoning	48 - 6 oz jars	72678.87
5	Chef Anton's Gumbo Mix	36 boxes	6779006.08
6	Grandma's Boysenberry Spread	12 - 8 oz jars	1278389.475
7	Uncle Bob's Organic Dried Pears	12 - 1 lb pkgs.	667281.285
8	Northwoods Cranberry Sauce	12 - 12 oz jars	1889052.66

9	Mishi Kobe Niku	18 - 500 g pkgs.	1905517.79

Note: Use Add for adding a single value to the entire column, Divide for dividing the column data with a single value and Subtract for deducting particular value from column data.

Summary from different sheets

Description: Pivot table wizard can be used for merging the data from different sheets. Normally this option is not available in menu. Add this from Office icon-> Excel Options->Customize->All Commands-> PivotTable and PivotChart Wizard. Step is same as how we added the Speak Cells command to the ribbon or Quick Access Toolbar.

Consider the scenario where we have the Units of order details in multiple sheets and need a report by consolidating the data from two sheets. For example, following data is available in first sheet in our work book.

Product Name	Units On Order
Chai	10
Aniseed Syrup	25
Tofu	10
Genen Shouyu	0
Pavlova	10
Alice Mutton	5

Second sheet in the work book contains the following data.

Product Name	Units On Order
Chai	5
Ipoh Coffee	0
Gula Malacca	5
Rogede sild	0
Spegesild	12
Alice Mutton	5

Steps:

1. Select PivotTable and PivotChart Wizard option ()

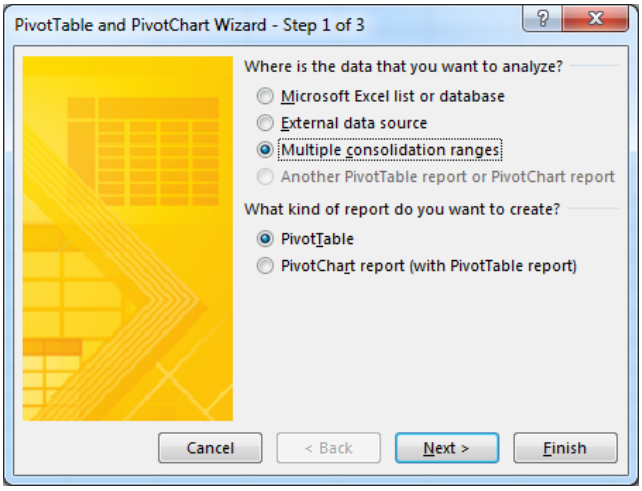


Figure 17: PivotTable and PivotChart Wizard

2. Select "***Multiple consolidation ranges***" and click **Next** to continue.

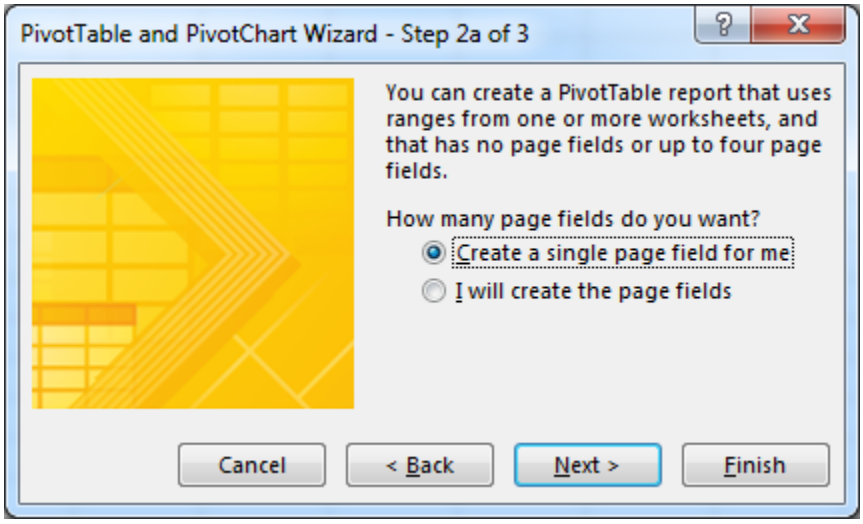


Figure 18: PivotTable and PivotChart Wizard

3. Select "***Create a single page field for me***" and click **Next** to continue.

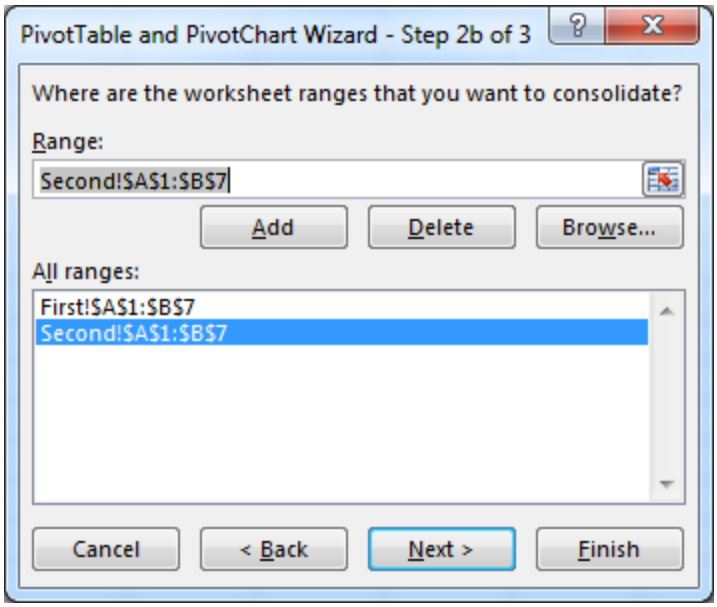


Figure 19: PivotTable and PivotChart Wizard - Add Range

4. Add data ranges from different sheets and click **Next** to continue

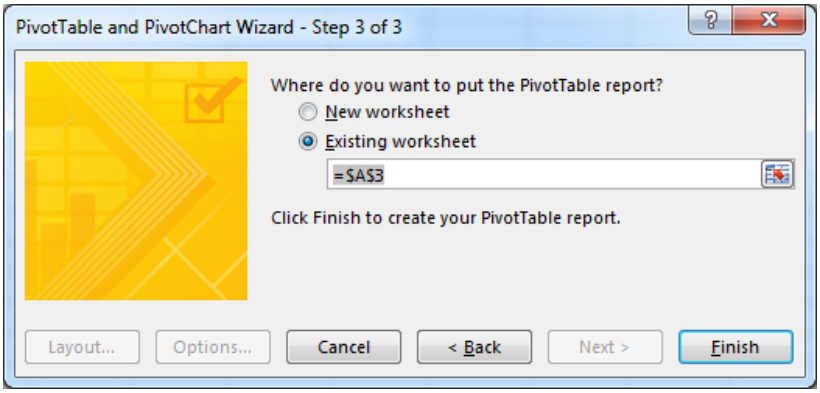


Figure 20: PivotTable and PivotChart Wizard- Finish

5. Specify whether the summary is needed in existing sheet or in new sheet and click Finish to generate the pivot report.

Page1	(All)	
Sum of Value	**Column Labels**	
Row Labels	**Units On Order**	**Grand Total**
Alice Mutton	10	10
Aniseed Syrup	25	25
Chai	15	15
Genen Shouyu	0	0
Gula Malacca	5	5
Ipoh Coffee	0	0
Pavlova	10	10
Rogede sild	0	0
Spegesild	12	12
Tofu	10	10
Grand Total	**87**	**87**

Figure 21: Pivot report from multiple sheets' data

Pivot report from multiple excel work books or files

In previous section, we have discussed about generating the summary from different sheets. In this section, we will look into one of the frequent requirement for excel data processing, pivot report from multiple excel files. We will use the same **PivotTable and PivotChart Wizard** feature for generating the Pivot report from multiple books.

