กิจกรรมชุมชนนักปฏิบัติ (CoP : Community of Practice)

หน่วยงาน : สำนักพัฒนาระบบและรับรองมาตรฐานสินค้าปศุสัตว์

เรื่อง Workshop Online เทคนิคการใช้โปรแกรมเพื่อนำมาปรับใช้ในงานวิชาการ และในงานเอกสาร

การดำเนินกิจกรรม

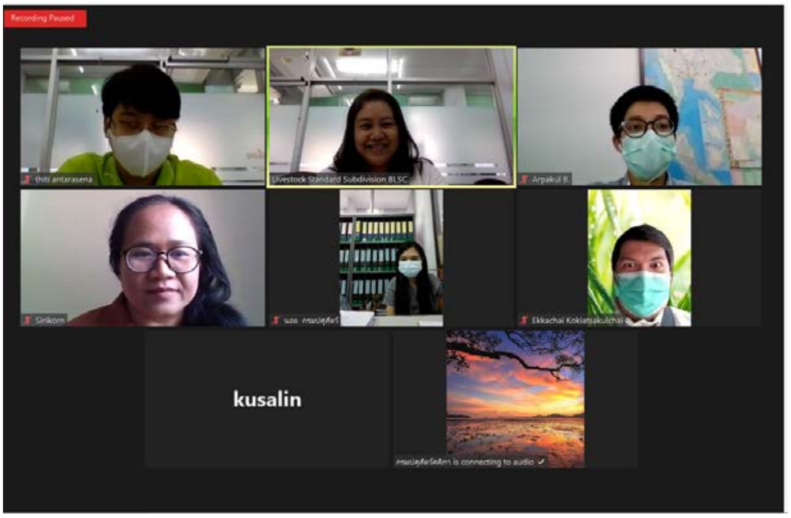
1. ผู้เข้าร่วมกิจกรรมฟังการบรรยายจากวิทยากร ณ สำนักพัฒนาระบบและรับรองมาตรฐานสินค้าปศุสัตว์ และการบรรยายผ่านโปรแกรม Zoom
2. ผู้เข้าร่วมกิจกรรมจัดทำข้อมูล แต่ละโปรแกรม และการปฏิบัติตามผู้บรรยาย
   2.1 การใช้โปรแกรม excel ในการคำนวณ การสร้างกราฟ และการทำ pivot table
   2.2 เทคนิคการ search ข้อมูลโปรแกรม word โปรแกรม Mendelay เพื่อการเก็บ reference และนำไปใส่เป็นเอกสารอ้างอิง
3. ผู้เข้าร่วมกิจกรรมแลกเปลี่ยน ข้อคิดเห็น ซักถาม และแลกเปลี่ยนประสบการณ์

รายชื่อผู้เข้าร่วมกิจกรรม

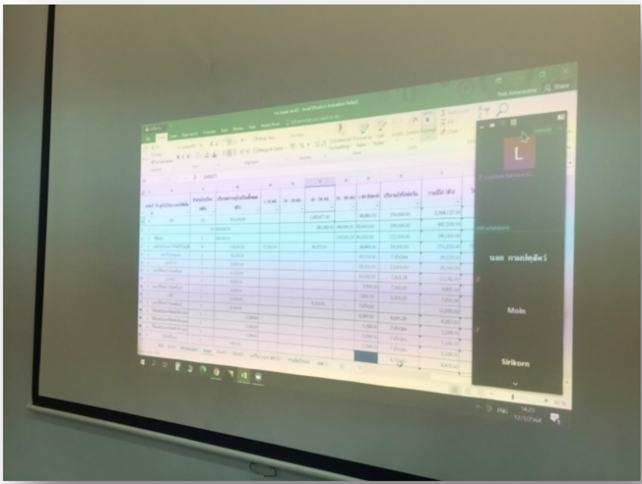
ที่	ชื่อ-นามสกุล	ตำแหน่ง	หน่วยงาน
๑	นางสาวกัญญารัตน์ แสนสุขเจริญผล	นายสัตวแพทย์ชำนาญการ	กลุ่มตรวจสอบมาตรฐานด้านการปศุสัตว์
๒	นางสาวสิริกร งามเกลี้ยง	นายสัตวแพทย์ชำนาญการ	กลุ่มตรวจสอบมาตรฐานด้านการปศุสัตว์
๓	นางสาวกุศลิน ก้องกิติกุล	นายสัตวแพทย์ชำนาญการ	กลุ่มตรวจสอบมาตรฐานด้านการปศุสัตว์
๔	นางสาวอาภากุล บุญเลิศ	นายสัตวแพทย์ปฏิบัติการ	กลุ่มตรวจสอบมาตรฐานด้านการปศุสัตว์
๕	นายเอกชัย ก่อเกียรติสกุลชัย	นายสัตวแพทย์ชำนาญการ	กลุ่มรับรองด้านการปศุสัตว์
๖	นางสาววรามล ใช้พานิช	นายสัตวแพทย์ชำนาญการ	กลุ่มรับรองด้านการปศุสัตว์
๗	นางสาวจารุวดี เปรมฤดี	นายสัตวแพทย์ชำนาญการ	กลุ่มรับรองด้านการปศุสัตว์
๘	นางสาวณัฐธิดา มะลิทอง	นายสัตวแพทย์ชำนาญการ	กลุ่มรับรองด้านการปศุสัตว์
๙	นางสาววันวิสาข์ แย้มมีกลิ่น	นักวิชาการชำนาญการ	กลุ่มรับรองด้านการปศุสัตว์
๑๐	นายมาลิก อับดุลบุตร	นายสัตวแพทย์ชำนาญการ	กลุ่มพัฒนาสินค้าปศุสัตว์ฮาลาล

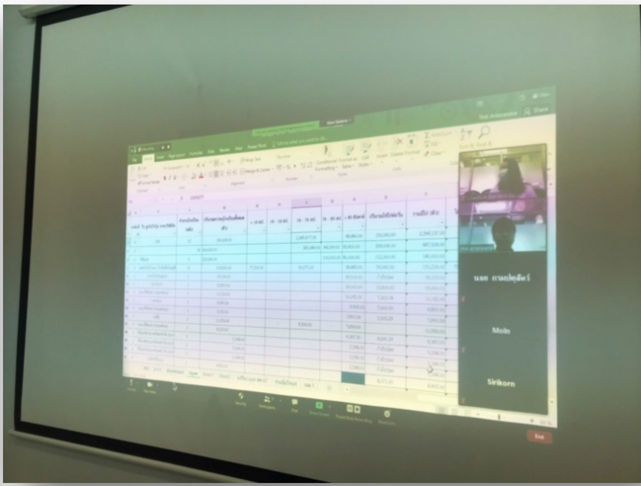
รูปภาพกิจกรรม

ฟังการบรรยายจากวิทยากรณ สำนักพัฒนาระบบและรับรองมาตรฐานสินค้าปศุสัตว์และการบรรยายผ่านโปรแกรม Zoom พร้อม แลกเปลี่ยน ข้อคิดเห็น ซักถาม และประสบการณ์



ผู้เข้าร่วมกิจกรรมจัดทำข้อมูล แต่ละโปรแกรม และการปฏิบัติตามผู้บรรยาย





โปรแกรมที่ใช้ในการจัดทำข้อมูลในการบรรยายครั้งนี้

Mendeley เป็น Free Software ช่วยจัดทารายการบรรณานุกรมแบบอัตโนมัติ รวมถึงสามารถค้นหาผลงานวิจัย ผ่าน Mendeley Desktop หรือ Mendeley Web และสามารถสร้าง Group ส่วนตัวหรือสาธารณะได้เพื่อใช้ในการติดต่อ กับนักวิจัย

ไมโครซอฟท์ เอ็กซ์เซล (Microsoft Excel) เป็นโปรแกรมประเภทตารางการคำนวณ มีฟังก์ชันพื้นฐาน บวก ลบ คูณ หาร ยกกำลัง รวมถึงฟังก์ชันทางคณิตศาสตร์ระดับสูง เช่น Modulo, ตรีโกณมิติ (Sin Cos Tan) ฟังก์ชันทางสถิติ เช่น ค่าเบี่ยงเบนมาตรฐาน ฟังก์ชันทางการเงิน เช่น การคิดค่าเสื่อมราคา , การคำนวณค่าปัจจุบัน ฟังก์ชันในการตัดต่อคำ เช่น Concatenate ฟังก์ชันในการค้นหาข้อมูล เช่น Lookup, vlookup และ hlookup การใช้งานในรูปแบบของฐานข้อมูล ตัวกรอง, การเรียงลำดับข้อมูล (Sort) , คำนวณยอดรวม (Subtotal) และตารางไพวอต (Pivot Table) สามารถทำกราฟในแบบต่างๆ เช่น เส้นตรง วงกลม กราฟรูปแท่ง กราฟแท่งเทียนที่ใช้กับการวิเคราะห์หุ้น กราฟพื้นที่ ทำกราฟ 2 ชนิดในรูปเดียวกัน

Microsoft Word 2010 **คือโปรแกรม** ประมวลผลคำที่ออกแบบมาเพื่อช่วยให้คุณสร้างเอกสารที่มีคุณภาพระดับมืออาชีพ ด้วยเครื่องมือจัดรูปแบบเอกสารที่ดีที่สุด Word จะช่วยให้คุณจัดระเบียบและเขียนเอกสารของคุณได้อย่างมีประสิทธิภาพยิ่งขึ้น Word ยังมีเครื่องมือการแก้ไขและการตรวจทานที่มีประสิทธิภาพเพื่อให้คุณสามารถทำงานร่วมกับผู้อื่นได้ง่าย

MENDELEY USING GUIDE

CONTENT

CREATE MENDELEY INSTITUTIONAL ACCOUNT

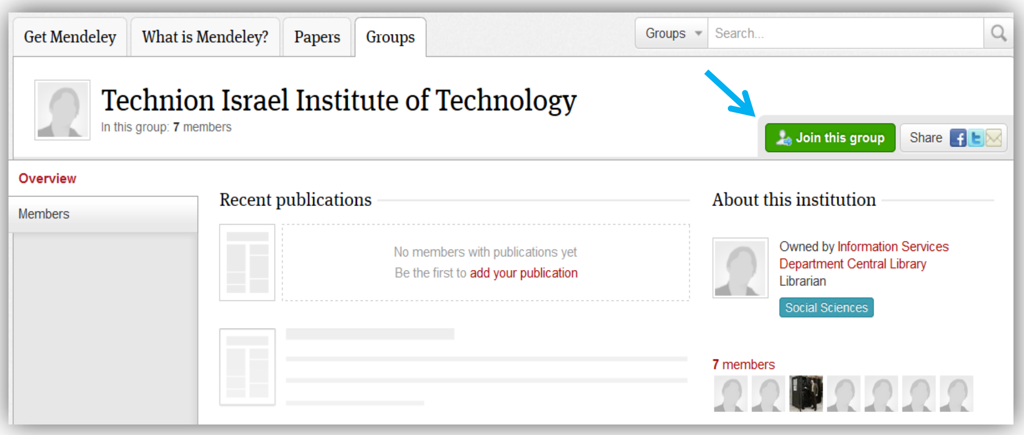
Access to Mendeley Institutional edition (free service to all Technion community) requires* a Technion user account (CAMPUS, STAFF, TX or T2).

To gain access to Mendeley Institutional edition, you should create new Mendeley Institutional account or upgrade existing free account:

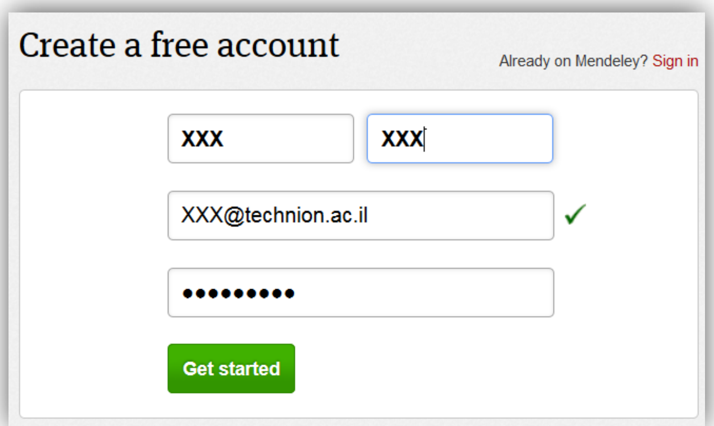
- ✓ Create new Mendeley Institutional account
- ✓ Upgrade existing free Mendeley account

CREATE NEW MENDELEY INSTITUTIONAL ACCOUNT

To create new Mendeley Institutional account, go to Technion Mendeley Institutional Edition and click *'Join this Group'*:

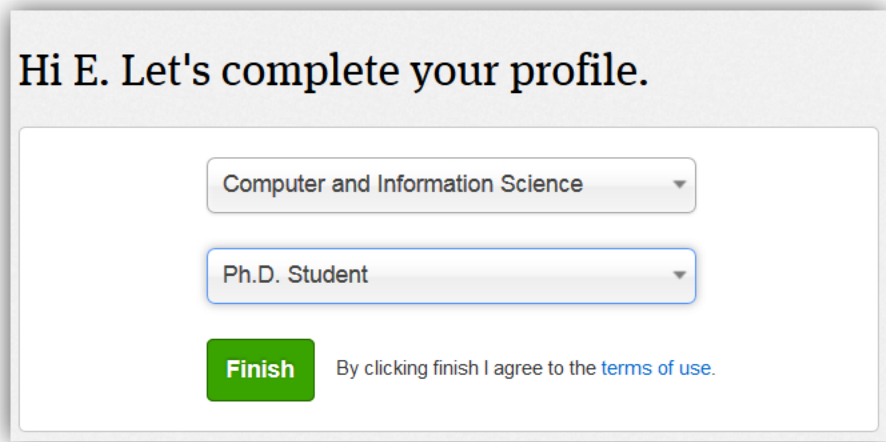


Fill in required fields (first and last name, email, password) and click *'Get Started'*.



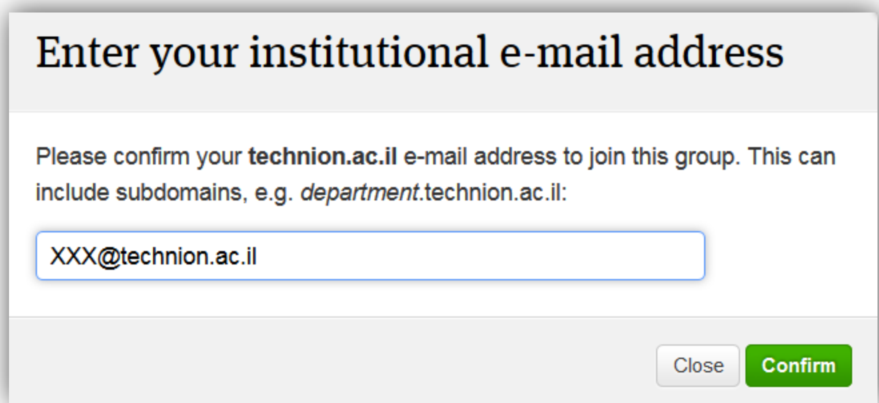
**You can use your Technion or another account.*

Complete your profile by selecting your field of study and academic status:

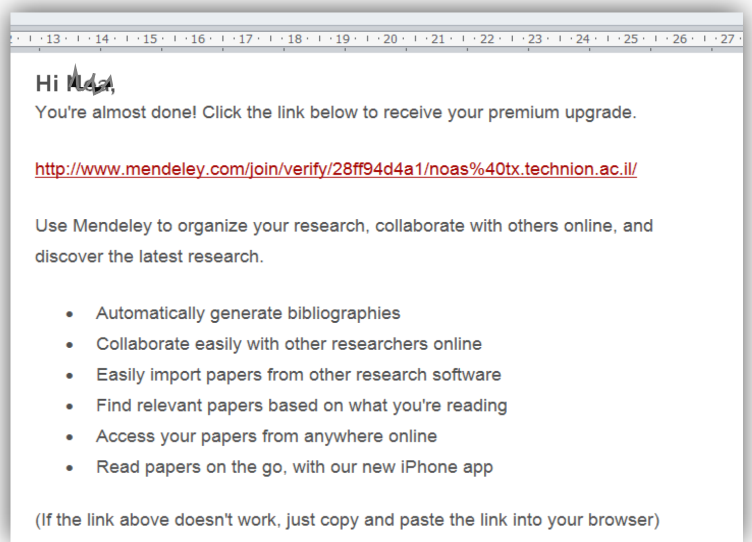


By clicking *'Finish'* you will agree to the terms of use.

You will be asked to confirm your Technion user account (CAMPUS, STAFF, TX or T2):

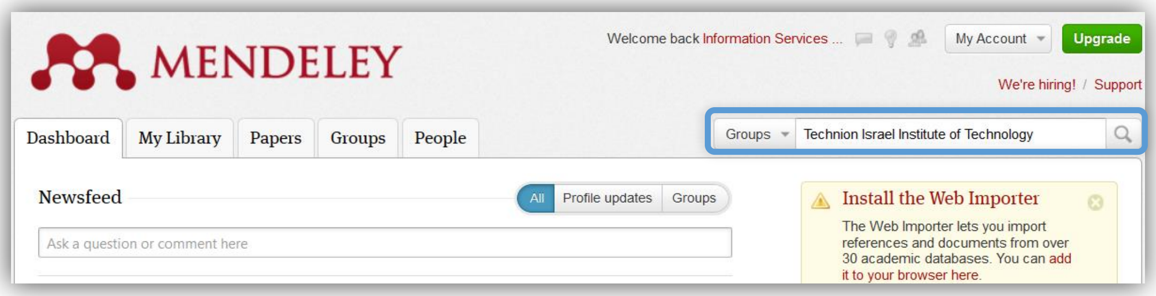


The verification e-mail will be send to your Technion e-mail. Click on the link inside to join:

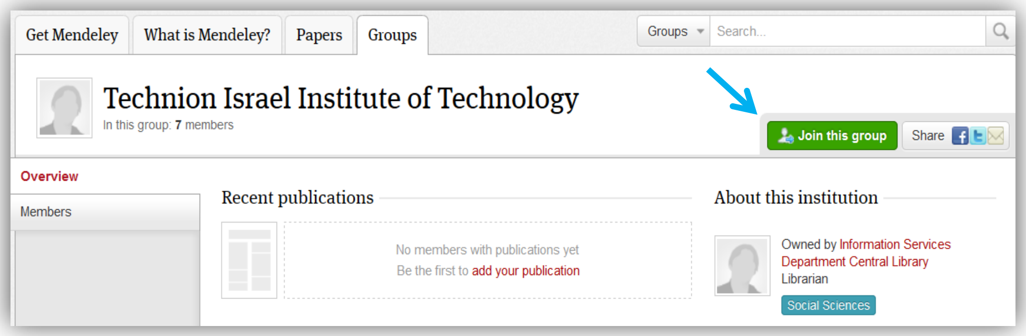


UPGRADE EXISTING FREE MENDELEY ACCOUNT TO THE INSTITUTIONAL

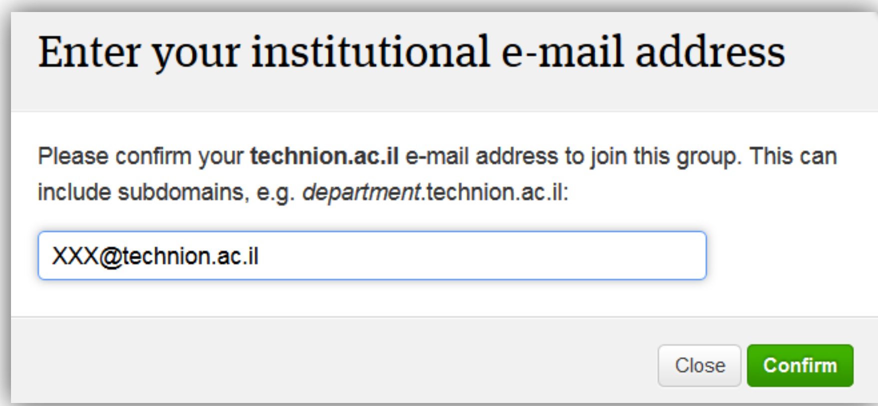
To upgrade existing free Mendeley account, sign in search for the group *'Technion Israel Institute of Technology'* on Mendeley website:



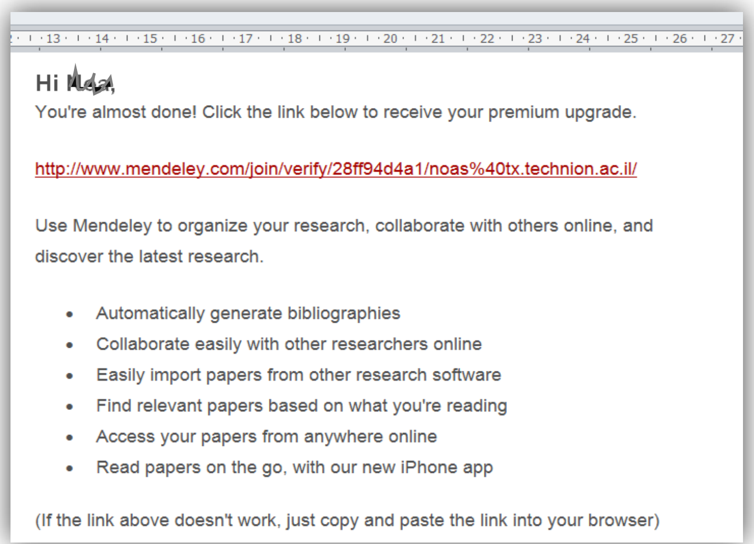
Click *'Join this group'*:



You will be asked to confirm your Technion user account (CAMPUS, STAFF, TX or T2):



The verification e-mail will be send to your Technion e-mail. Click on the link inside to join:



START USING MENDELEY

To start using Mendeley you should create an account and download the desktop program to your computer.