Consider the scenario, where we have one excel work book, say Book1 with following product information.

Product Name	Unit In Stock
Chai	100
Aniseed Syrup	232
Chef Anton's Cajun Seasoning	56
Chef Anton's Gumbo Mix	121
Queso Manchego La Pastora	3543
Konbu	34
Tofu	1
Genen Shouyu	23
Pavlova	55
Alice Mutton	77

Second work book, say Book2 contains the following details

Product Name	Unit In Stock
Chai	39
Chang	17
Aniseed Syrup	13
Chef Anton's Cajun Seasoning	53
Chef Anton's Gumbo Mix	0
Grandma's Boysenberry Spread	120
Uncle Bob's Organic Dried Pears	15
Northwoods Cranberry Sauce	6
Mishi Kobe Niku	29
Ikura	31
Queso Cabrales	22
Queso Manchego La Pastora	86

Requirement is to generate the Pivot report out of the data available in both these excel files.

Steps:

1. Open a new excel file or the file where you need the pivot report
2. Select PivotTable and PivotChart Wizard option from the Quick Access Toolbar

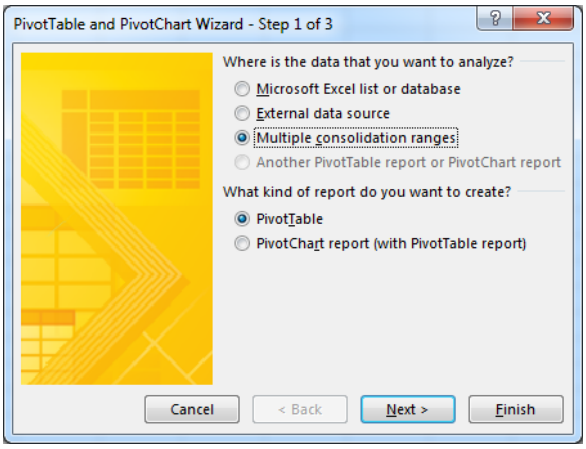


Figure 22: PivotTable and PivotChart Wizard

3. Select ***Multiple consolidation ranges*** option and click on **Next** to continue

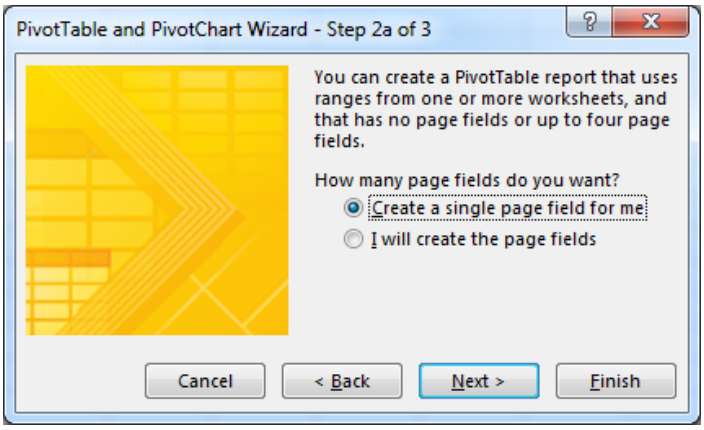


Figure 23: PivotTable and PivotChart Wizard

4. Select the ***Create a single page field for me*** option and click on **Next** to continue

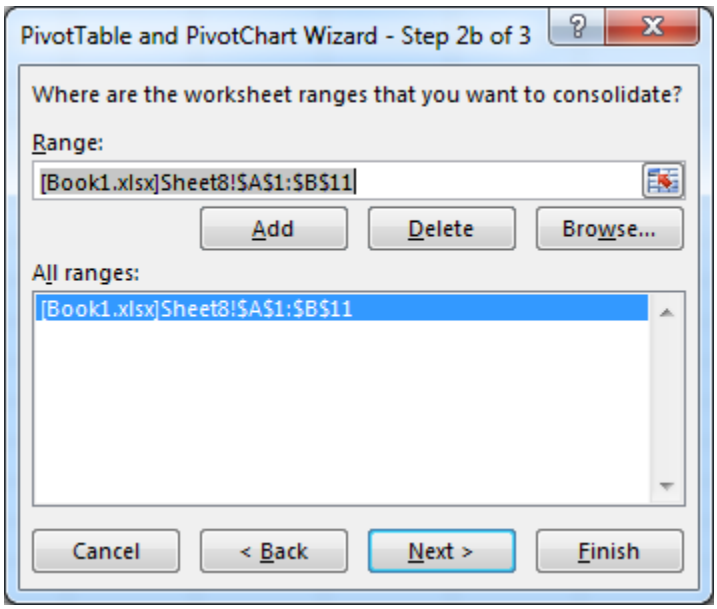


Figure 24: PivotTable and PivotChart Wizard - Add Range

5. Select the range from the first book and click on **Add** to add to the ranges list
6. Now select the range from second book. You may not able to select the other workbook by navigating to the same. **Edit the work book name and sheet name** available in **Range** field to match the second workbook details. Now you will get the control in the second workbook and allows us to select the range in that work book.

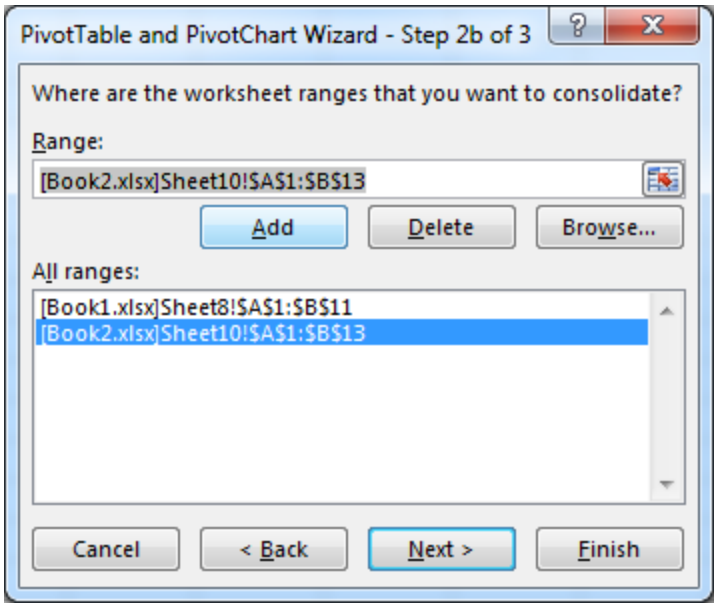


Figure 25: PivotTable and PivotChart Wizard - Add Range

Edited the workbook name (Bbok2) and sheet name (Sheet10) in range field and selected the data range from the second work book.

7. Click **Add** to include the range and click on **Next** to continue
8. Now, specify the location on the third work book for Pivot report

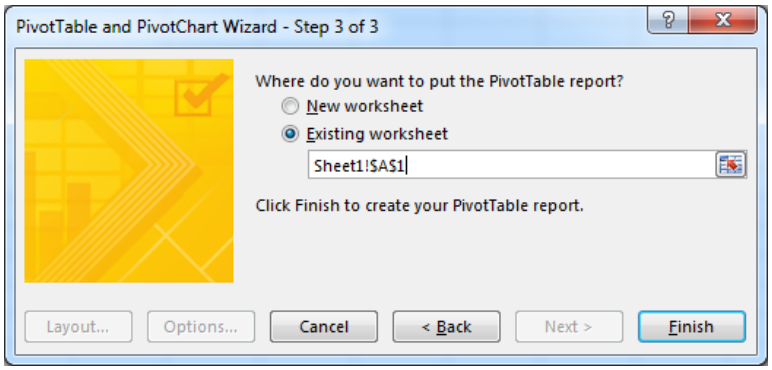


Figure 26: PivotTable and PivotChart Wizard - Finish

9. Click on Finish to generate the pivot report based on data from two workbooks

Page1	(All)	
Sum of Value	**Column Labels**	
Row Labels	**Unit In Stock**	**Grand Total**
Alice Mutton	77	77
Aniseed Syrup	245	245
Chai	139	139
Chang	17	17
Chef Anton's Cajun Seasoning	109	109
Chef Anton's Gumbo Mix	121	121
Genen Shouyu	23	23
Grandma's Boysenberry Spread	120	120
Ikura	31	31
Konbu	34	34
Mishi Kobe Niku	29	29
Northwoods Cranberry Sauce	6	6
Pavlova	55	55
Queso Cabrales	22	22
Queso Manchego La Pastora	3629	3629
Tofu	1	1
Uncle Bob's Organic Dried Pears	15	15
Grand Total	**4673**	**4673**

Figure 27: Pivot report from two different work books

Conditional Formatting

Description: Make the business data more appealing using color or icon combinations. Older versions of Excel have a limitation of maximum 3 conditions. In Excel 2007 onwards, we can have more than 3 conditions as part of the conditional formatting.

Data Bars – Represent the data along with a graphical notation of the data.

Select different Data Bars option to visualy represent the data range along with the data.

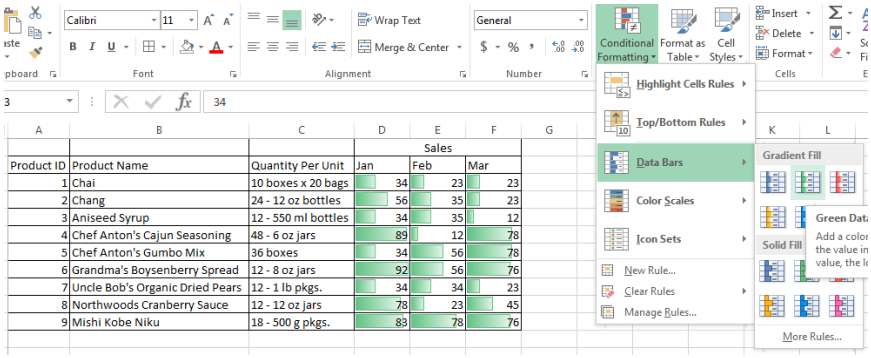


Figure 28: Conditional Formatting - Data Bars

Color Scales – Represent the value using color ranges.

Use the Color Scales to indicate the deviations in value like the sales of products compared to average sales.

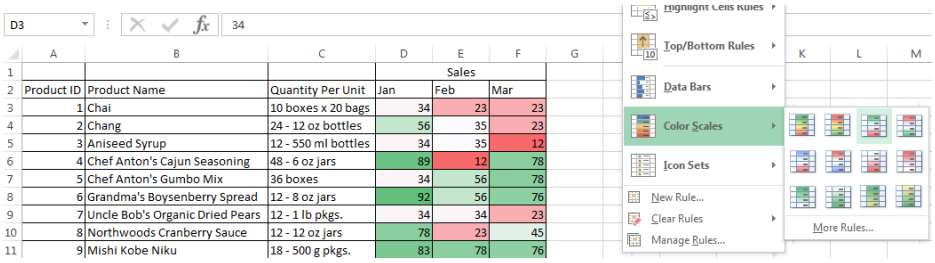


Figure 29: Conditional Formatting - Color Scales

Icon Sets: - Suitable for specific range of values like grades, ranks, etc.

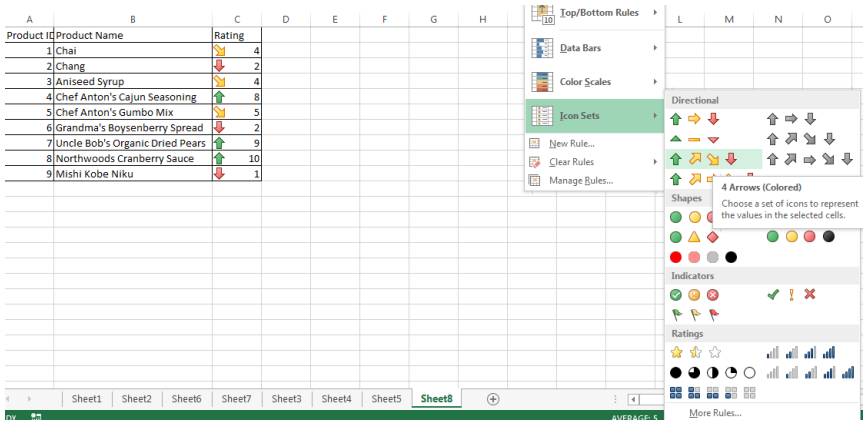
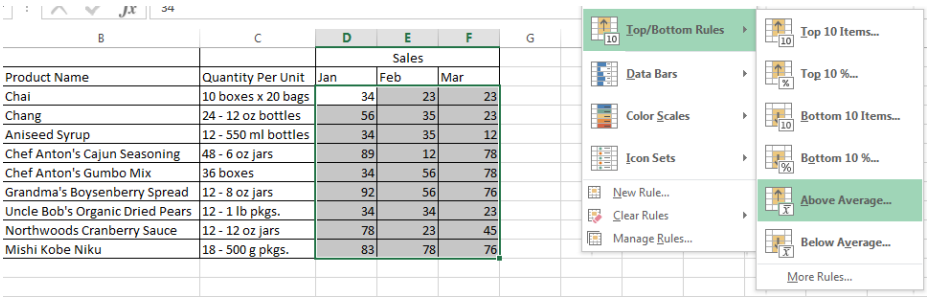


Figure 30: Conditional Formatting - Icon Sets

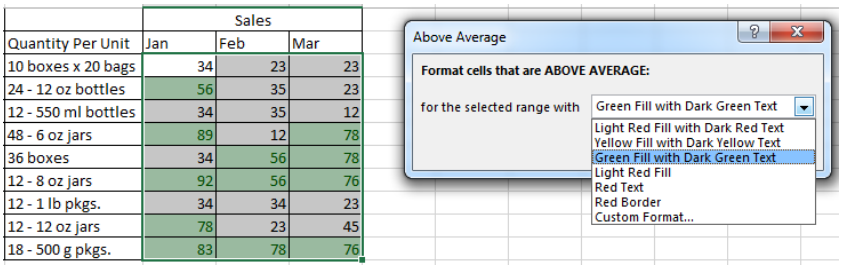
Top/Bottom Rules: - Useful when we want to highlight Top 10 values or bottom 10% items or the items above/below average.



Product Name	Quantity Per Unit	Sales Jan	Feb	Mar
Chai	10 boxes x 20 bags	34	23	23
Chang	24 - 12 oz bottles	56	35	23
Aniseed Syrup	12 - 550 ml bottles	34	35	12
Chef Anton's Cajun Seasoning	48 - 6 oz jars	89	12	78
Chef Anton's Gumbo Mix	36 boxes	34	56	78
Grandma's Boysenberry Spread	12 - 8 oz jars	92	56	76
Uncle Bob's Organic Dried Pears	12 - 1 lb pkgs.	34	34	23
Northwoods Cranberry Sauce	12 - 12 oz jars	78	23	45
Mishi Kobe Niku	18 - 500 g pkgs.	83	78	76

Figure 31: Conditional Formatting - Top/Bottom Rules

Select the required criteria like above average from the Top/Bottom Rules list. This will display the options for formatting the data range meeting the specific condition



Quantity Per Unit	Sales Jan	Feb	Mar
10 boxes x 20 bags	34	23	23
24 - 12 oz bottles	56	35	23
12 - 550 ml bottles	34	35	12
48 - 6 oz jars	89	12	78
36 boxes	34	56	78
12 - 8 oz jars	92	56	76
12 - 1 lb pkgs.	34	34	23
12 - 12 oz jars	78	23	45
18 - 500 g pkgs.	83	78	76

Figure 32: Conditional Formatting - Top/Bottom Rules

Highlight Cells Rule: - Useful when we need to apply the style using complex conditions.