- ✓ Download the desktop program
- ✓ Install the web importer

DOWNLOAD THE DESKTOP PROGRAM

Immediately after creating new account you will be able to download Mendeley Desktop.

Or visit http://www.mendeley.com/download-mendeley-desktop/ and click *'Download Mendeley Desktop'*:

MENDELEY DESKTOP FOR DIFFERENT SYSTEMS:

Windows

Mac

Linux

Mendeley App (iOS)

INSTALL THE WEB IMPORTER

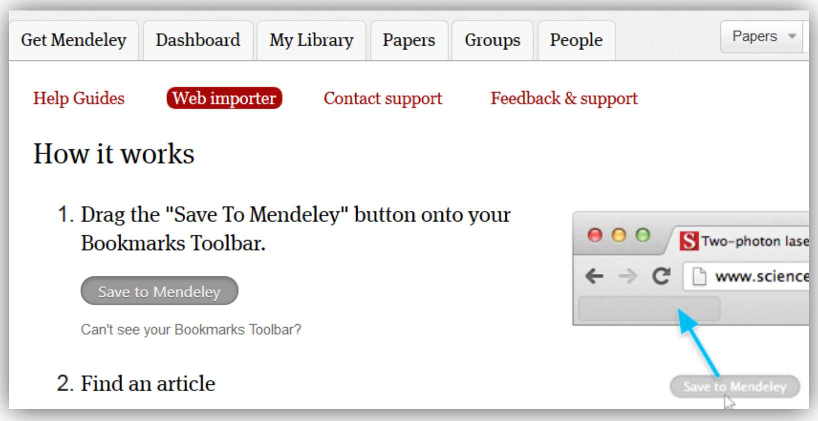
Install the Web Importer to import references from different databases to Mendeley Desktop in the easiest way.

You can download the web importer in two ways.

Go to http://www.mendeley.com/import:

1. Drag the *'Save to Mendeley'* button to your bookmarks toolbar or to your bookmarks.

2. Right-click on the button and choose to add this link to your bookmarks.



**You can do this later from the Dashboard tab in the Tools menu on the online version or from 'Tools' menu in Mendeley desktop.*

Mendeley Web Importer supported sites (please scrawl dawn).

ADDING REFERENCES FROM DATABASES AND WEBSITES

There are some ways to import/ enter records metadata:

- ✓ Adding references by using 'Save to Mendeley' button
- ✓ Adding references in a classical way
- ✓ Adding references by creating RIS file
- ✓ Adding references manually
- ✓ Adding references by dragging PDFs files
- ✓ Adding references from existing software (Refworks)

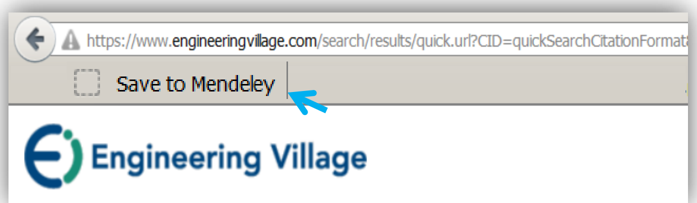
ADDING REFERENCES BY USING 'SAVE TO MENDELEY' BUTTON

'Save to Mendeley' button is compatible with the most popular Technion Databases:

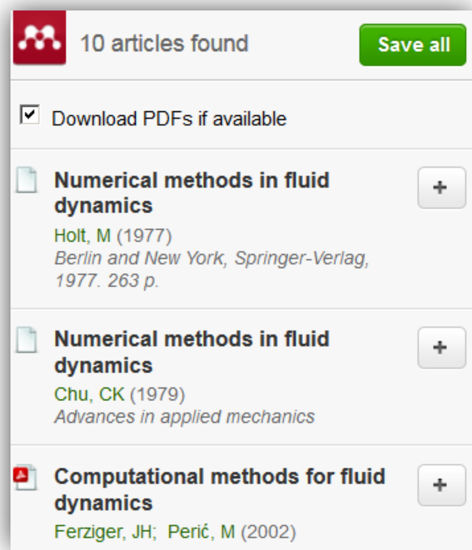
Engineering Village (Compendex, Inspec, NTIS), Google Scholar, Scopus, Web of Science, PubMed.

Full list of Mendeley 'Web Importer' supported sites (please scrawl dawn).

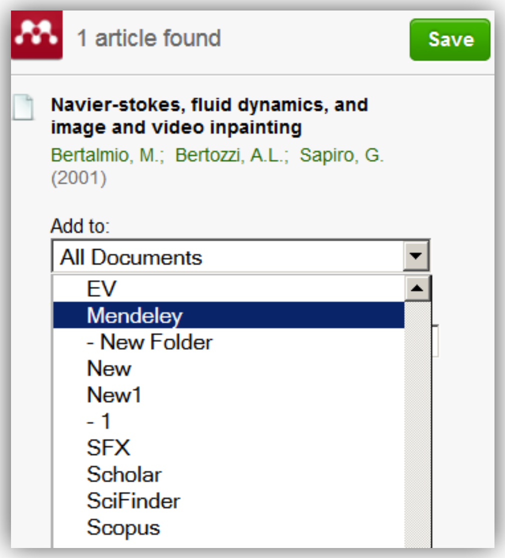
To 'grab' the reference, click on the *'Save to Mendeley'* button:



If there are multiple references, click the sign *'plus'* next to each reference you wish to export from the list on the right hand side of the page:

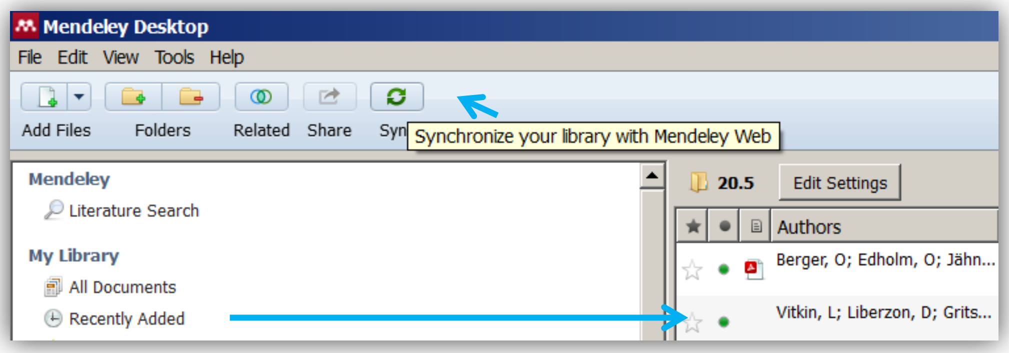


If there is one reference, choose the folder to store it and click *'Save'*:



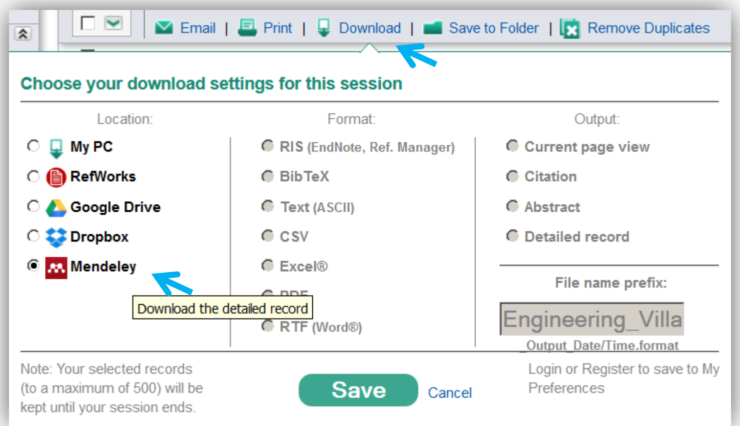
**The option to include the PDFs is available for references with free or Technion access.*

Next time you sync Mendeley Desktop, saved articles will appear in the *'Recently Added'* folder:



ADDING REFERENCES IN A CLASSICAL WAY

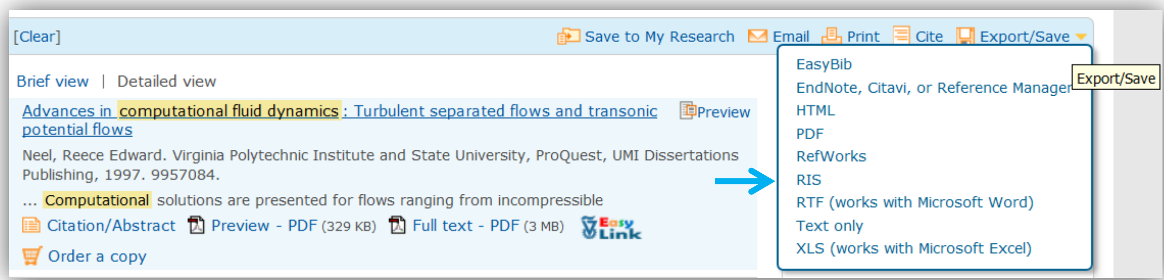
If there are multiple references, mark each reference you wish to export, click *'Download'/ 'Export'/ 'Save to'* (depend on database), select *'Mendeley'* and click *'Save'*:



ADDING REFERENCES BY CREATING RIS FILE

PROQUEST DATABASES

If there are multiple references, mark each reference you wish to export, select *'RIS'* from the drop-down list on *'Export/Save'* option:



To save a RIS file with your citation information, click *'Continue'* and the file will be downloaded automatically.

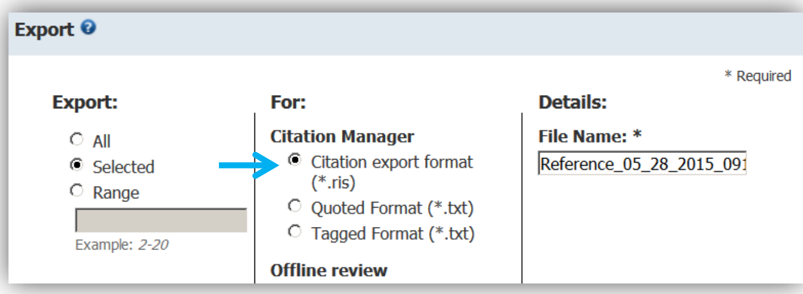
During the download, select *'Open File'* option to export it directly to your Mendeley Desktop.

Saved articles will appear in the "Recently Added" folder.

SCIFINDER

If there are multiple references, mark each reference you wish to export and click *'Export'*.

Select the option *'Citation export format (*.ris)'* and click *'Export':*

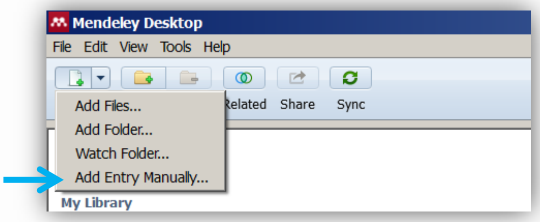


During the download, select *'Open File'* option to export it directly to your Mendeley Desktop.

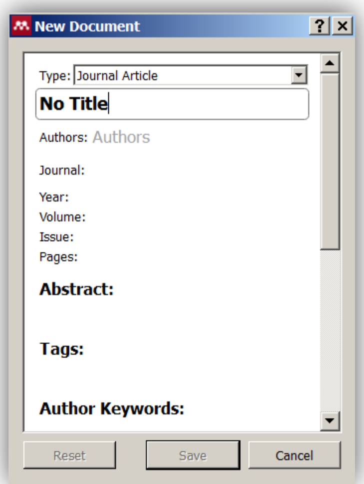
Saved articles will appear in the *'Recently Added'* folder.

ADDING REFERENCES MANUALLY

To add references manually, click *'Add Files'* button on the in the upper-left corner of the interface and from the drop-down list select *'Add Entry Manually'*:



A pop-up window will appear. Select the type of material you wish to add (e.g. book, book section, document, journal article, etc.), fill in metadata fields and click *'Save'*:



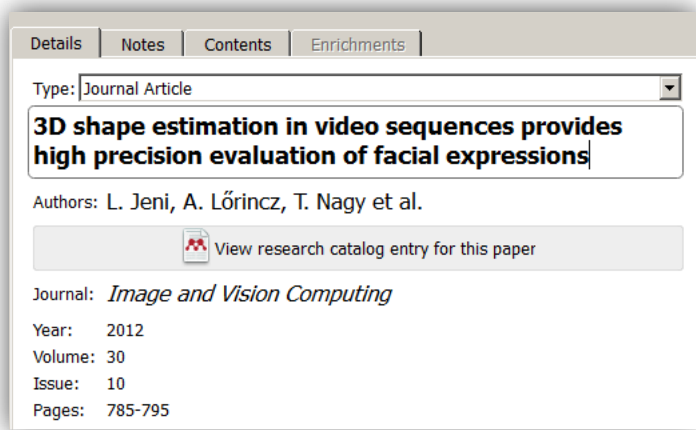
ADDING REFERENCES BY DRAGGING PDF FILES

DRAG AND DROP

Individual PDFs or folders can also be dragged from your computer into your Mendeley Desktop.

Mendeley will try to automatically extract the citation information.

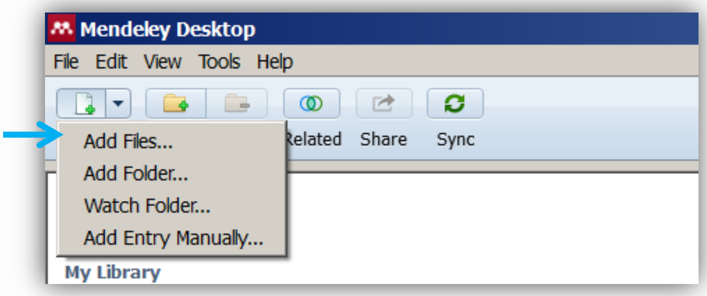
Verify that the information is accurate and full. Missing details can be added manually by typing them in the relevant fields:



**Not all PDFs will automatically convert into Mendeley records.*

ADD FILES/FOLDER

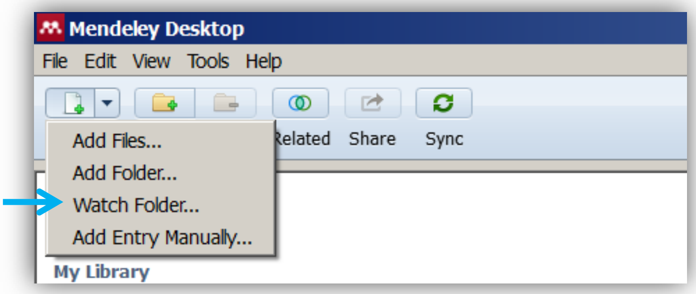
Click on the *'Add Files'* button to the top left of the screen and navigate to the folder where the PDF is stored. Select a document and click *'open'*:



WATCH FOLDER

References from *'Watch Folder'* on your computer will be added automatically to Mendeley Desktop.

To set up this option, create folder on your computer you want to be the dedicated pdf folder for automatic reference import. Then click on the *'Add Files'* button to the top left of the screen of Mendeley Desktop and navigate to this folder:

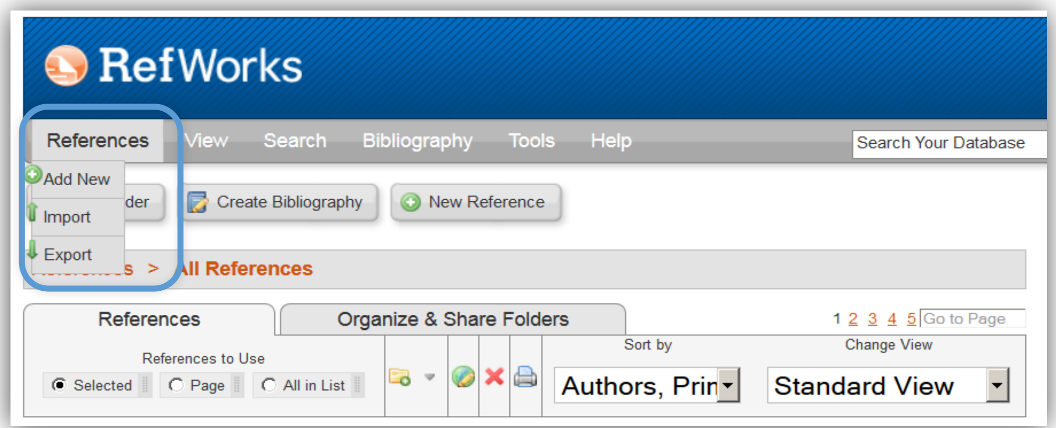


ADDING REFERENCES FROM EXISTING SOFTWARE (REFWORKS)

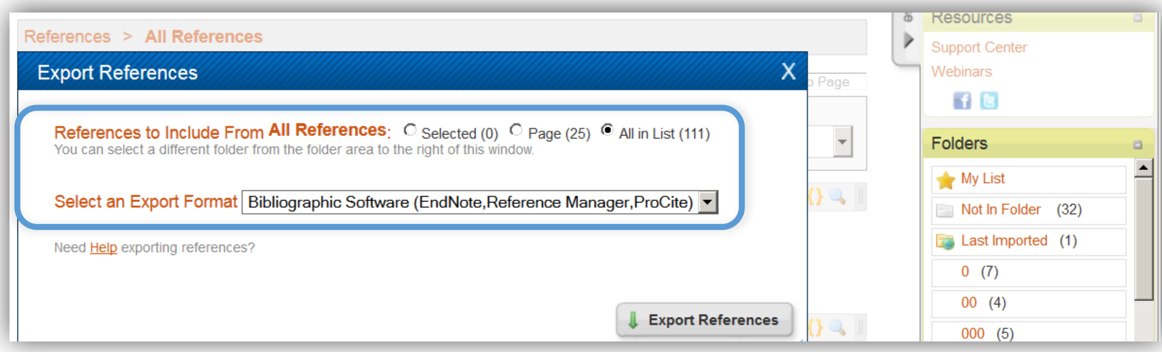
EXPORT YOUR LIBRARY

Log into your RefWorks account.