We can define our on conditions and custom formatting using the Highlight Cells Rule. Select one of the available criteria to define the custom formatting.

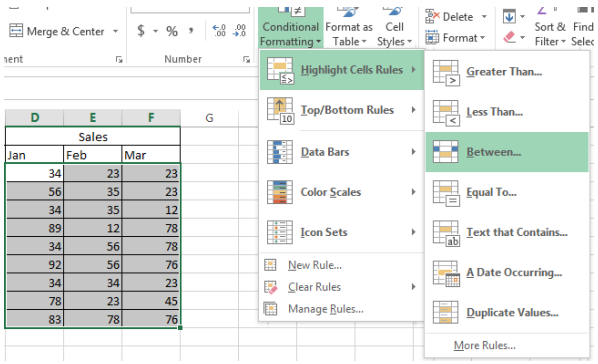


Figure 33: Conditional Formatting - Highlight Cell Rules

This will display the New Formatting Rule window for defining to custom rule and format.

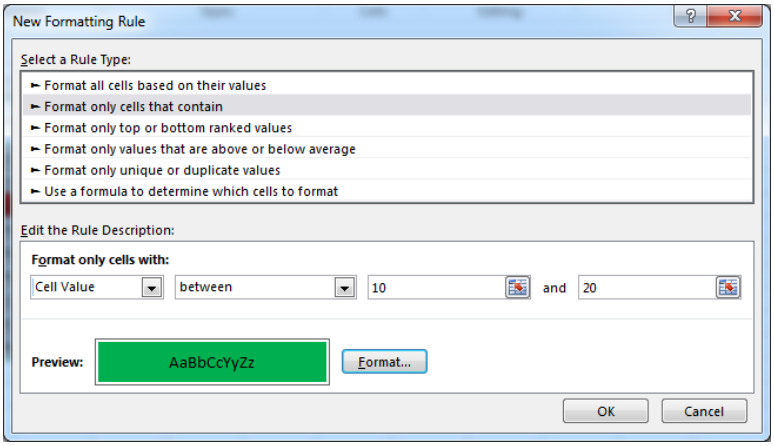


Figure 34: Conditional Formatting - Custom rules

Remove Duplicate

Description: This feature will help us to remove the duplicate cell or row from the sheet.

Steps:

1. Select the data
2. Click on Data tab in the Ribbon
3. Select '**Remove Duplicates'** option from the Data Tools session.

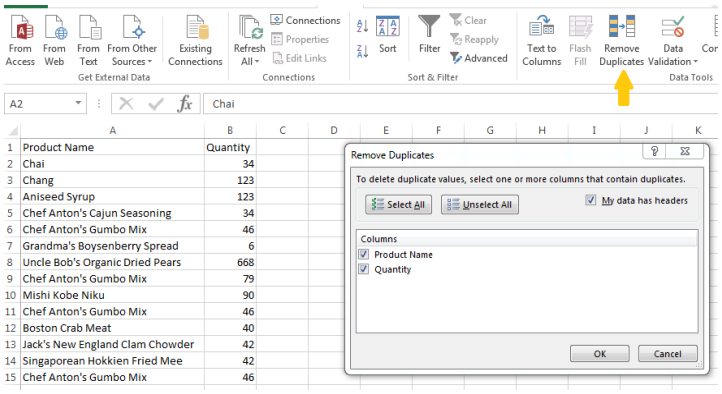


Figure 35: Remove Duplicates

4. Select all items to remove the duplicate row. Select column names to remove duplicate from columns.

We can decide the selection of columns depends on whether we need to remove the entire row or just one cell.

Trace Precedents/Trace Dependents

Trace Precedents: Shows arrows that indicate the cells affecting the value of currently selected cell. In other words, it shows the depended cells of a derived cell.

Here, value of the currently selected cell H14 is the sum of the cells H10 and H12. In turn, value of H10 and H12 is calculated using other cells.

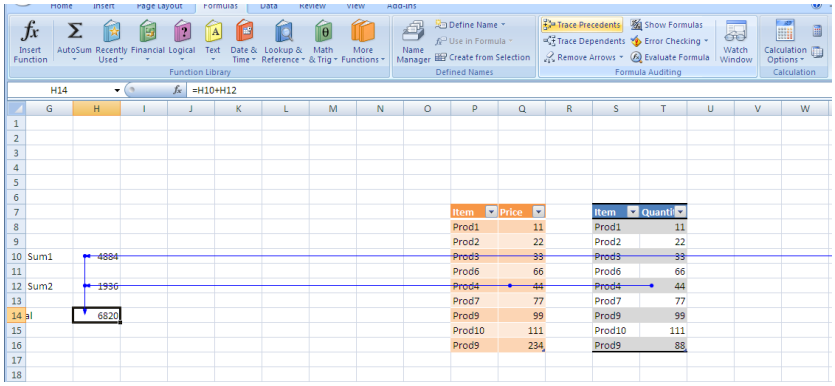


Figure 36: Trace Precedents

Trace Dependents: Shows arrows that indicate the cells affected by the value of the currently selected cell.

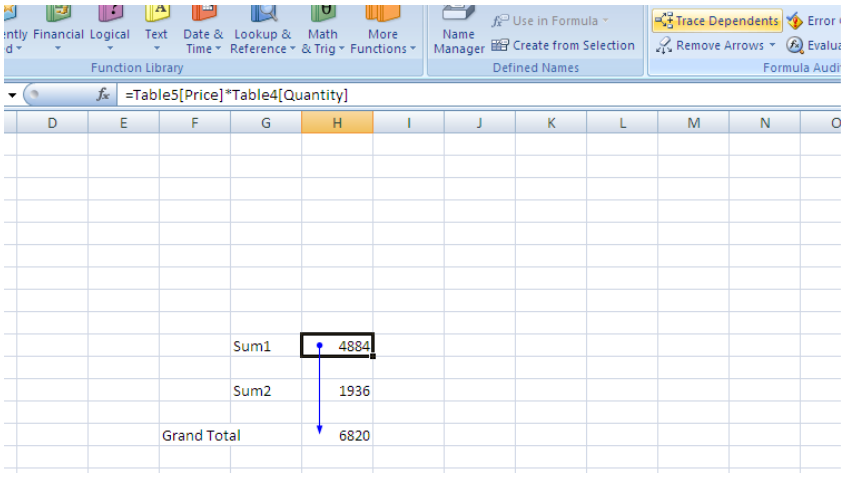


Figure 37: Trace Dependents

Green Error Mask

Description: This is the familiar green mark appearing in the left top corner of the cell. It indicates that, the data present in the cell is having some discrepancy or error. It is up to the user to correct the errors.

Number Stored As Text

One such indication is number is stored as Text. If a number stored in text format, this data will not be considered for any formulas referring the cell; in turn gives wrong data or result.