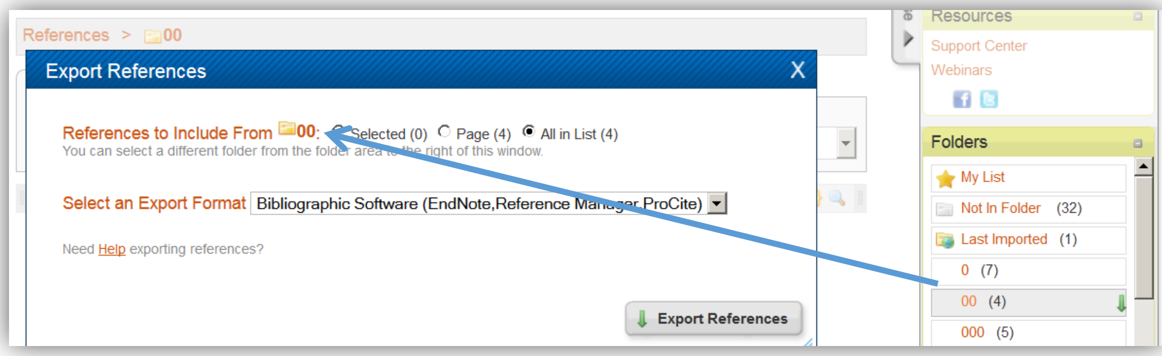
To export all references go to *'References'* menu and click *'Export'*:



Select *'Bibliographic Software'* as the export format and click 'Export References':



To export references from a special folder, click name of this folder from folders area to the right of the window:

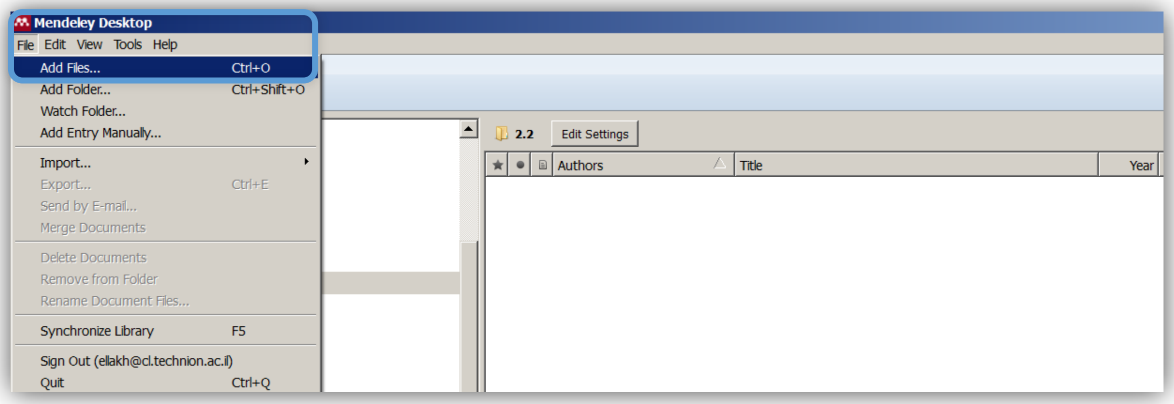


**Note: Alternatively you can export in BibTeX format*

IMPORT REFERENCES INTO MENDELEY DESKTOP

Open Mendeley Desktop.

Go to File menu and click *'Add Files'*:

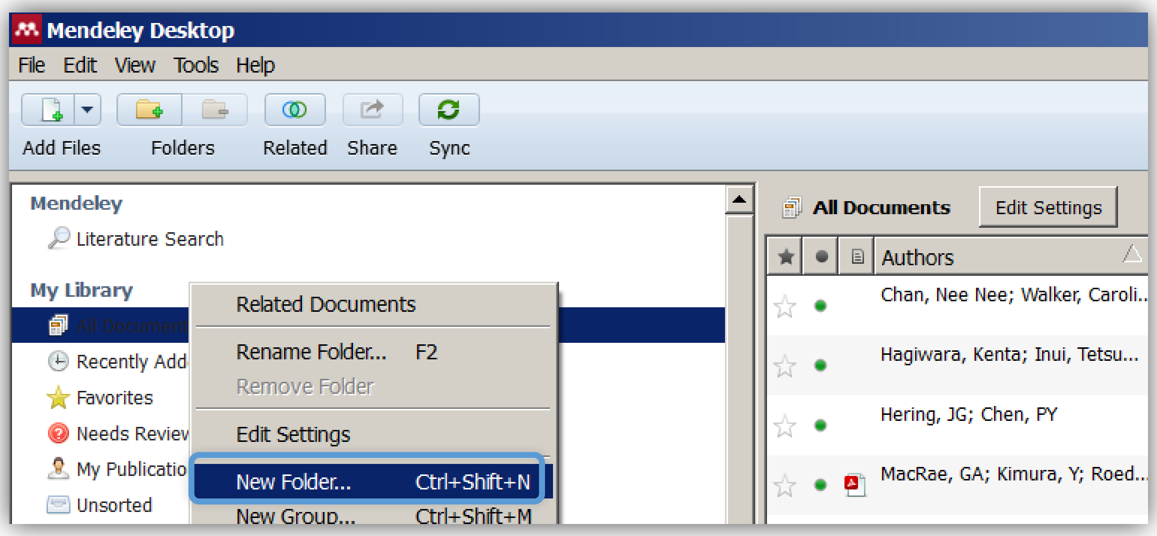


Select the file you exported from RefWorks.

All references should be imported automatically.

To import references by folder, you should firstly create a new folder in the Mendeley Desktop and select it while importing.

To create folders in Mendeley Desktop click right and choose *'New Folder'*:



**Note: To add PDF files from RefWorks to Mendeley you will need to download them manually and add them to Mendeley.*

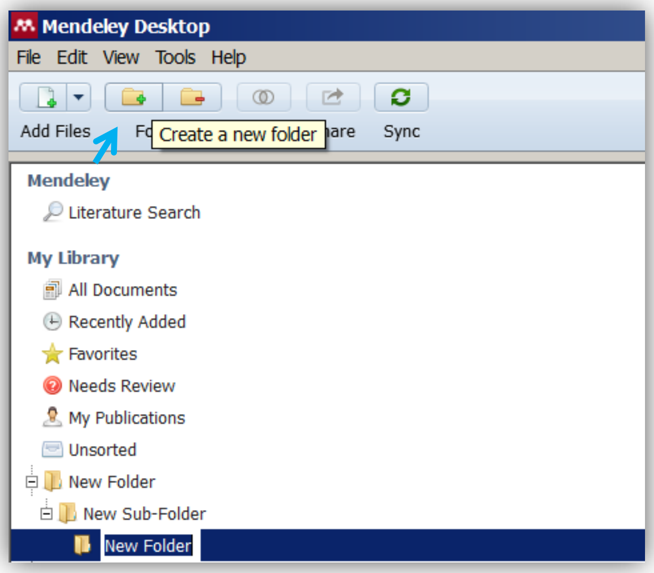
ORGANIZING MENDELEY LIBRARY

FOLDERS & SUB-FOLDERS

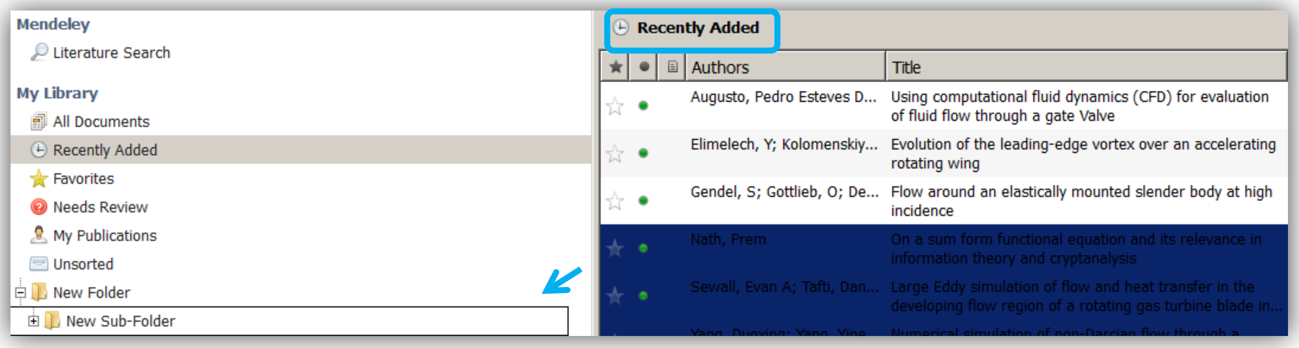
To organize your references, use folders & sub-folders.

To create folder, click on the *'Folders'* button to the top left of the screen (or right click in the left pane of the desktop) and create title for a new folder.

To create sub-folders stay on the folder for it you want a sub-folder, click on the *'Folders'* button (or right click in the left pane of the desktop) and create title for a new sub-folder.



To add references to the new folder/ sub-folder, drag them from the *'Recently Added'* folder:



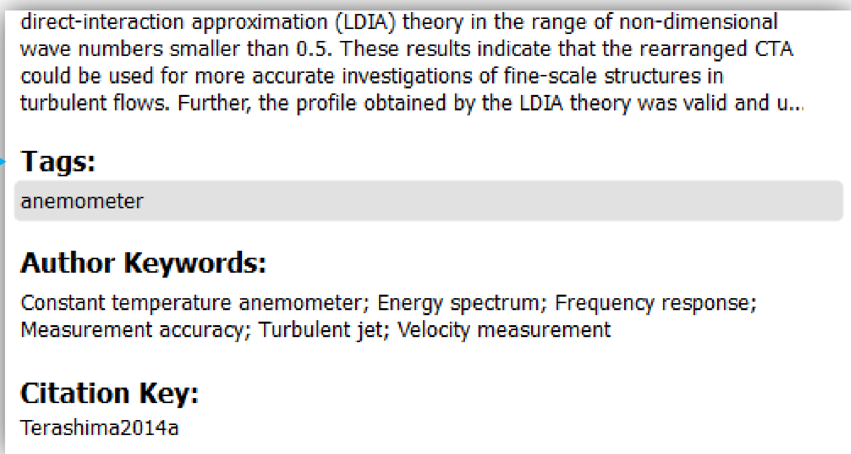
**References can be put in more than one folder.*

FILTERS

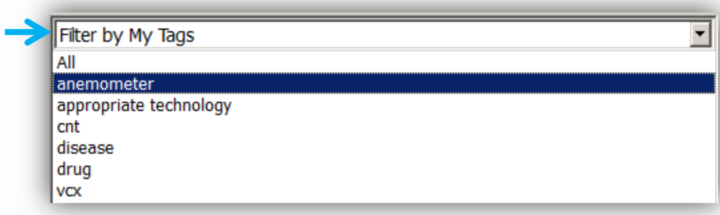
TAGS

To organize your references you can assign tags.

To add tag/tags to the reference you've added to your Mendeley desktop, click on the field *'Tags'* on the pane of record's details:



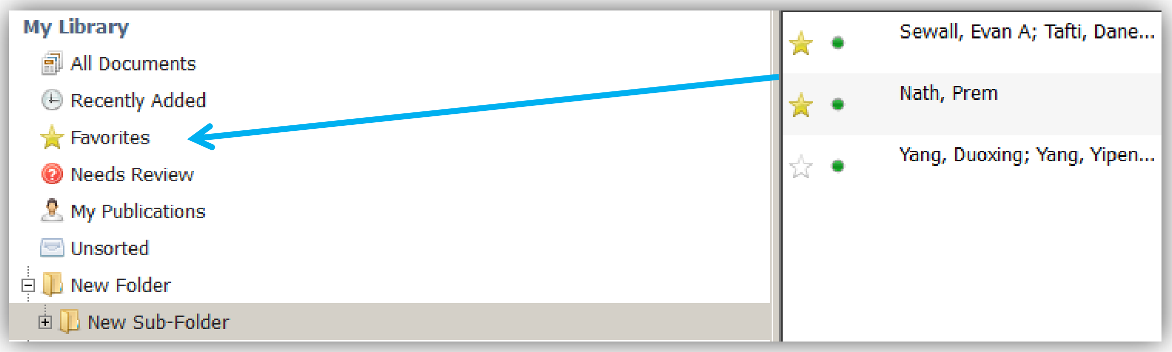
To find all articles with a particular tag, select *'Filter by My Tags'* from the drop-down list to the bottom left of the screen and click the appropriate tag:



**Some references you've added to your Mendeley desktop can come with tags already.*

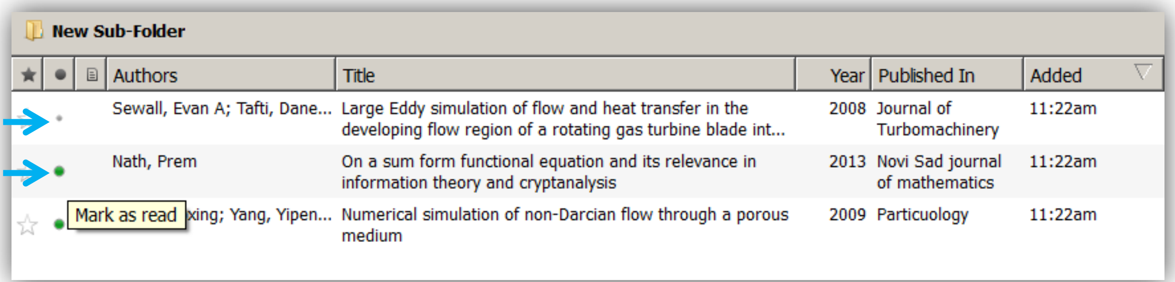
FAVORITES

Use star icon to mark favorite documents:



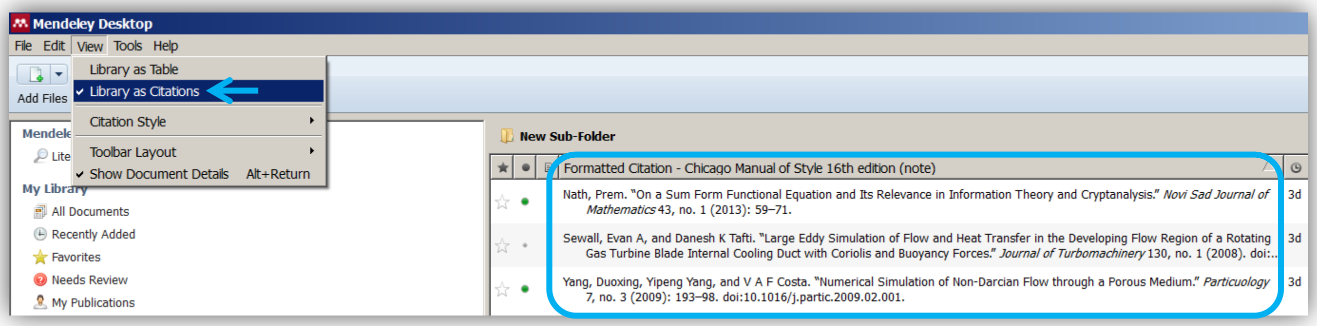
READ/UNREAD

Mark documents as read or unread using the green circle:

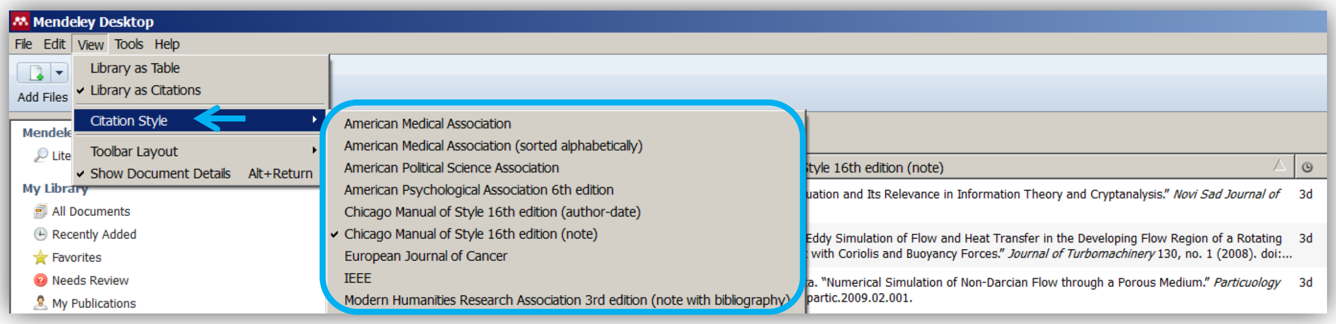


RECORDS VIEW

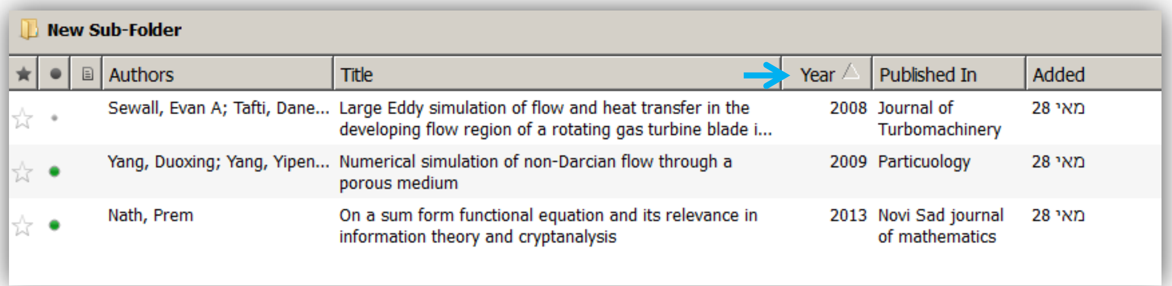
To change view of references (middle pane) to citation view, click on the *'View'* button on the Menu Bar and in the drop down menu select *'Library as Citations'*:



To change style of citation, select *'Citation Style'* and choose an appropriate style in this *'View'* drop down menu:

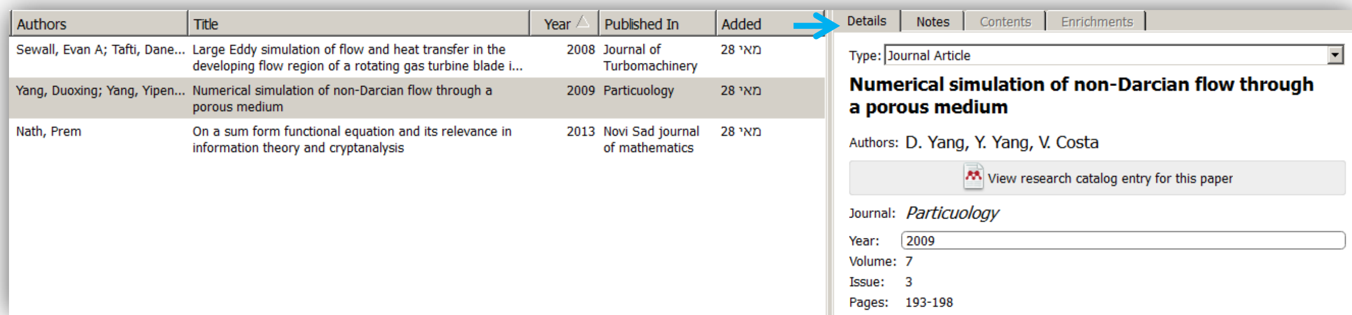


To sort references by type of document indicator (.pdf, MS Word, etc.), authors, title, year, publication or date added to Mendeley Desktop, click on any of these headers:



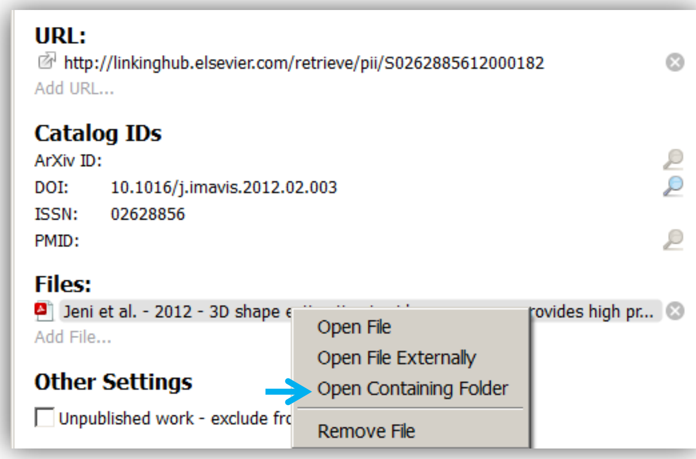
RECORD'S DETAILS

To add/ change details for a special record, click on the particular field on the *'Details'* tab:



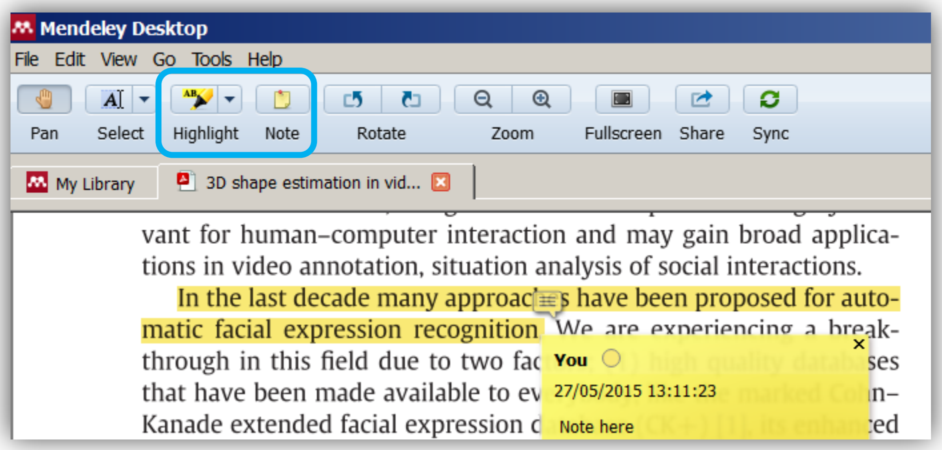
To attach PDF file to metadata, scroll down to the field *'Files'*, click *'Add File'*, navigate to the folder where the PDF is stored, select a document and click *'Open'*.

To check where Mendeley has saved PDF on your computer, right mouse click on a pdf and select *'Open Containing Folder'*:

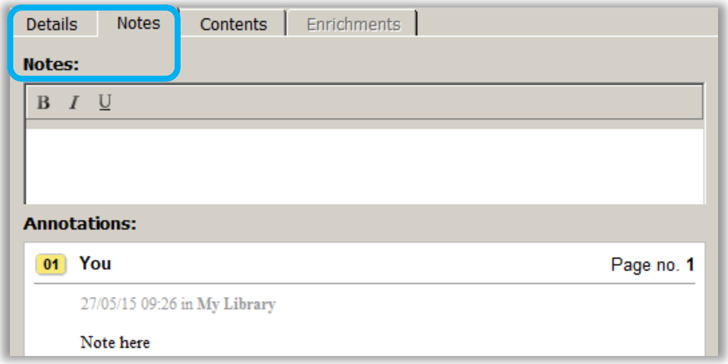


VIEW AND ANNOTATE PDFS

Once PDFs have been added to your Mendeley Desktop, you can click the PDF icon or double-click on the reference to read, highlight and annotate attached documents. The PDF will be opened by the PDF viewer in a separate tab:

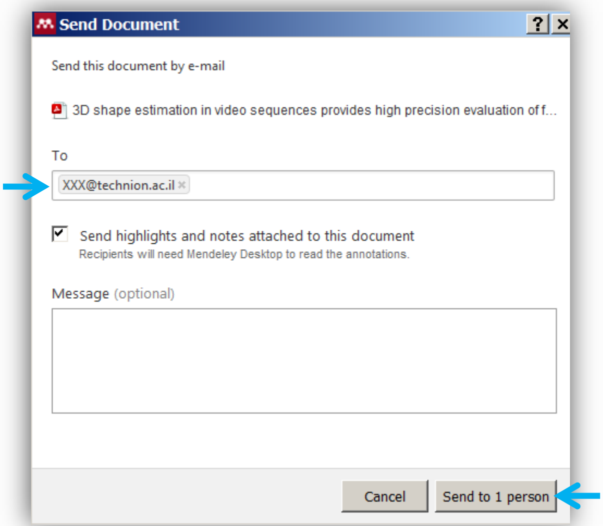


Your annotations can be viewed in the *'Notes'* tab, next to the *'Details'* tab on the right pane:



To share PDF file with annotations and notes, click *'Share'* button.

In the appeared pop-up window, enter e-mail of recipients and click *'Send to … person'*:



** It is only possible to share PDFs in Private Groups.*

SHARE

Create groups to share information with others.

There are 3 types of groups:

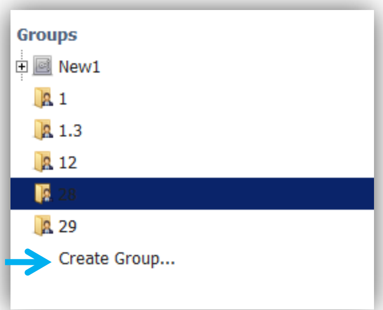
- ✓ Private Groups (content is visible only to invited members of the group)
- ✓ Public Invite-only Groups (content is visible to everybody, but only members can contribute to them)
- ✓ Public Open Groups (content is open, everybody can join and contribute to)

** Free version of Mendeley allows you to create 1 private group with 3 members.*

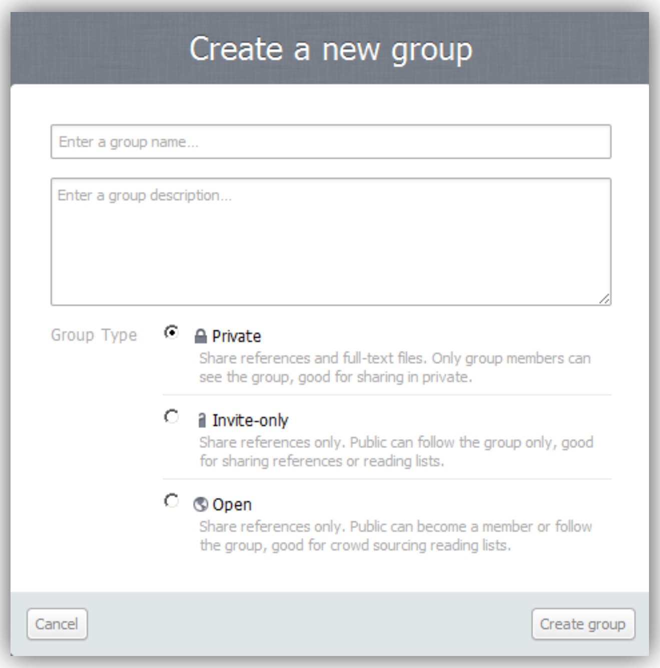
To create a group you can in 2 ways:

FROM THE DESKTOP

In the left panel of Mendeley Desktop, click *'Create Group*':



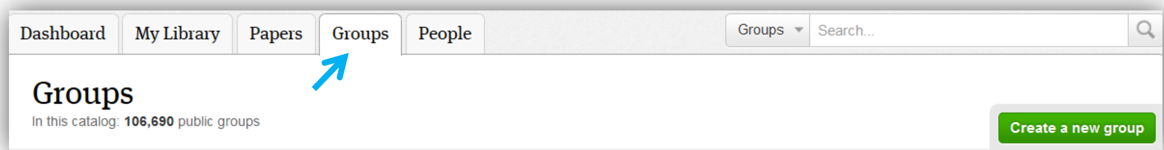
A pop-up window will appear. Create group name and description, and choose the type of group. Then, click *'Create group'*:



Enter the email addresses of the people you would like to invite to your group.

FROM THE MENDELEY WEB

Select the *'Groups'* tab and click *'Create a new group'* button in upper right corner:



ADDING REFERENCES TO A GROUP

To add references to the group, drag them from your Mendeley library.

**Attached documents can be dragged to private groups only.*

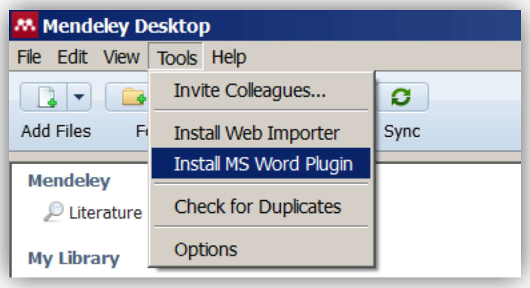
Click the Sync button in the toolbar to share references and documents with group members.

CREATE CITATIONS AND BIBLIOGRAPHY

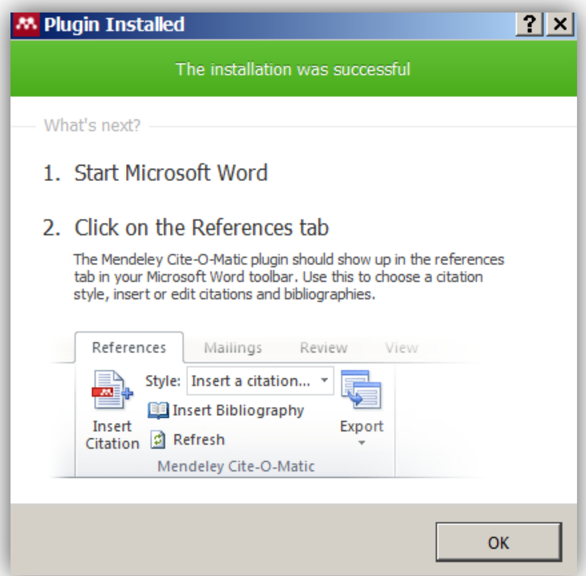
INSTALL MS WORD PLUG IN

To insert citations to a paper and to create a bibliography, you will need to install a citation plug-in.

To install a citation plug-in, click *'Install MS Word Plug In'* from *'Tools'* menu:



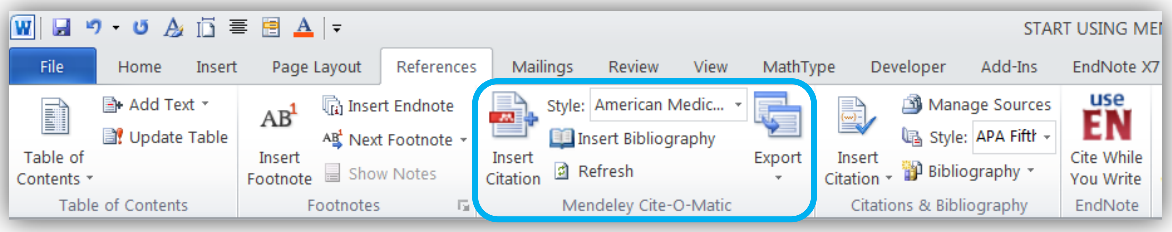
A pop up menu will appear indicating successful installation. Click *'Ok'* and open your MS Word document:



**Be noted, all office documents should be closed during installation.*

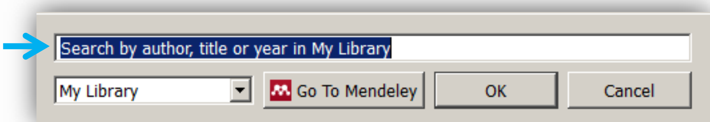
INSERT CITATIONS

The Mendeley Cite-O-Matic plug-in will appear in the *'References'* tab in the Word toolbar:

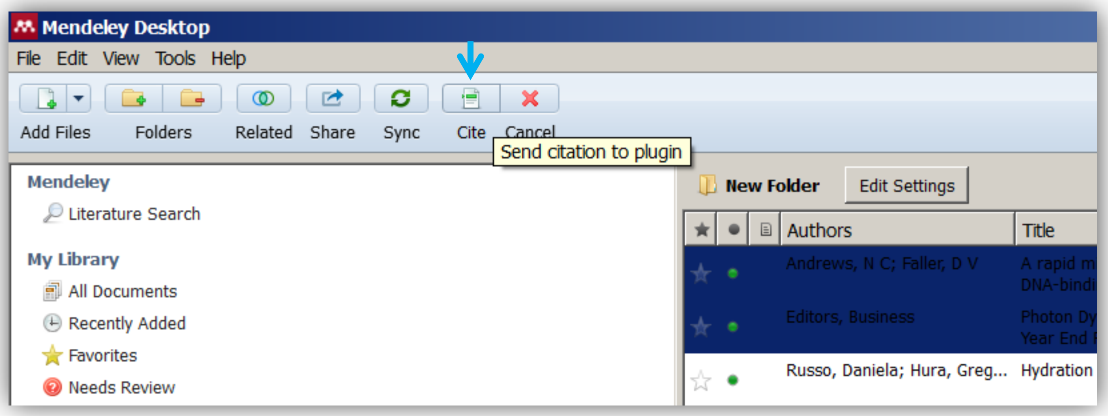


To insert a citation, place cursor where you want the citation in the document and click *'Insert Citation'*.

In the appeared search window, start to enter a search term to bring up the citation you need:



Or (advanced) click *'Go to Mendeley'* in the appeared window and select one or more references from the list. Then click *'Cite'*:



**References can be inserted from Groups as well.*

CREATE BIBLIOGRAPHY

To create bibliography, click *'Insert Bibliography'* button in the end of the document.

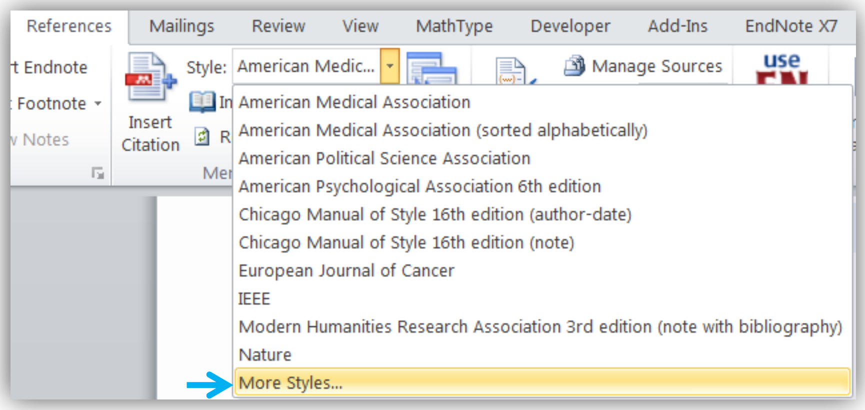
**New citations will be added automatically to created list.*

CITATION STYLES

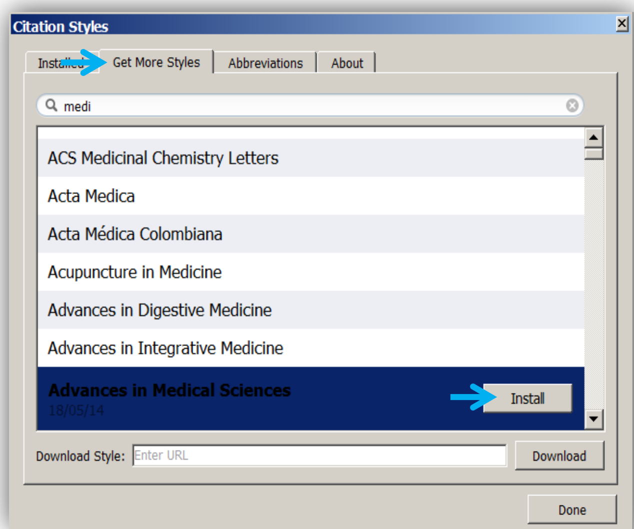
To change bibliographic styles, go to *'Styles'* in the Mendeley toolbar and choose a bibliographic style from the style dropdown list.

MORE STYLES

To download more styles to your Word list of styles, click *'More styles'*:



In the appeared window search for the style you need and download it:

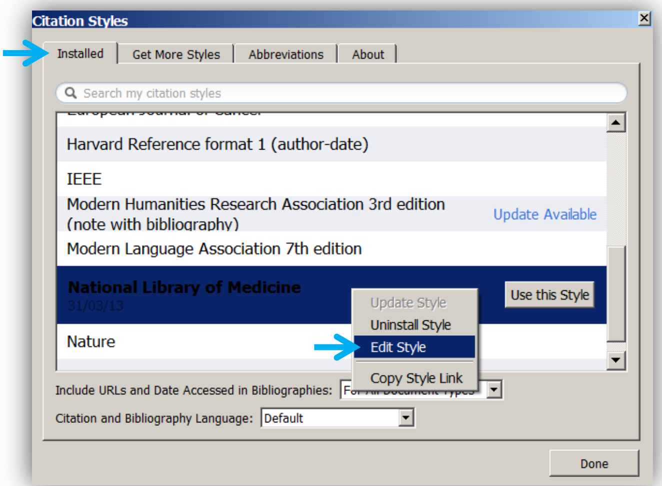


The downloaded style will be shown in your Word style's list.

EDIT RELATED STYLE

To edit related style, go to *'Citation Style Editor'* (CSL).

Right click on the style closest to the one you need from a list of styles that are currently installed and click *'Edit Style'*:

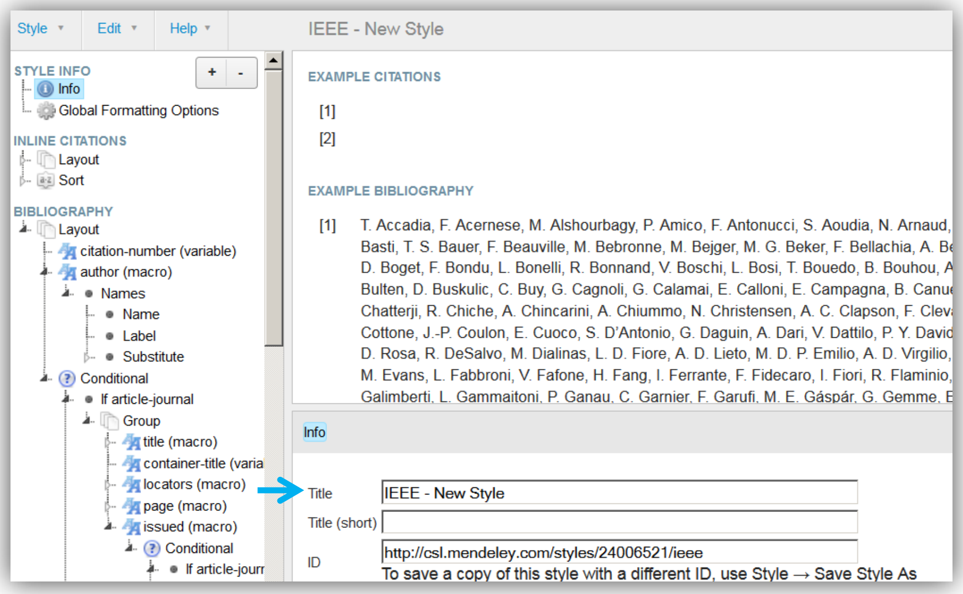


The style editor will ask for permission to access your account.

After authorizing the style editor will create a new style based on the one that was selected.

Automatically the title of the new style will include your name: *IEEE – Your Name*

To change the title, click in the Title box in the options below the example citation and enter the new title:

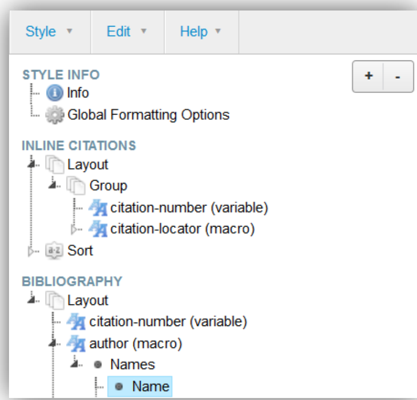


The style ID will be created automatically.

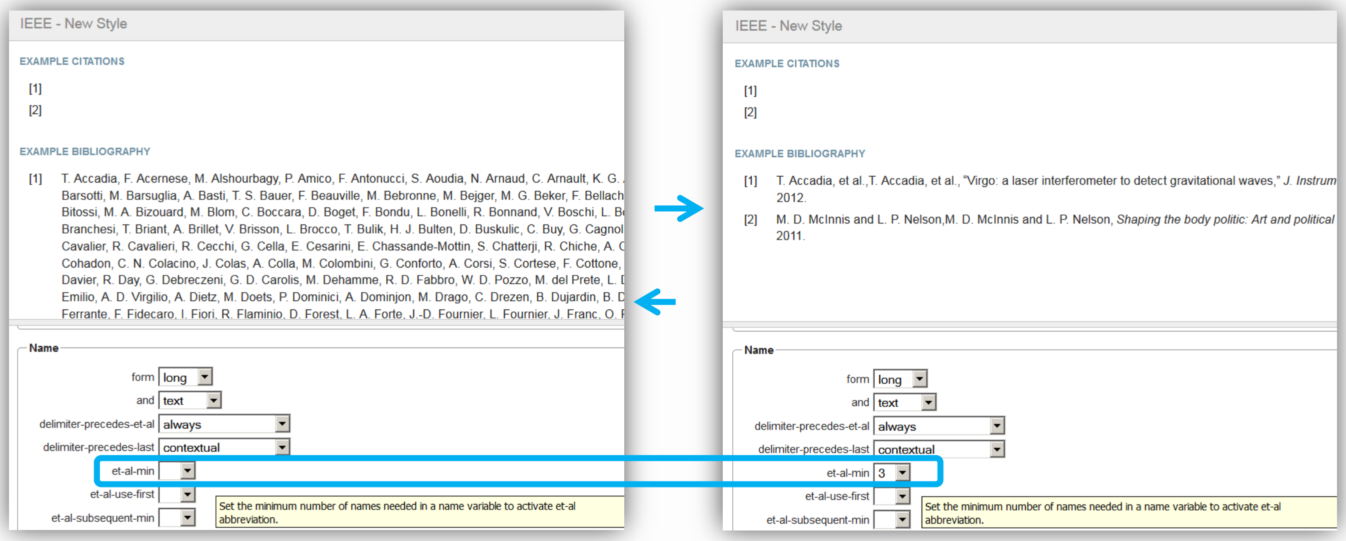
To make changes, click on the relevant part of the inline citations or bibliography entry on the left pane. The tool will open the options are available to be changed.

For example, to limit the number of authors shown in bibliography go to *'Bibliography'* section on the left pane.

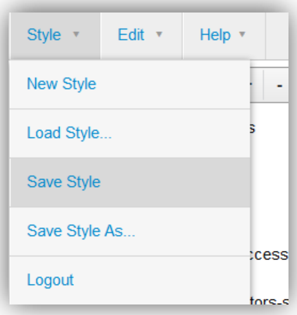
Select *'Author (macro)'* and choose *'Name'* in the *'Names'* section:



In the opened field *'et-al-min'* choose relevant number of authors to be shown:



To save your style, got to *'Style'* and from dropdown list select *'Save Style'*:



Kennesaw State University

University Information Technology Services

Microsoft Office Excel 2016 for Windows

PivotTables & PivotCharts

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University Information Technology Services

Microsoft Office: Excel 2016 for Windows

PivotTables & PivotCharts

Table of Contents

Introduction

This booklet is the companion document to the Excel 2016: PivotTables and Pivot Charts workshop. The booklet will explain PivotTables and Pivot Charts, how to create them, and how to use them to quickly analyze large quantities of data.

Learning Objectives

After completing the instructions in this booklet, you will be able to:

- Define PivotTables and Pivot Charts
- Insert PivotTables
- Insert Pivot Charts
- Filter information in your PivotTable and Pivot Chart
- Use Slicers

PivotTables

PivotTables are a powerful tool in Excel that will allow you to quickly summarize, sort, filter, and analyze data. They can handle large amounts of data in lists and tables by organizing data, on the fly, by different rows and columns. This is faster, and more flexible for analyzing your data, as you don't need to rely on formulas.

For example, you could have a spreadsheet that contains information on salespeople, products sold, regions, items sold, etc. Using a PivotTable, you can quickly organize the data so different relationships are visible (e.g. Who is the top salesperson? What product has sold the most?).

Salesperson	Product	Region	Customer	Date	Item Cost	No.Items	Total Cost
Vaughn, Harlon	Captain Recliner	NE	B&B Spaces	01/03/11	$ 340.95	9	$ 3,068.55
Norman, Rita	Media Armoire	SE	Home USA	01/03/11	$ 340.95	2	$ 681.90
Christensen, Jill	Bamboo End Table	NW	Ellington Designs	01/04/11	$ 79.99	7	$ 559.93
Norman, Rita	Bamboo Coffee Table	SE	Ellington Designs	01/05/11	$ 168.95	3	$ 506.85
Byrd, Asa	Bamboo End Table	SE	B&B Spaces	01/05/11	$ 79.99	12	$ 959.88
Owen, Robert	Chameleon Couch	SW	Ellington Designs	01/07/11	$ 799.95	13	$ 10,399.35
Maynard, Susan	Bamboo End Table	NE	Home USA	01/08/11	$ 79.99	10	$ 799.90
Norman, Rita	Chameleon Couch	SE	Home USA	01/08/11	$ 799.95	2	$ 1,599.90
Norman, Rita	Media Armoire	SE	Home USA	01/08/11	$ 340.95	6	$ 2,045.70
Norman, Rita	Media Armoire	SE	B&B Spaces	01/11/11	$ 340.95	13	$ 4,432.35

Figure 1 - Sample Sales Spreadsheet

Note: When working with PivotTables, the data should contain your titles in a single row, and the table should not contain any empty cells.

Creating PivotTables

The following will show you how to create a PivotTable using the sample sales spreadsheet as an example:

1. In the *Ribbon*, Click the **Insert** tab.

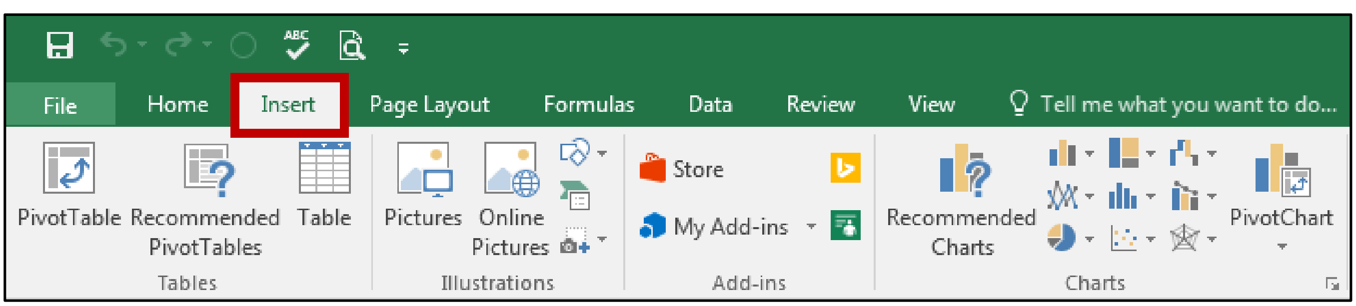


Figure 2 - Insert Tab

2. Under the *Tables* grouping, Click **PivotTable**.

Figure 3 - PivotTable

3. The *Create PivotTable* window will appear. Excel will automatically select the data it thinks you want to use to create your *PivotTable*.

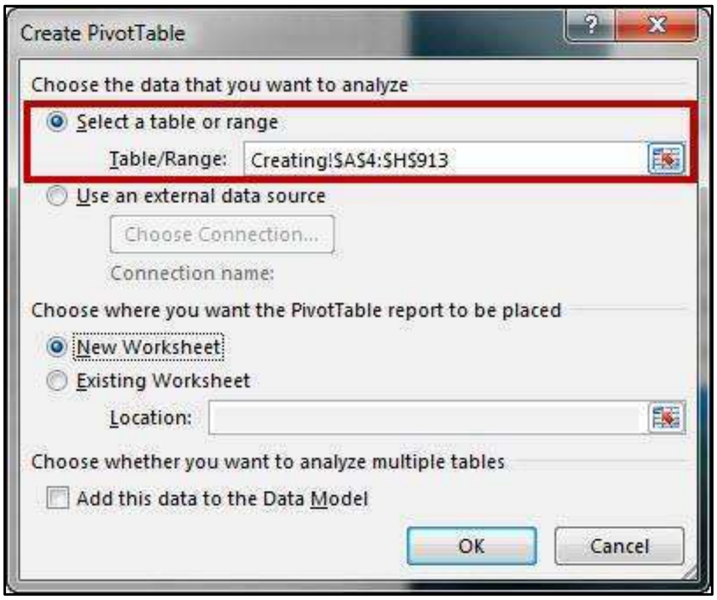


Figure 4 - Create PivotTable Window

Note: To select a different range from what Excel has suggested, Click the **cell selection** box and use the mouse to select a new range.

4. Under *Choose where you want the PivotTable report to be placed*, select **New Worksheet**.

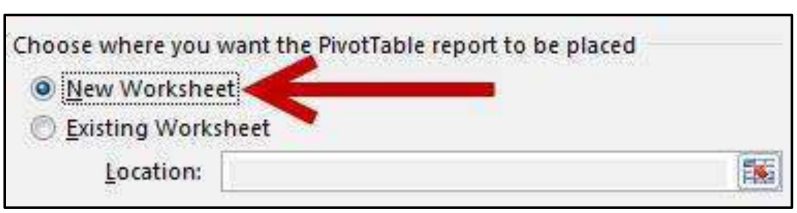


Figure 5 - Create PivotTable on a New Worksheet

5. Click **OK**.

6. The *PivotTable* will be created in a new worksheet.

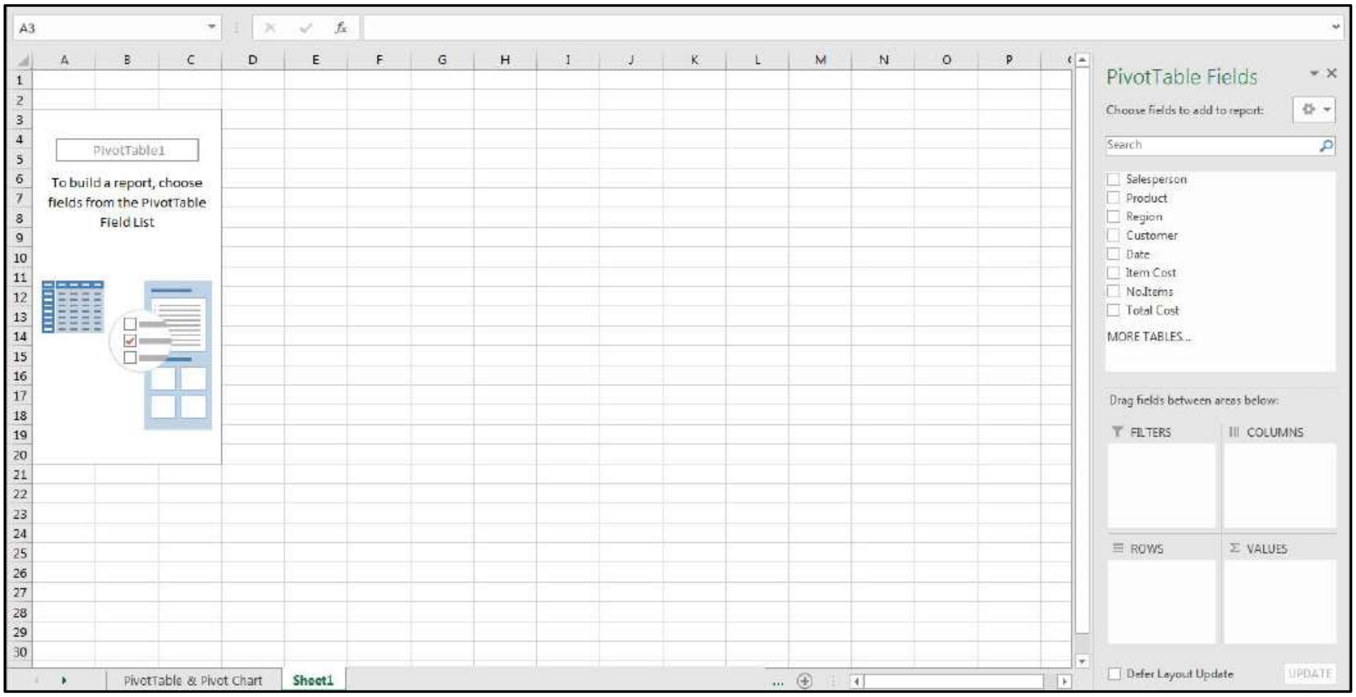


Figure 6 - New PivotTable Worksheet

7. The *PivotTable Fields* will appear on the right side of the screen.

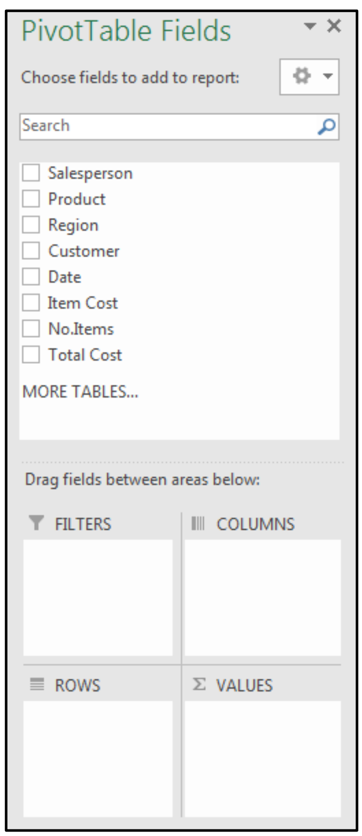


Figure 7 - PivotTable Fields

Analyzing Data with PivotTables

After creating your PivotTable, the *PivotTable Fields* list will display the data ranges that you selected, and four areas that will make up your PivotTable (Filters, Columns, Rows, and Values). You can quickly move fields in and out of these areas to view your data in different ways.

For example, we want to use the PivotTable to analyze the data and determine how many sales a salesperson has made of each product.

1. Drag-and-drop your **fields** into the *filter, column, rows, and values* boxes.
    a. **Filters** area fields are shown as top-level report filters above the *PivotTable* (See **Error! Reference source not found.**).
    b. **Columns** area fields are shown as *Column Labels* at the top of the *PivotTable* (See **Error! Reference source not found.**).
    c. **Rows** area fields are shown as *Row Labels* on the left side of the *PivotTable* (See **Error! Reference source not found.**).
    d. **Values** area fields are shown as summarized numeric values in the *PivotTable* (See **Error! Reference source not found.**).

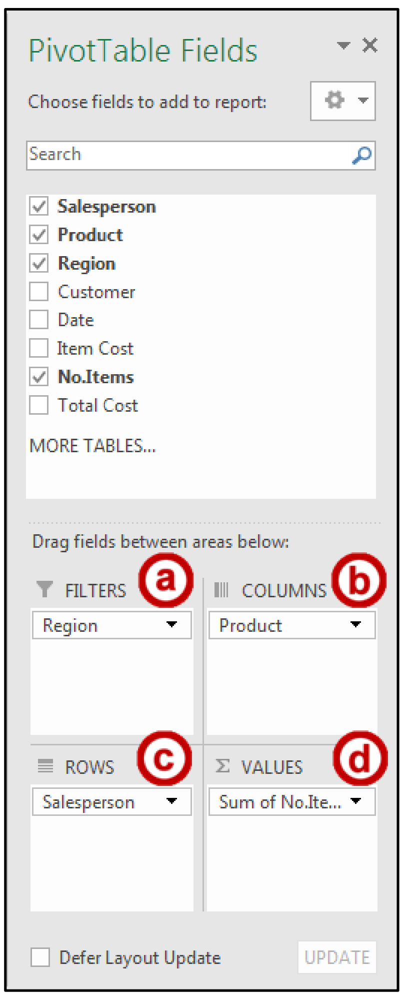


Figure 8 - Select PivotTable Fields

2. The PivotTable will change to show the fields in their respective locations, showing total sales for each sales person by product.