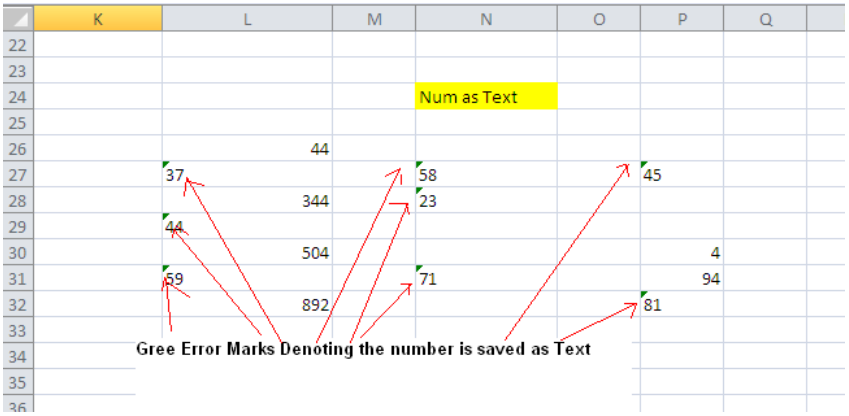


Figure 38: Green error Marks

For avoiding this error, click on the cell and select the icon appearing on the left side of the cell.

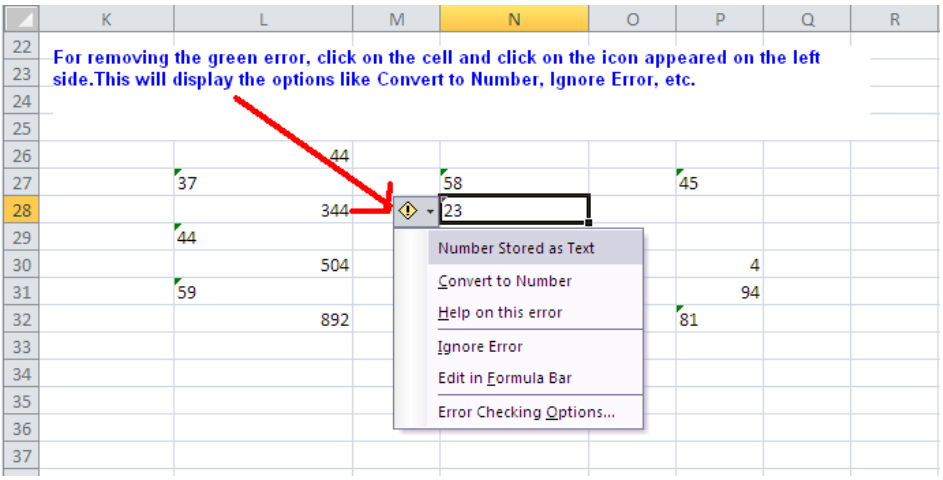


Figure 39: Green error - solution

For Selecting all such errors in the sheet and act on it, **press Ctrl+A two times.** Click on one cell contains the error mask, press ctrl+A twice for selecting the entire sheet. Then the icon will appear on the top left corner of the sheet.

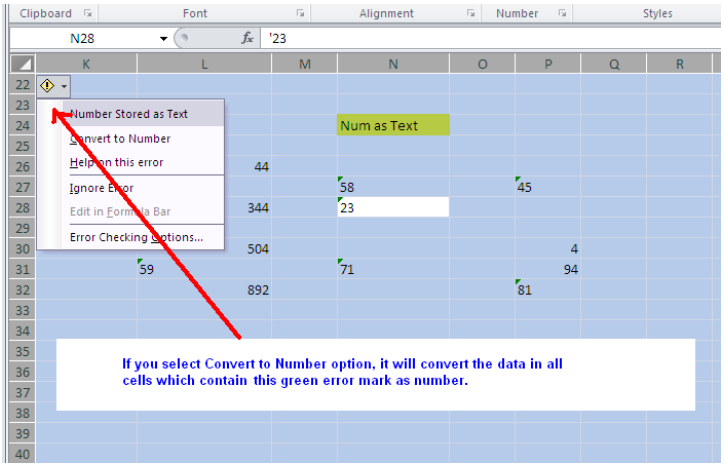


Figure 40: Green error Mark - Select entire sheet

Inconsistent Formula

This error mark denotes that the cell is having a formula, which is different from the adjacent cells. In the below screen shot, we used the formula as Amount*3.2% in all cells except the one with green error mask, where we used the formula Amount*3.3%.

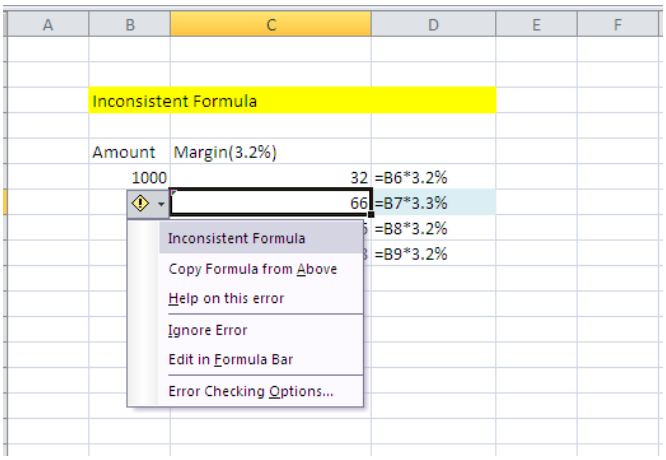


Figure 41: Inconsistent Formula

Formula Omits Adjacent Cells

This indicates that the formula is omitted some data adjacent to it. In the below example, we calculated the Total revenue as a sum of revenues from Jan to April. After that, we added the revenue of May.

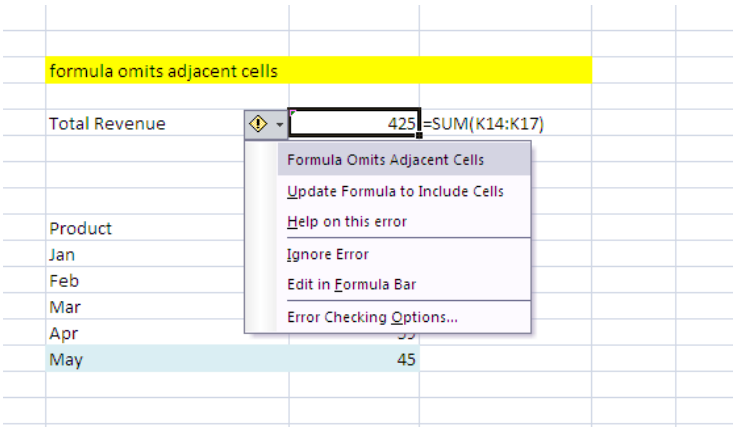


Figure 42: Formula omits adjacent cells

Table

Description: Insert table is introduced as a new feature in Excel 2007. Even though we can form tables using columns, rows and Gridlines in Excel, Insert table option is having lot of advantages or features in it.

Steps for inserting a table:

1. Select the cells/ columns required to be part of the table.
2. Click Insert-> Table option.
3. Specify whether your table is having headers or not.