Region	(All)					
Sum of No.Items	Column Labels					
Row Labels	Bamboo Coffee Table	Bamboo End Table	Captain Recliner	Chameleon Couch	Media Armoire	Grand Total
Arnold, Cole	154	104	138	121	91	608
Byrd, Asa	150	69	155	101	110	585
Christensen, Jill	209	118	151	117	183	778
Kelly, Icelita	19	150	90	174	166	599
Leon, Emily	154	124	80	105	169	632
Livingston, Lynette	79	122	74	107	142	524
Lucas, John	77	130	75	172	62	516
Maynard, Susan	147	145	125	116	212	745
McCullough, Scott	93	62	72	90	121	438
Norman, Rita	134	145	79	128	172	658
Owen, Robert	157	120	150	249	170	846
Vaughn, Harlon	239	199	214	199	217	1068
Grand Total	**1612**	**1488**	**1403**	**1679**	**1815**	**7997**

Figure 9 - PivotTable Results

Filtering the PivotTable

The following shows how to filter information within a *PivotTable*:

1. Next to a *Field Header*, click the **drop-down** arrow.

Region	(All)			
Sum of No.Items	Column Labels			
Row Labels	Bamboo Coffee Table	Bamboo End Table	Captain Recliner	Chameleon Couch
Arnold, Cole	154	104	138	121
Byrd, Asa	150	69	155	101
Grand Total	**304**	**173**	**293**	**222**

Figure 10 - Drop-Down Button

2. A *Drop-down* menu will appear with values for the field listed below.

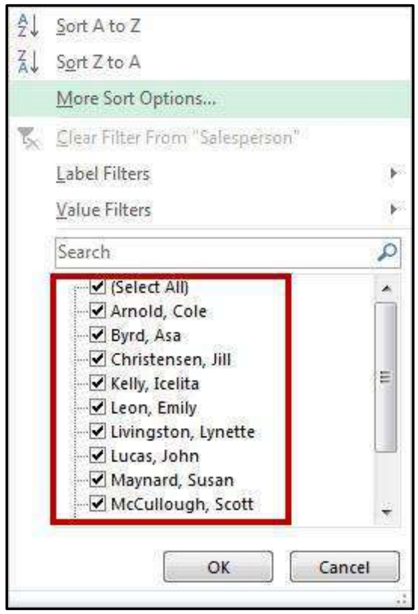
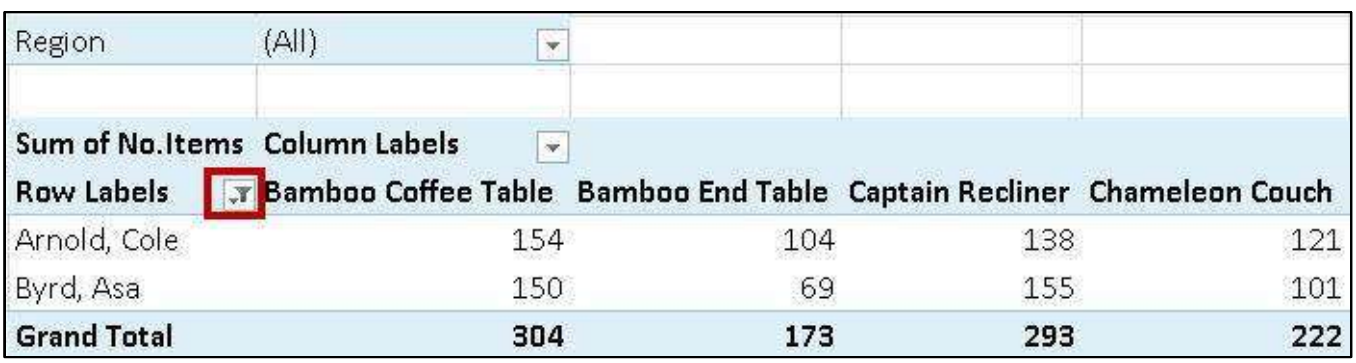


Figure 11 - Filter Values

3. Click the **checkboxes** to select/deselect values that you want to filter for.
4. Click **OK** to apply your filter.
5. A *filter* icon will appear next to the *drop-down* arrow to indicate a filter has been applied to the field.



Region	(All)			
Sum of No.Items	**Column Labels**			
Row Labels	**Bamboo Coffee Table**	**Bamboo End Table**	**Captain Recliner**	**Chameleon Couch**
Arnold, Cole	154	104	138	121
Byrd, Asa	150	69	155	101
Grand Total	**304**	**173**	**293**	**222**

Figure 12 - Filter Applied

6. To remove the filter, click the **drop-down** arrow.

7. The *drop-down* menu will appear. Click **Clear Filter From** to remove the filter.

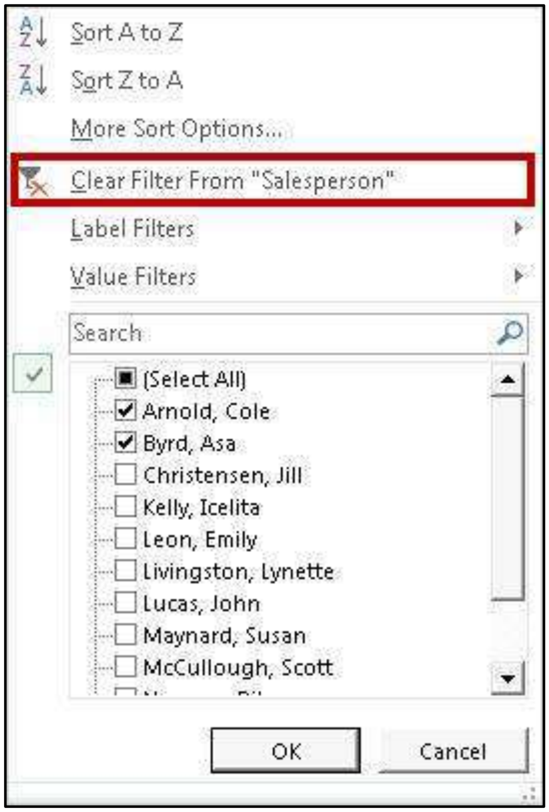


Figure 13 - Clear Filter From

PivotCharts

Similar to *PivotTables*, PivotCharts can be used to quickly summarize, sort, filter, and analyze large amounts of data, and display that data as a visual representation. After creating your PivotTable, you can create a PivotChart using a variety of available charts (e.g. Pie, Line, Bar) that uses the same field settings.

Creating PivotCharts

The following will show you how to create a PivotChart from an existing PivotTable:

1. Highlight the **data** you want to use for your PivotChart.
2. In the *Ribbon*, Click the **Insert** tab.

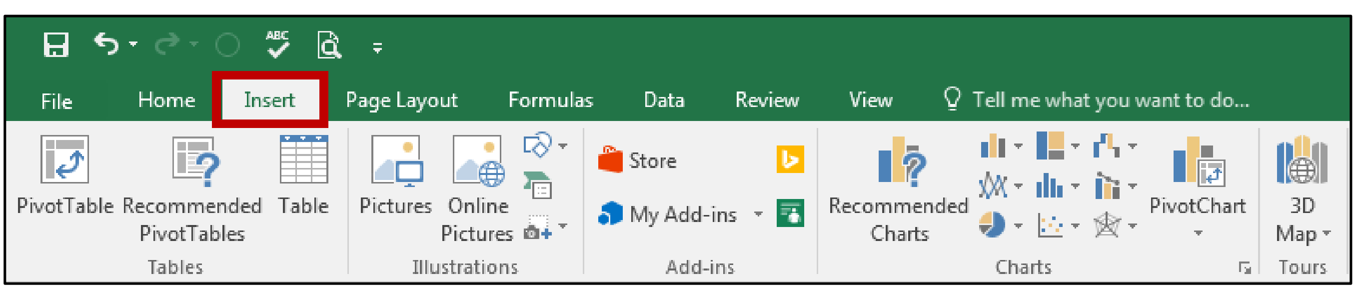


Figure 14 - Insert Tab

3. Under the *Charts* grouping, click **PivotChart**.

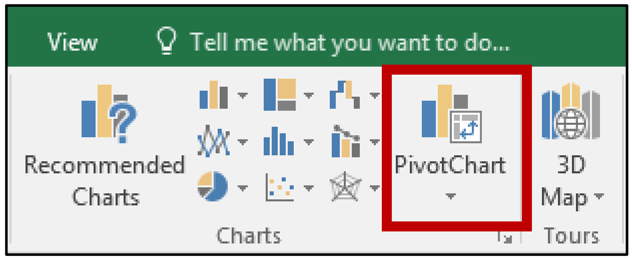


Figure 15 - PivotChart

4. The *Create PivotChart* window appears to allow you to change the data range, choose where you want the PivotChart to be placed, and choose whether or not you want to analyze multiple tables. Make your selections and click **OK**. In this example, a new worksheet will be created.

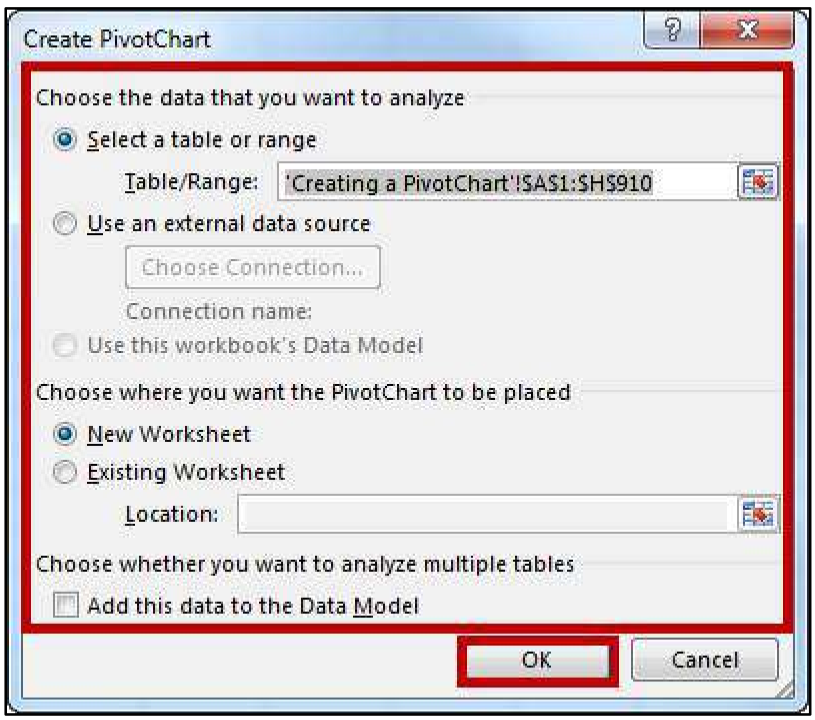


Figure 16 - Create PivotChart Options

5. The *PivotChart* will be placed into your workbook on a new worksheet.

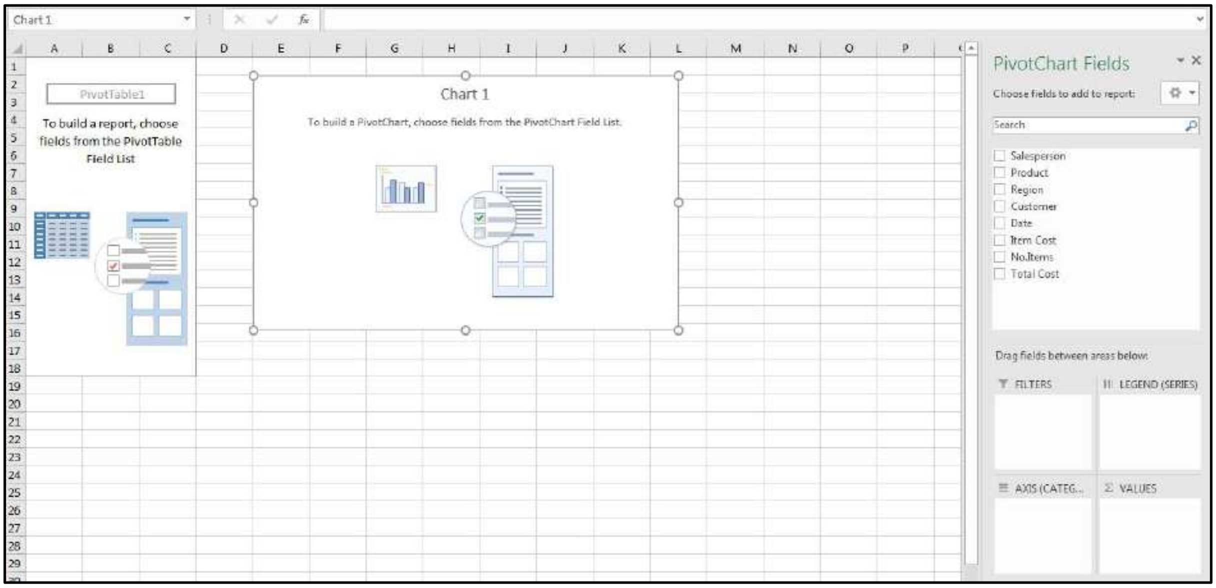


Figure 17 - New PivotChart Worksheet

6. The *PivotChart Fields* will appear on the right side of the screen.

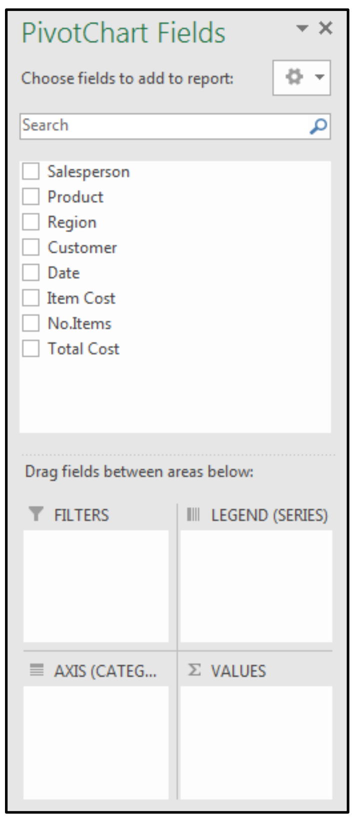


Figure 18 - PivotChart Fields

Note: You can alter the information that is displayed the same way as with PivotTables. See *Analyzing Data with PivotTables* for more information.

7. To change the chart type, click the **chart** and click the **Change Chart Type** in the Data grouping on the Design tab.

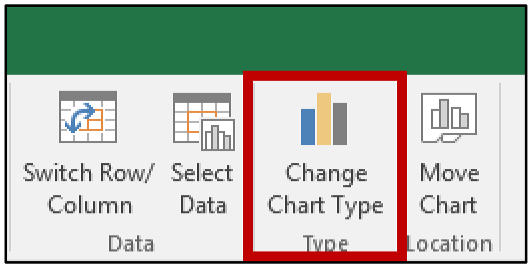


Figure 19 - Change Chart Type

8. Click a **Chart Type** (see Figure 20).
9. Click the **Chart Style** you want to use (see Figure 20).
10. Click **OK** to save the selection (see Figure 20).

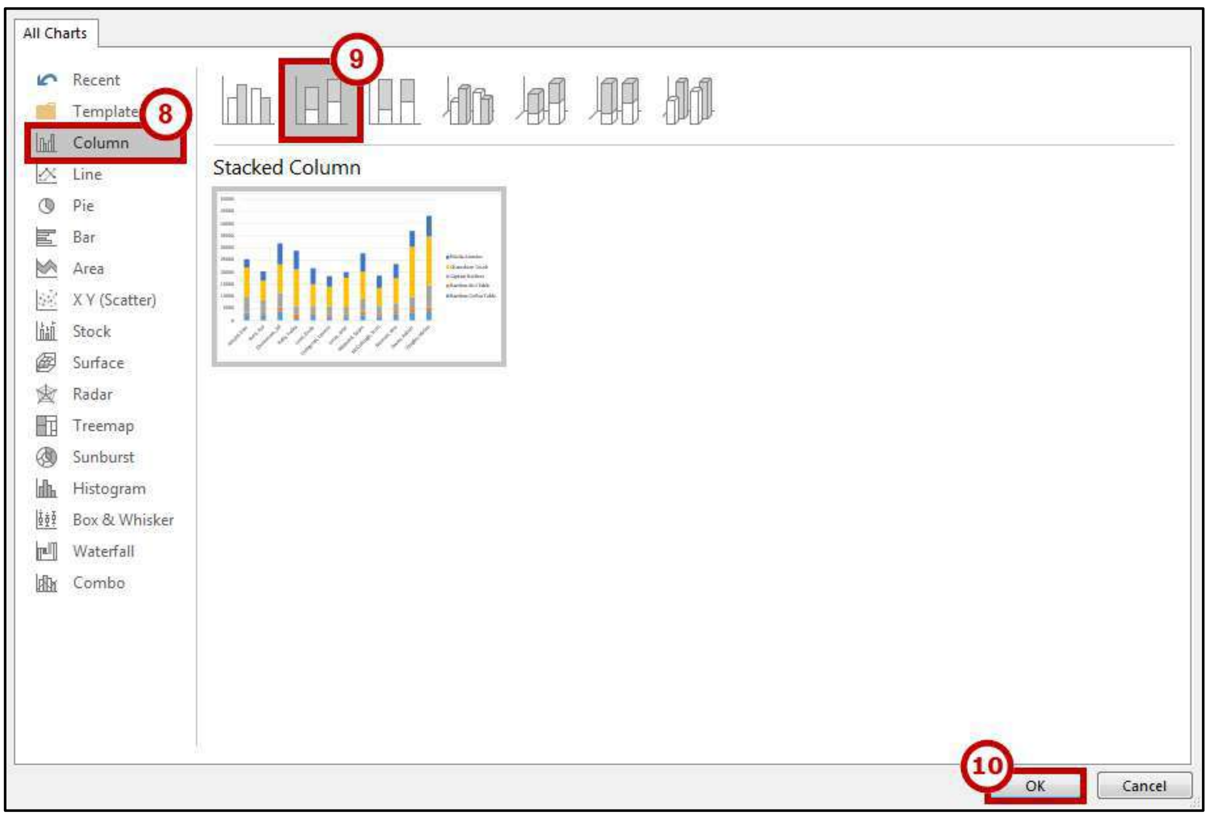


Figure 20 - New Chart Selection

Filtering the PivotChart

The following shows how to filter information within a *PivotChart*:

1. Next to a *Field Header*, click the **drop-down** arrow.

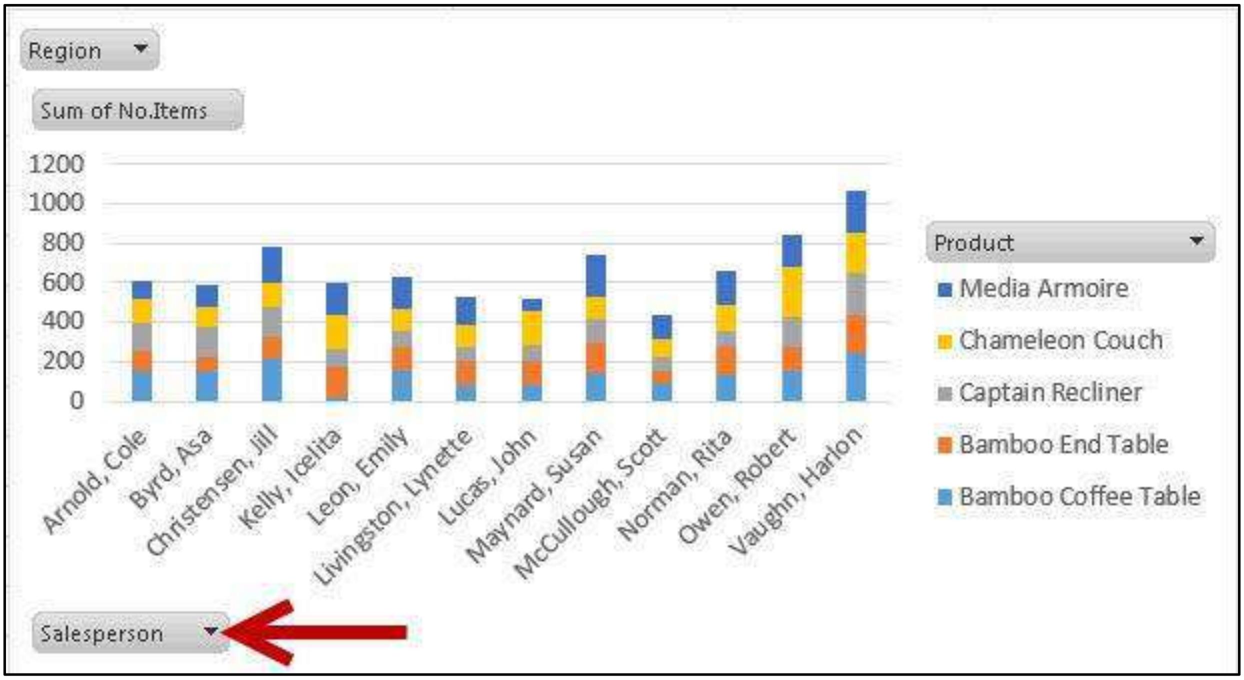


Figure 21 - Drop-Down Button

2. A *Drop-down* menu will appear with values for the field listed below.

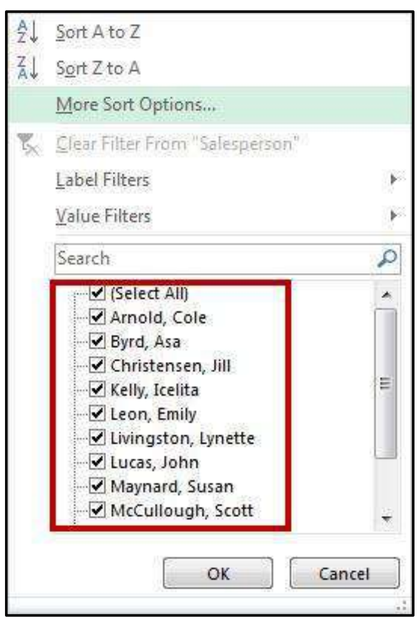


Figure 22 - Filter Values

3. Click the **checkboxes** to select/deselect values that you want to filter for.
4. Click **OK** to apply your filter.

5. A *filter* icon will appear next to the *drop-down* arrow to indicate a filter has been applied to the field.

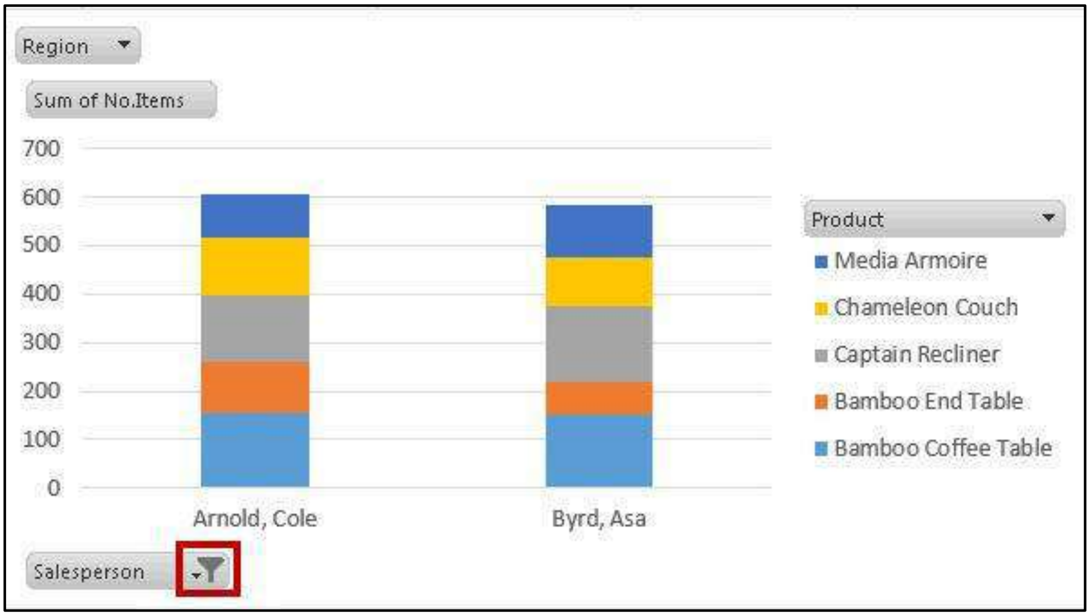


Figure 23 - Filter Applied

6. To remove the filter, Click the **drop-down** arrow.
7. The *drop-down* menu will appear. click **Clear Filter From** to remove the filter.

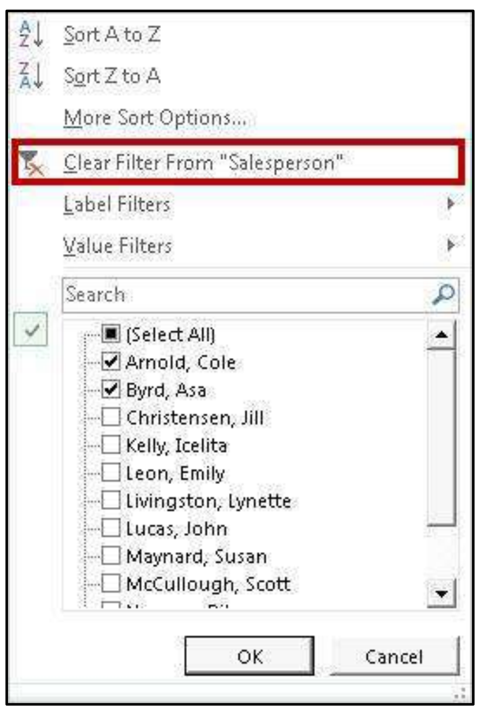


Figure 24 - Clear Filter From

Using Slicers to Filter Data

Slicers can provide greater control over your PivotTable or PivotChart when you are analyzing your data. Slicers work similar to filtering your information, but allows you to insert tables that you can use to quickly select values to filter/unfilter. They will show what is currently shown/not shown at a glance. Slicers can also be adjusted to change their size and color to make them more presentable.

Inserting Slicers into your PivotTable or PivotChart

The following explains how to insert Slicers into your *PivotTable*:

1. Click within your **PivotTable** to select it.
2. In the *Ribbon*, Click the **Insert** tab.

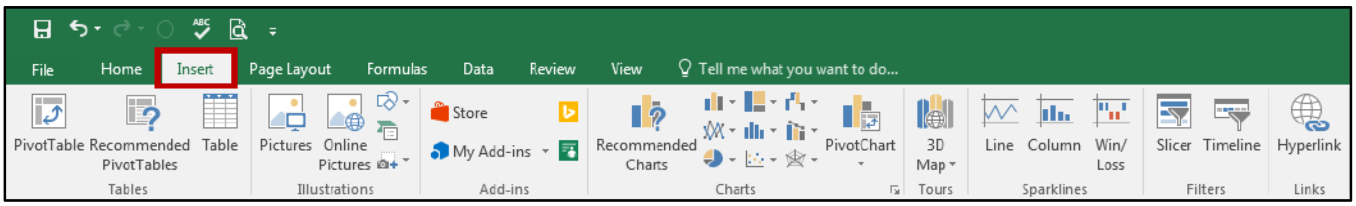


Figure 25 - Insert Tab

3. Under the *Filters* grouping, click **Slicer**.

Figure 26 – Slicer

4. The *Insert Slicers* window will appear with a list of your available fields.

Figure 27 - Insert Slicers Window

5. Click the **checkboxes** next to the field(s) you want to create slicers for.
6. Click **OK**.

7. The **slicers** will be inserted into your spreadsheet.

Figure 28 - Slicers Inserted

8. Click and drag the **slicers** to reposition them as necessary.
9. To apply a filter from one of the slicers, click one of the **values**.

Figure 29 - Using a Slicer

Note: To select multiple values, hold down the **shift** key while clicking your values.

10. To remove values from your slicer, click the **Clear Filter** icon in the upper-right hand corner of the slicer.

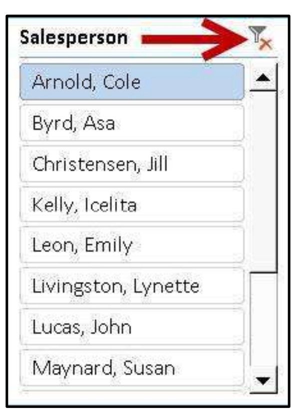


Figure 30 - Clear Filter from Slicer

Additional Slicer Options

When a Slicer is selected, the *Slicer Tools – Options* tab will be available in the *Ribbon*. From this tab, you can change the Slicer caption, style, and size of the buttons and window. The following explains how to access the *Slicer Tools – Options* tab:

1. Click the **Slicer**.
2. In the *Ribbon*, click the **Slicer Tools – Options** tab.

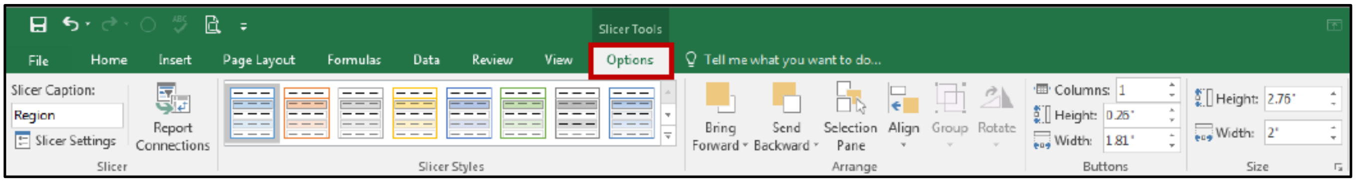


Figure 31 - Slicer Tools - Options Tab

3. Additional Slicer tools will be displayed. From here you can alter the slicer captions, styles, button, and window size.

Figure 32 - Additional Slicer Tools

Additional Help

For additional support, please contact the KSU Service Desk:

KSU Service Desk for Faculty & Staff

- Phone: 470-578-6999
- Email: service@kennesaw.edu
- Website: http://uits.kennesaw.edu

KSU Student Helpdesk

- Phone: 470-578-3555
- Email: studenthelpdesk@kennesaw.edu
- Website: http://uits.kennesaw.edu

UFHealth
INFORMATION TECHNOLOGY TRAINING

Office

Excel 2016
Charts and Graphs

training@health.ufl.edu

Excel 2016: Charts and Graphs

2.0 hours

This workshop assumes prior experience with Excel, Basics I recommended. Topics include data groupings; creating and modifying charts; chart types; source data; chart options; chart locations; formatting; adding trend lines and error bars.

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Updated: 02/07/2017

Charts

A chart helps you display your data into a graphical representation. There are many types of charts, but in this class we'll focus on simple column, line, and pie charts. There are examples of other charts near the end of this handouts.

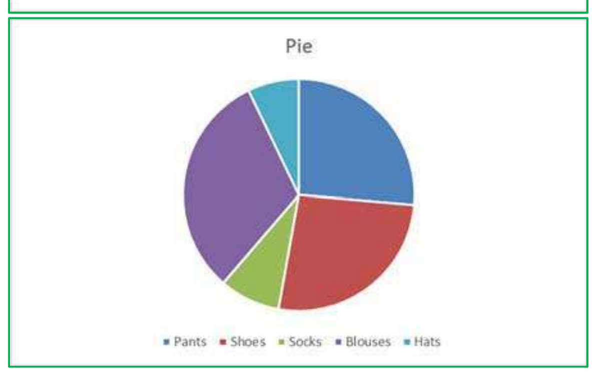
The first thing to know is the data has to be organized so Excel can understand what you are trying to chart. Excel will chart your data selection or your connected data range. As long as there are no blank columns and no blank rows within your dataset, you can skip selecting the cells.

Here is a dataset we will use in class:

Item	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Pants	456	489	423	468
Shoes	498	435	472	436
Socks	128	168	157	138
Blouses	579	498	531	589
Hats	126	129	123	119

This is a structured collection of related data set in a table format. When plotted onto a clustered column chart, like the one shown above, the titles in the first column of the dataset appear along our category axis. The titles in the first row appear within the legend. The values are represented by the height of each column.

Line charts are usually set up to go across a period of time, think *Time Line*. For this chart I've used the **Switch Row Column** tool so we can see the trend of the sales through the year. In this case our first column titles appear in the legend, and the first row of titles appears in our category axis.

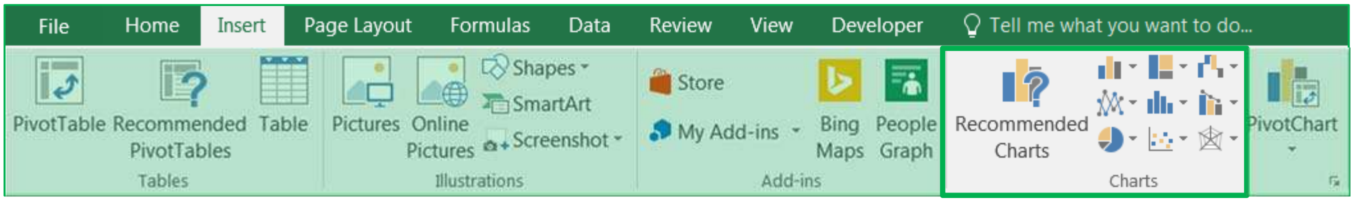


Pie charts are usually created to display the breakdown of the total values within the whole. Pie charts can only be based on one set of data. When you try to create one with the above dataset, you will only see the first value set appear within the chart. If you want to go to an extreme and have all four quarters show, try using a *Doughnut* chart.

Creating a Chart

To create a chart make sure your cursor is in the dataset you would like to plot. If you want a subset of the dataset, select that portion. You can use your Ctrl key to add to a current selection.

You will find the **Charts** group on the **Insert** tab. Click on any small chart button to see a list of possible charts.



If you are unsure of the best chart option for your data use the **Recommend Charts** button. It will open the Insert Chart window shown here.

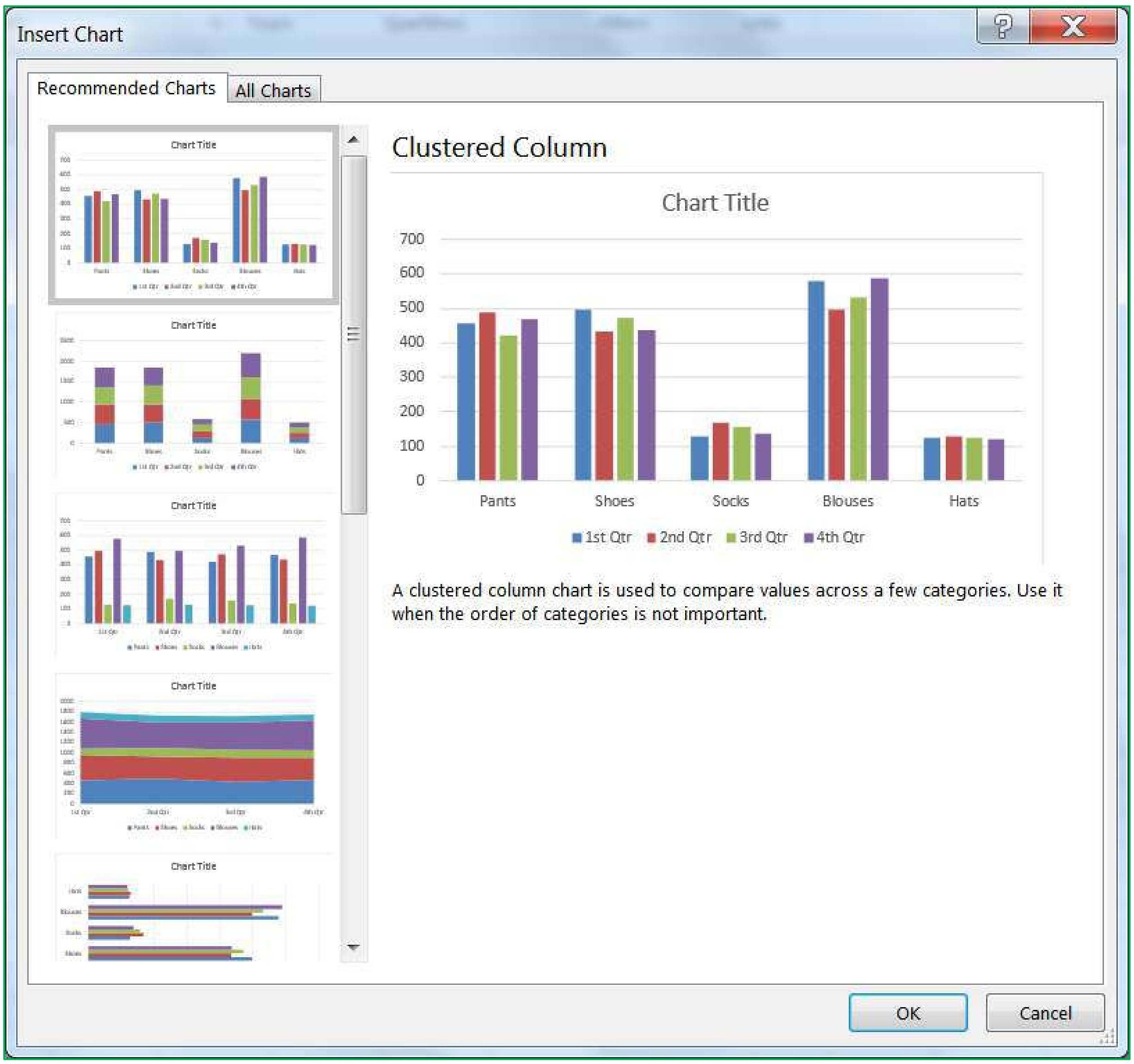
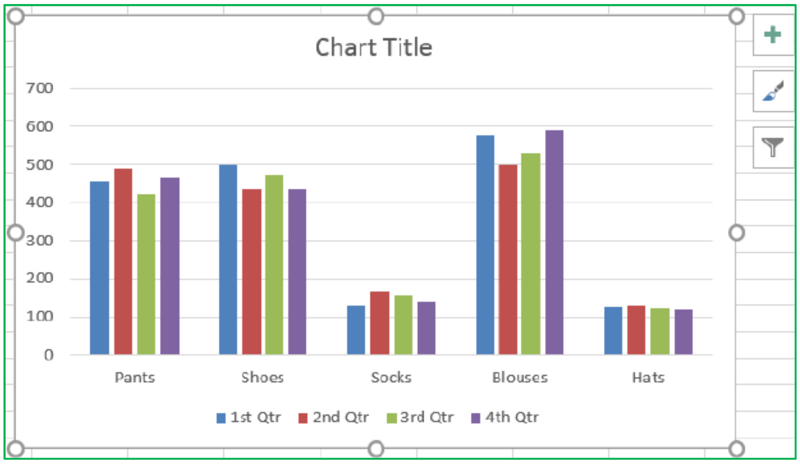
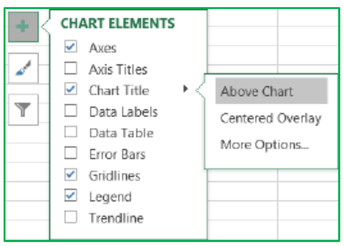


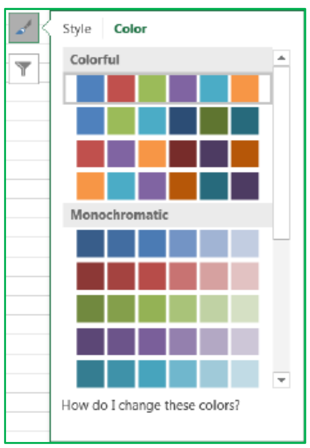
Chart Tools

When you select a chart, three buttons appear along the right side of the selection.





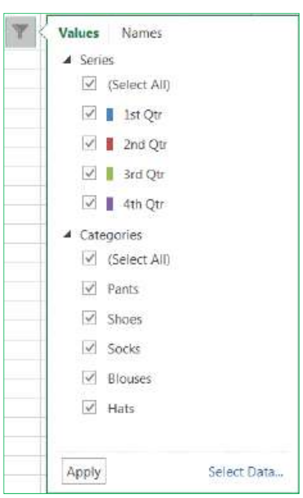
The plus sign is the **Add Chart Element** button. This option is used to add and remove different pieces of your chart. The list of options will vary depending on the type of chart. For example, a pie chart will not have a set of category axis titles. As you hover your mouse over each option, you will see a small arrow head pointing to the right. This will open another menu with more detailed choices. Each menu also has a "More Options..." button which will open a Format Pane on to customize each chart element.