We have lot of formatting options for the table as given below

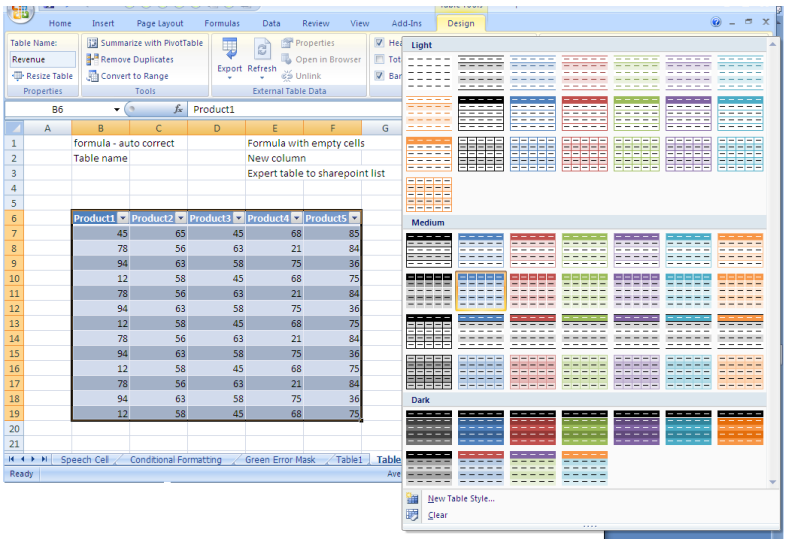


Figure 43: Table formatting

We have more options under Table Tools -> Design tab. Some of the features are export the table to SharePoint list/Visio pivot diagram, Summarize with Pivot table, Convert to Range, etc.

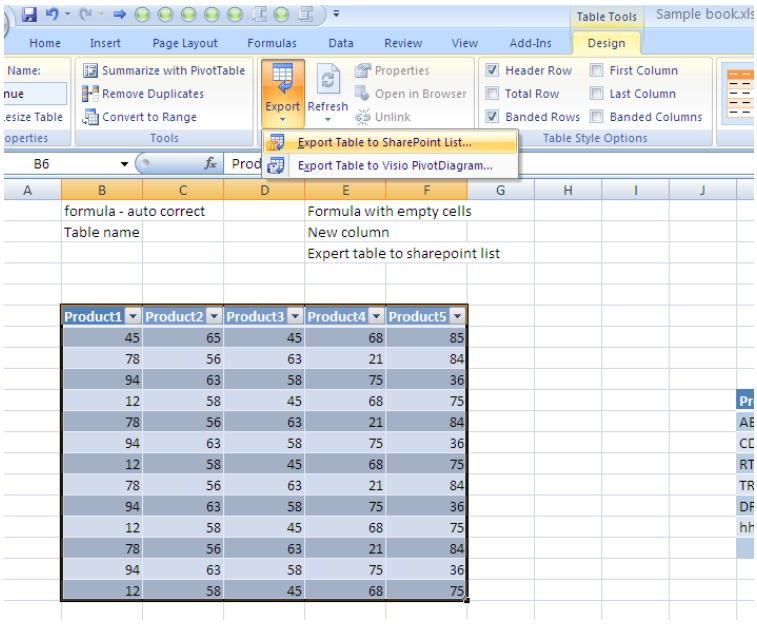


Figure 44: Table - Options

Inclusion of new columns or Rows

When you add a new column near to the table, it automatically format and include the column to the table. Same way, it will format the new rows too.

Formulas

Table will take care of the empty cells referred in formulas. When you add a new record/row into the table, it automatically modifies the formulas which refer to the columns of the table.

Table Name

We can name the table using Table design tab.

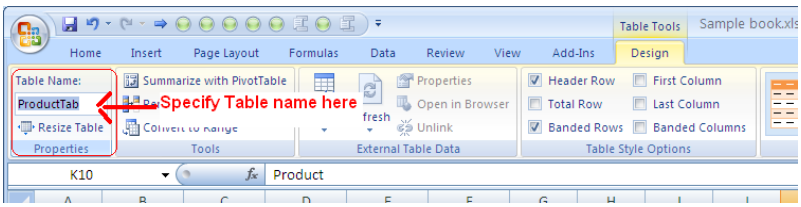


Figure 45: Table Name

By default system will name each table as Table1, Table2, and so on. Table names are useful to create formulas in a more meaningful way. We can refer the table from any sheet using the table name. Also, excel provide the intelligence to automatically detect the table names and prompt to the user.

In following figure, Product Tab, ProductTab11 are table names.

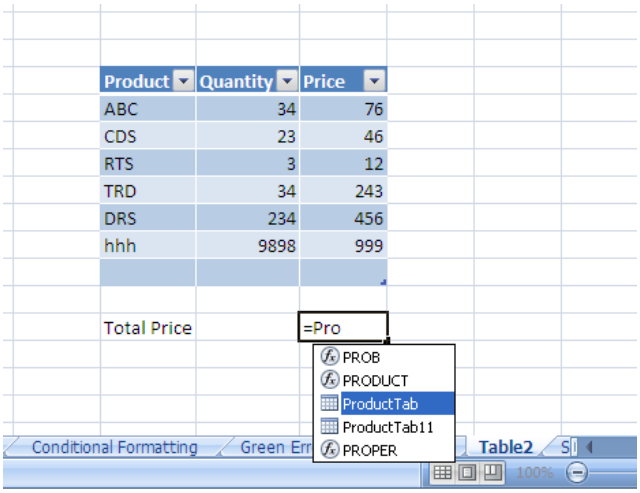


Figure 46: Table name Intelligence

Column names are also getting intelligence as follows.

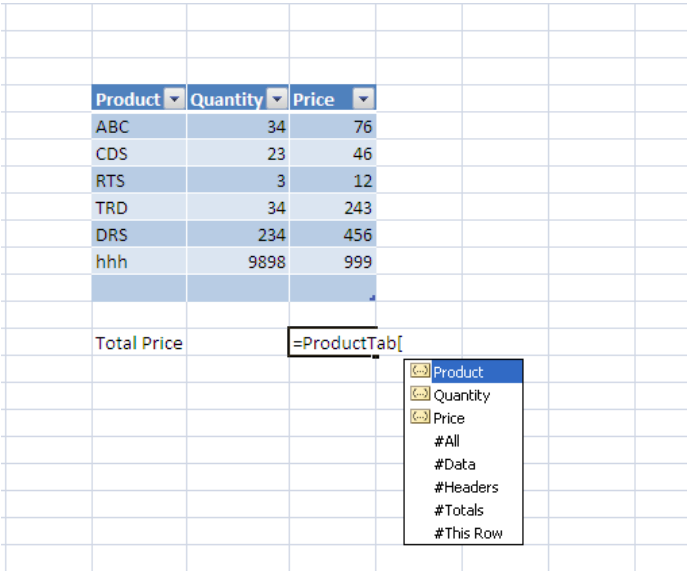


Figure 47: Table column name intelligence

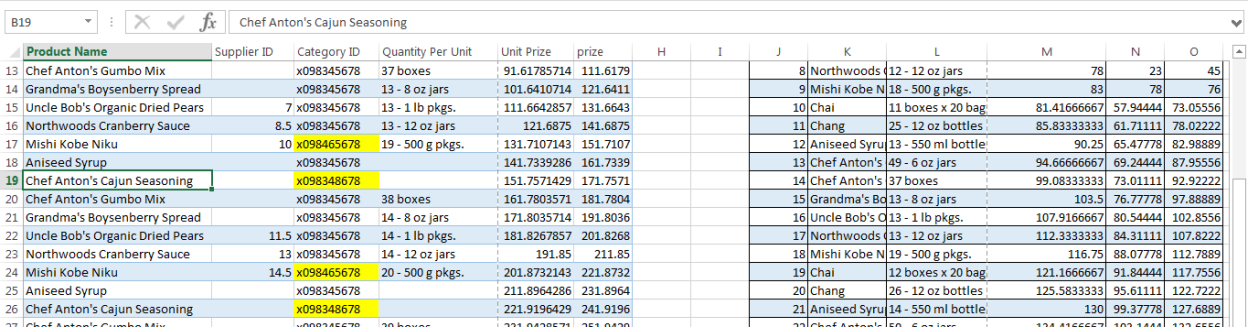
Freeze multiple tables' column headings

We use the Freeze feature to freeze the top row or portions of excel to refer the column headings when we scroll down the excel sheet. If we have multiple tables/ headings, then the freeze feature may not be helpful.

If we have the column headings in the same row, then we will be able to freeze the row to show the column headings from all tables. But, most of the cases, the column headings of different tables will be in different rows, which restrict the usage of freeze option.

For avoiding this limitation, Table feature is came with an excellent feature to display the column heading as real sheet's column heading [A, B, C…]. When we scroll down the lengthy table and point to any of the table cell, then the sheet's column headings change to corresponding table's column names.

Following figure shows two tables, one contains product information and another with Item details. After scroll down, pointed to the product information table, which changed the corresponding sheet's column names to product information table's column names like Product Name, Supplier ID, etc. Note that there is no change in remaining column headings like H, I, J, etc.

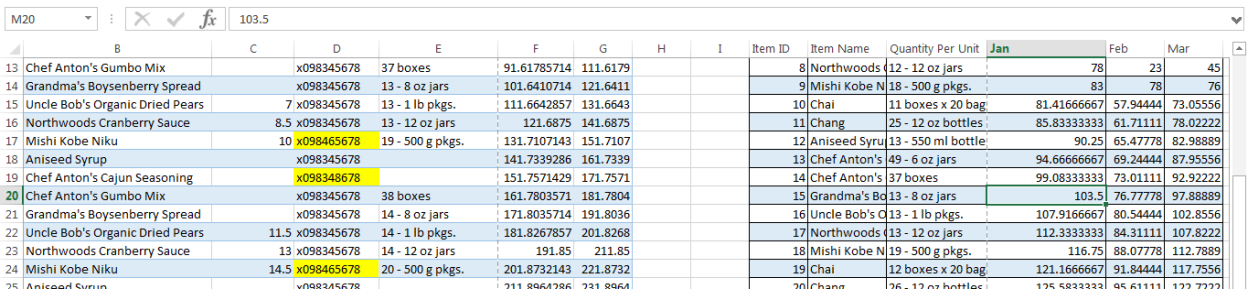


B19 | Chef Anton's Cajun Seasoning

	Product Name	Supplier ID	Category ID	Quantity Per Unit	Unit Prize	prize	H	I	J	K	L	M	N	O
13	Chef Anton's Gumbo Mix		x098345678	37 boxes	91.61785714	111.6179			8	Northwoods (	12 - 12 oz jars	78	23	45
14	Grandma's Boysenberry Spread		x098345678	13 - 8 oz jars	101.6410714	121.6411			9	Mishi Kobe N	18 - 500 g pkgs.	83	78	76
15	Uncle Bob's Organic Dried Pears	7	x098345678	13 - 1 lb pkgs.	111.6642857	131.6643			10	Chai	11 boxes x 20 bag	81.41666667	57.94444	73.05556
16	Northwoods Cranberry Sauce	8.5	x098345678	13 - 12 oz jars	121.6875	141.6875			11	Chang	25 - 12 oz bottles	85.83333333	61.71111	78.02222
17	Mishi Kobe Niku	10	x098465678	19 - 500 g pkgs.	131.7107143	151.7107			12	Aniseed Syru	13 - 550 ml bottle	90.25	65.47778	82.98889
18	Aniseed Syrup		x098345678		141.7339286	161.7339			13	Chef Anton's	49 - 6 oz jars	94.66666667	69.24444	87.95556
19	Chef Anton's Cajun Seasoning		x098348678		151.7571429	171.7571			14	Chef Anton's	37 boxes	99.08333333	73.01111	92.92222
20	Chef Anton's Gumbo Mix		x098345678	38 boxes	161.7803571	181.7804			15	Grandma's Bo	13 - 8 oz jars	103.5	76.77778	97.88889
21	Grandma's Boysenberry Spread		x098345678	14 - 8 oz jars	171.8035714	191.8036			16	Uncle Bob's O	13 - 1 lb pkgs.	107.9166667	80.54444	102.8556
22	Uncle Bob's Organic Dried Pears	11.5	x098345678	14 - 1 lb pkgs.	181.8267857	201.8268			17	Northwoods (	13 - 12 oz jars	112.3333333	84.31111	107.8222
23	Northwoods Cranberry Sauce	13	x098345678	14 - 12 oz jars	191.85	211.85			18	Mishi Kobe N	19 - 500 g pkgs.	116.75	88.07778	112.7889
24	Mishi Kobe Niku	14.5	x098465678	20 - 500 g pkgs.	201.8732143	221.8732			19	Chai	12 boxes x 20 bag	121.1666667	91.84444	117.7556
25	Aniseed Syrup		x098345678		211.8964286	231.8964			20	Chang	26 - 12 oz bottles	125.5833333	95.61111	122.7222
26	Chef Anton's Cajun Seasoning		x098348678		221.9196429	241.9196			21	Aniseed Syru	14 - 550 ml bottle	130	99.37778	127.6889

Figure 48: Freeze multiple tables' column names

Moreover, column headings corresponding to the item details table is not displayed. Now, let us point to a cell in the item details table.



M20 | 103.5

	B	C	D	E	F	G	H	I	Item ID	Item Name	Quantity Per Unit	Jan	Feb	Mar
13	Chef Anton's Gumbo Mix		x098345678	37 boxes	91.61785714	111.6179			8	Northwoods (	12 - 12 oz jars	78	23	45
14	Grandma's Boysenberry Spread		x098345678	13 - 8 oz jars	101.6410714	121.6411			9	Mishi Kobe N	18 - 500 g pkgs.	83	78	76
15	Uncle Bob's Organic Dried Pears	7	x098345678	13 - 1 lb pkgs.	111.6642857	131.6643			10	Chai	11 boxes x 20 bag	81.41666667	57.94444	73.05556
16	Northwoods Cranberry Sauce	8.5	x098345678	13 - 12 oz jars	121.6875	141.6875			11	Chang	25 - 12 oz bottles	85.83333333	61.71111	78.02222
17	Mishi Kobe Niku	10	x098465678	19 - 500 g pkgs.	131.7107143	151.7107			12	Aniseed Syru	13 - 550 ml bottle	90.25	65.47778	82.98889
18	Aniseed Syrup		x098345678		141.7339286	161.7339			13	Chef Anton's	49 - 6 oz jars	94.66666667	69.24444	87.95556
19	Chef Anton's Cajun Seasoning		x098348678		151.7571429	171.7571			14	Chef Anton's	37 boxes	99.08333333	73.01111	92.92222
20	Chef Anton's Gumbo Mix		x098345678	38 boxes	161.7803571	181.7804			15	Grandma's Bo	13 - 8 oz jars	103.5	76.77778	97.88889
21	Grandma's Boysenberry Spread		x098345678	14 - 8 oz jars	171.8035714	191.8036			16	Uncle Bob's O	13 - 1 lb pkgs.	107.9166667	80.54444	102.8556
22	Uncle Bob's Organic Dried Pears	11.5	x098345678	14 - 1 lb pkgs.	181.8267857	201.8268			17	Northwoods (	13 - 12 oz jars	112.3333333	84.31111	107.8222
23	Northwoods Cranberry Sauce	13	x098345678	14 - 12 oz jars	191.85	211.85			18	Mishi Kobe N	19 - 500 g pkgs.	116.75	88.07778	112.7889
24	Mishi Kobe Niku	14.5	x098465678	20 - 500 g pkgs.	201.8732143	221.8732			19	Chai	12 boxes x 20 bag	121.1666667	91.84444	117.7556

Figure 49: Freeze multiple tables' column names

Sheet's column names corresponding to the item details table changed to column names of item detail table.

Formatting

Description: There are many format options available which we are not aware. As there are lots of format options, this section is not going to explain all options. It will give an example where the usage of a bad format resulted in wrong business data.

Scenario: We have the start date and end date of a project. We need to calculate the project duration in hours. The formula used is simple and placed the cell format as hh:mm. The duration between 15th April 8 AM and 15th April 5PM is calculated correctly [9 hrs]. But the duration between 15th April 8 AM and 16th April 5PM is also calculated as 9 hours, which is wrong. Heredue to the wrong formatting, formula is avoiding the date, it considering only the time.

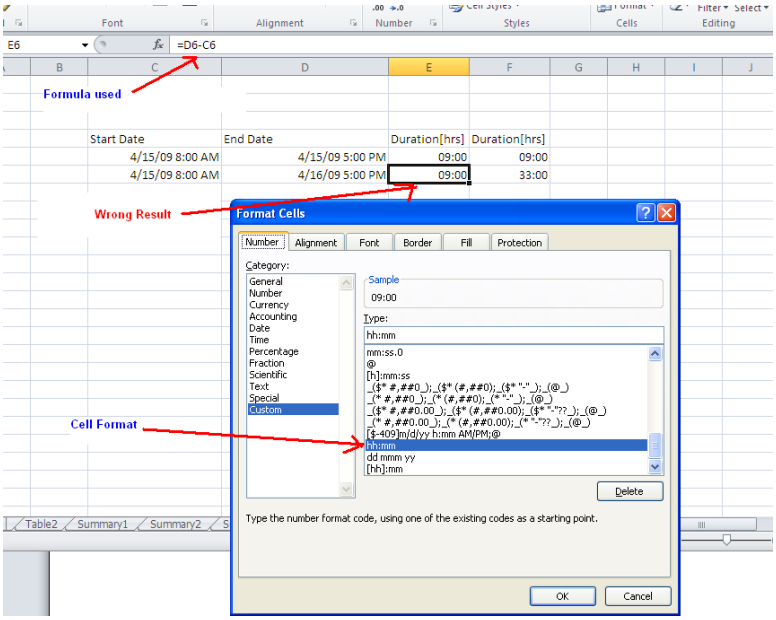


Figure 50: Formatting

Now let us see the correct format option. Noticed the formula used is same. Only difference is the cell format where it changed from **hh:mm to [hh]:mm.**

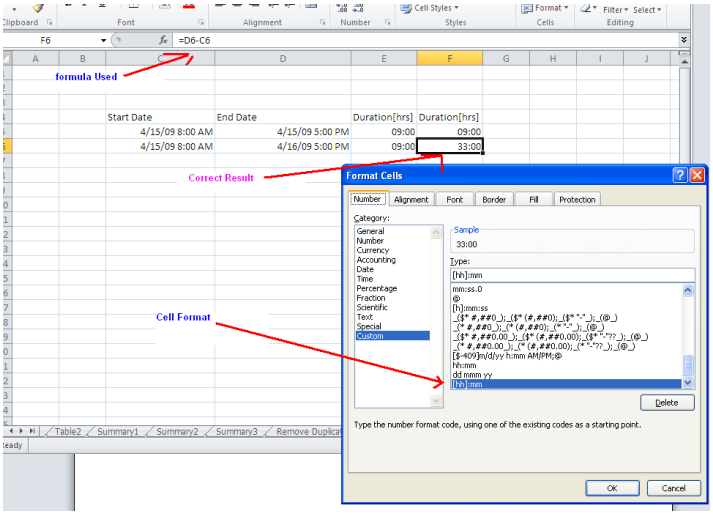


Figure 51: Cell format

Trace Error

Description: Trace error will point to the root of the error. If the cells display some error message and the data in the cell combined of some complex formulas, then it is difficult to find out the real cause for the error. Trace error will trace the error till its original position.

In the below example, K14 having error message. For tracing the error, select Error Checking option under Formula Auditing section under Formula tab. Select Trace Error option from the Error Checking window. This will trace the root cell or till the cell which caused the error.

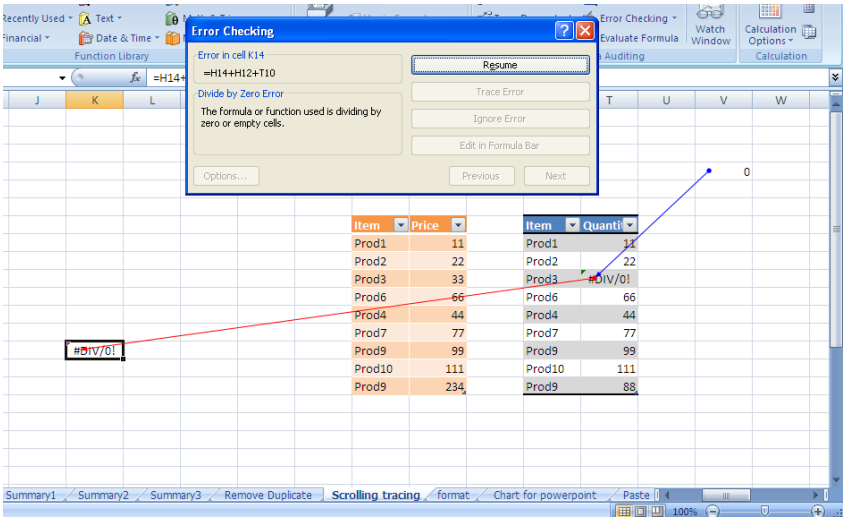


Figure 52: Trace error

Page Layout View

Description: Excel 2007 contains Page layout view similar to print layout view in Word. This will display the excel sheet in the form of pages with **header and footer** options.

Steps:

1. Select View Tab.
2. Select Page Layout option as shown below.

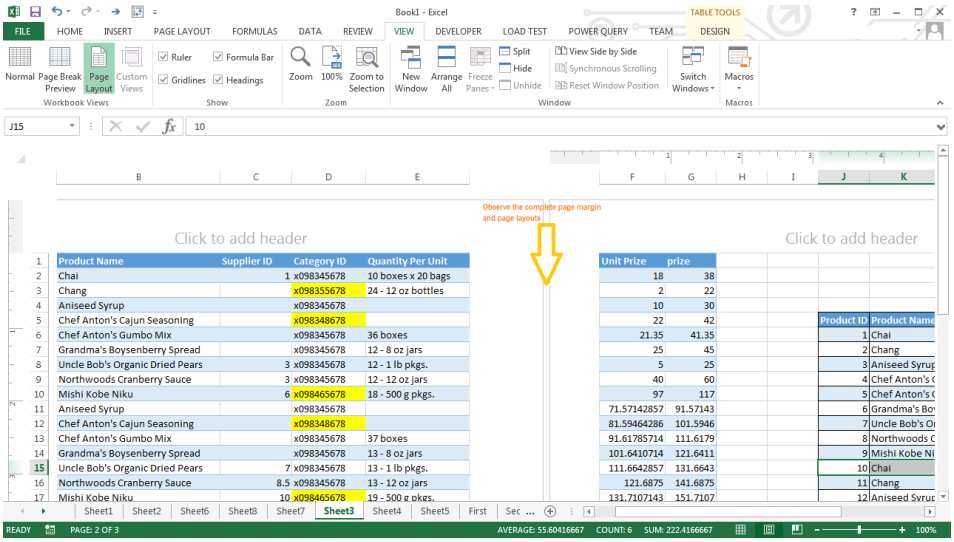


Figure 53: Page Layout View

Summary

Each of the office products have thousands of features. With the optimized usage of these features one can improve the productivity of day to day activities.

Appendix

Horizontal Scrolling: Alt+PageUp and Alt+PageDown .