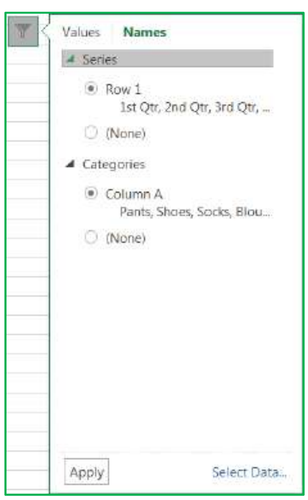


There is a *Chart Style Gallery* and a *Colors* menu on the *Design* tab, but the **Chart Styles** button, the paint brush next to the chart, offers the same options.

If you are patient while you hover over each option, Excel will provide you with a Live Preview of the result.

The **Color** options are available at the top of the menu.





The third button is a funnel. This is a **Chart Filters** button.

The **Values** group allows you to add and remove data points from the chart.

The **Names** page allows you to change the labels that appear in the legend (series) and axis titles (category).

The **Select Data...** option at the bottom of the window opens the same window as the *Select Data* button on the *Design* tab. From there you can change or adjust the range of cells used to create this chart.

Chart Tool Tabs

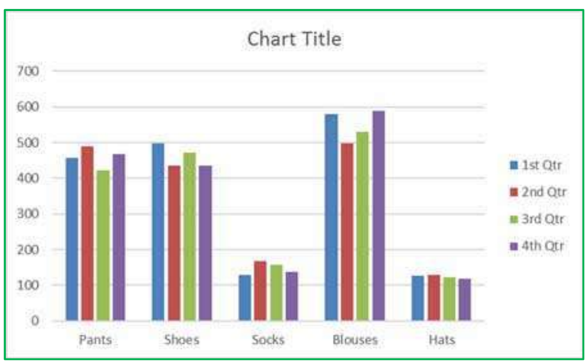
When a chart is selected two chart tool tabs appear at the end of the ribbon, **Design** and **Format**.

Design Tab

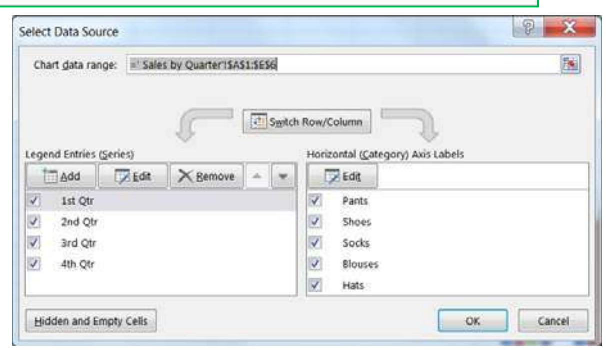
1 2 3 4 5 6 7 8

1. **Add Chart Element** – A menu of chart elements that can be added or removed to the chart. Each option will have a expand arrow at the end of the element name that will provide specifics and a **More Options** button to open the Format Pane. This is the same as the Add Chart Element button that appears next to the selected chart.
2. **Quick Layout** – A variety of layouts that offer suggested views and choices that adjust the chart elements such as adding a title, varying the space between columns, and moving the legend.
3. **Change Colors** – Different color that can be applied to your chart. Changing the Theme on the *Page Layout* tab will give you a different sets of colors.
4. **Chart Style Gallery** – Different chart styles that can be applied to your chart. Because Excel automatically adjusts the Ribbon to fit on your screen, your copy of Excel may show less options than the picture above. Use the scroll arrows and open menu buttons at the right side of the gallery for more.
5. **Switch Row/Column** – Changes the direction the chart looks at the data. In our column chart, each column is plotted on the chart, when we **Switch** each row is plotted. We are swapping the category labels with the legend labels.

Item	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Pants	456	489	423	468
Shoes	498	435	472	436
Socks	128	168	157	138
Blouses	579	498	531	589
Hats	126	129	123	119



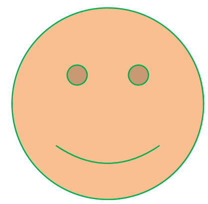
6. **Select Data** – Opens a Select Data Source window where you can customize the source of the chart data, even edit the labels. Use this window to reorder your legend and change how Line charts deal with blank cell values.



7. **Change Chart Type** – Opens Insert Chart window where you can change to other chart types. If you have multiple series you can change each to be different chart type by choosing the ***Combo*** chart type from the bottom of the left pane.
8. **Move Chart** – By default when you create a chart it is placed on the same worksheet as your data set. You can move the chart to its own worksheet or to any existing worksheet with the workbook.

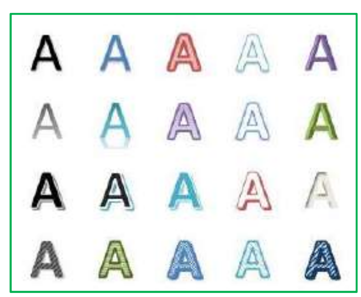
Format Tab

1. **Current Selection**
    a. Chart Elements – This box shows the currently selected Chart Element, and the menu provides a list of the major chart elements. Choose an item from this list to select that element.
    b. Format Selection – Opens the Format Pane based on the current selection shown in the Chart Elements box.
    c. Reset to Match Style – Changes the current selection to match the original style of the chart.
2. **Insert Shape**



    a. Shape Gallery – Use this gallery to find a shape such as a block arrow to add to your chart.
    b. Change Shape – Use this tool to change the current shape to a different one, perhaps a rectangle into a rounded rectangle.
3. **Shape Styles**

    a. Style Gallery – Different shape styles, options will vary based on the current selection.
    b. Shape Fill – Menu of the most common fill colors and options, such as pictures and textures. For more options, open the Format Pane.
    c. Shape Outline – Menu of the most common outline colors and options, such as dashes and arrows. For more options open the Format Pane.
    d. Shape Effects – Menu of the most common shape effects, such as shadows. For more options open the Format Pane.
4. **WordArt Styles**



    a. WordArt Gallery – Different WordArt styles
    b. Text Fill – Menu of the most common fill colors and options, such as pictures and textures.
    c. Text Outline – Menu of the most common outline colors and options, such as dashes and line weight.
    d. Text Effects – Menu of the most common Text effects, such as shadows. For more options open the Format Pane.
5. **Arrange** – Change the alignment and arrangement of multiple charts. Use the **Shift** key to select more than one chart at a time.
6. **Size** – Change the height and width of the chart.

Format Pane

There are multiple ways to open the Format Pane.

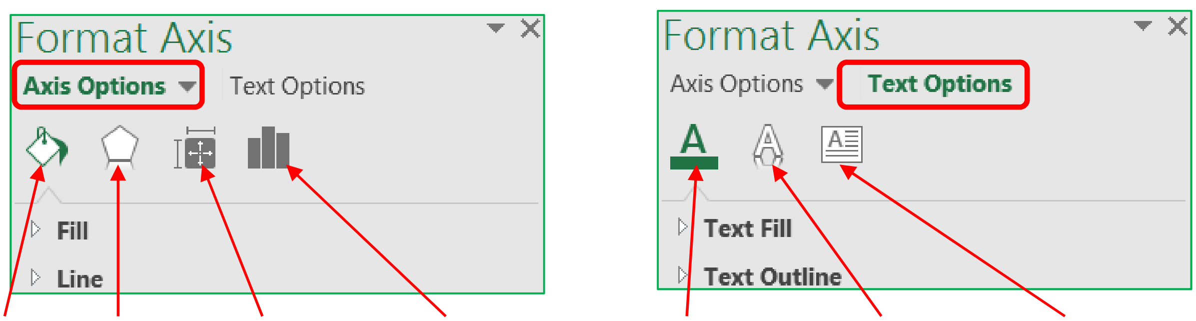
- Click on the **Format Selection** button in the *Format* tab
- Click on **More** option from any menu
- Right-click on a chart element and choose **Format…**
- Double-click on a chart element

The format pane can remain open for as long as you need it. The properties shown change depending on the current selection. The current selection is shown on the Format tab and in the title of the Format Pane.

The pane can be pulled free from the side by dragging the title toward the middle of the window. To return the pane to the side of the window drag it back into place or double-click the title of the Format Pane.

To close the pane, click on the X in the upper right hand corner. If you accidentally close the pane, use any method above to reopen it.

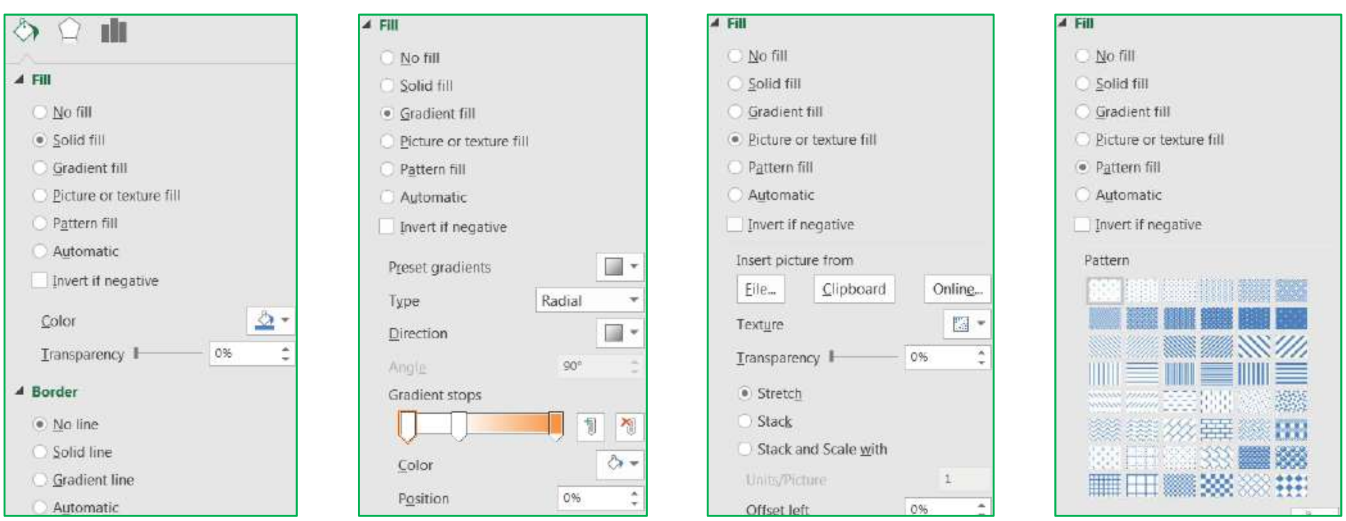
Within the Format Pane, click on each icon to see the subset of properties. Click on the expand arrow in front of the options to see the relevant properties.



Fill & Line **Effects** **Size & Properties** **Options** **Text Fill & Outline** **Text Effects** **Text Box Options**

The Fill & Line and Effects options are the same for all the of the chart elements. If an option cannot be applied to that chart element, Excel will disable (grey out) that option.

Below are the fill options for a Chart Element. Each **Fill** choice provides a new set of options.



How do I …?

Change Axis Numbers

Select the Axis by clicking on a number in the area. Open the Format pane, be sure the title says **Format Axis**.
Click on the Options button.

From here you can:

- Change the **Minimum** and **Maximum** numbers shown. These can be greater than the minimum and less than the maximum if you want.
- Change the **Major** unit, this is how the displayed number is chosen. If the major unit is 100 the chart axis will read 100, 200, 300. If it's 25 the chart will show 25, 50, 75.
- Change the **Display Units** to Thousands, Millions, Billions. This will change the unit shown in the labels and data tables as well.
- Change the **Format** of the numbers; number of decimals, include a dollar sign, etc.

Change Distance Between Columns

Select any column. Open the Format pane, be sure the title says **Format Data Series**.
Click on the Options button.

From here you can:

- Change the selected series to be on a **secondary axis**
- Change the distance the series **overlap**
- Change the **width between** the each category grouping

Explode a Pie Chart

In the chart: Hover over a pie wedge. Click and drag the piece away from the center. To move one piece at a time, select the single pie wedge first, and then move it from the middle.

In the properties: Select a pie wedge. Open the Format pane, be sure the title says **Format Data Series**.
Click on the Options button.

From here you can:

- Change the rotation without changing the order of the data
- Change the explosion, how close the wedges are to each other

Add Trendlines and Error Bars

Select the chart. Click on the Add Chart Element button in the Design tab, or on the button next to the chart.

You can add your own custom error bars, if needed, from the error bar options. You do have to format one series of error bars at a time.

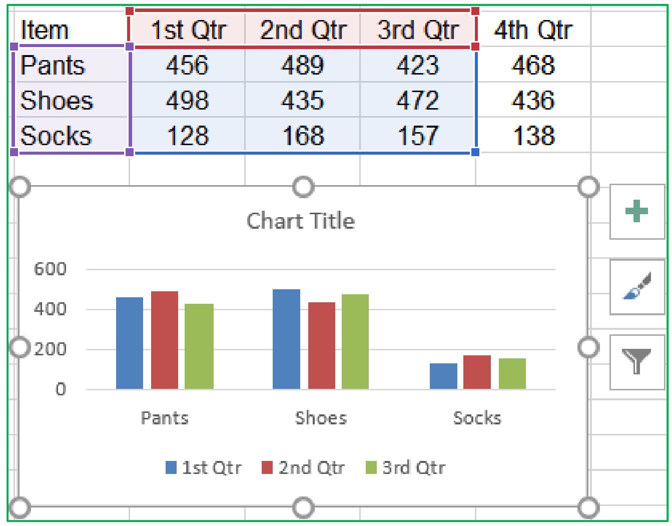
Make Charts the Same Size

Use the Height and Width properties found on the Format tab in the ribbon, or on the Format Pane for the Chart Area's Size & Options. You can use the alignment options on the format tab to make the charts line up.

Changing the Data Source

From the Worksheet

When you select a chart you will see the Chart Tool tabs in the ribbon, and the three options buttons along the right side of the chart. If you can see the cells in the worksheet used for the chart you will also be able to see the data is selected and each section is shaded.

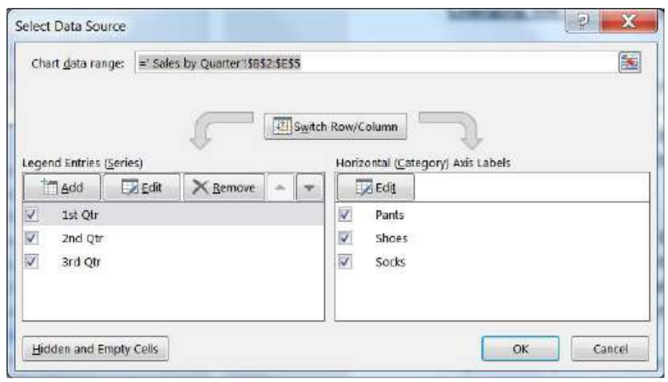


If you hover your mouse over the bottom right-hand corner of the data grouping you will get the two-way sizing arrow. If you click and drag the selection you can manually change the chart data source.

If you know you will have more categories and series you can grow the data area beyond what's showing and Excel will assign new colors and make room in the chart for the new values.

From the Select Data Source Window

From the Chart Tools *Design* tab choose **Select Data**.

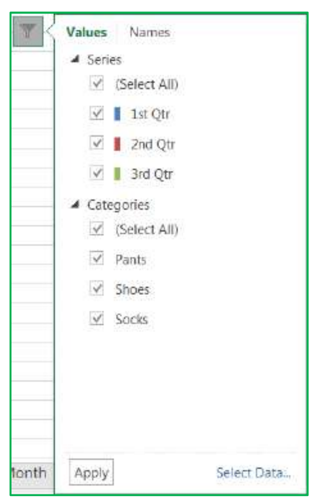


The **Chart data range** option can be a bit finicky so I recommend deleting the current range and selecting the new set from the worksheet.

The chart is initially arranged to follow the order of the data, but if you would like the legend in a different order, you can rearrange the Legend Entries using the up and down arrows.

Removing data

Both of the above options will help you add and remove data. You can manually adjust the range in the worksheet or you can select a different range from the Select Data Source window. Both are great as long as you are using a consecutive range of data.



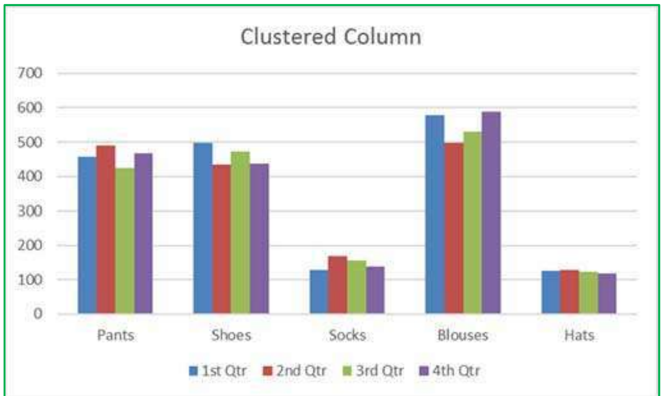
The Select Data Source window also had a **Remove** button to delete a series from the chart. Notice there is not one for the Category/Axis labels. To be able to remove one you will need to first **Switch Row/Column**. Once you've removed the categories, **Switch Row/Column** again.

From the chart itself you can click on the series you want to remove and press **Delete** on the keyboard. You can only delete the series, so the same actions apply in order to remove a category you will need to switch the row/columns first.

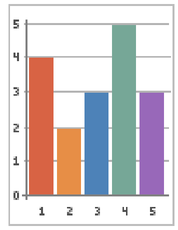
However, we now have a Filters button along the side of the selected chart. From here we can uncheck any of the values we do not want on the chart; Series and Categories. You <u>must</u> click the **Apply** button at the bottom of the menu for the filter to take effect.

Types of Charts

Column and Bar Charts

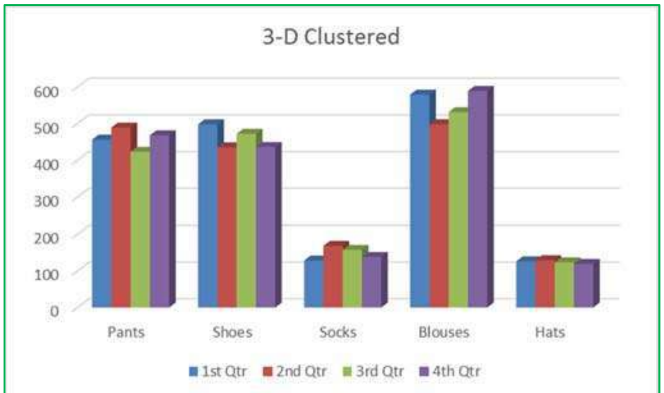


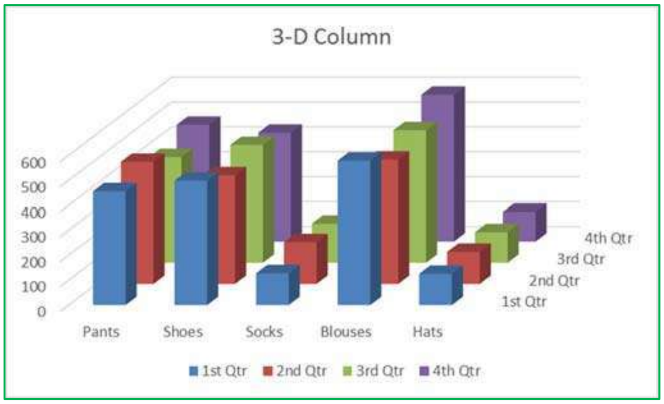
Insert Column or Bar Chart

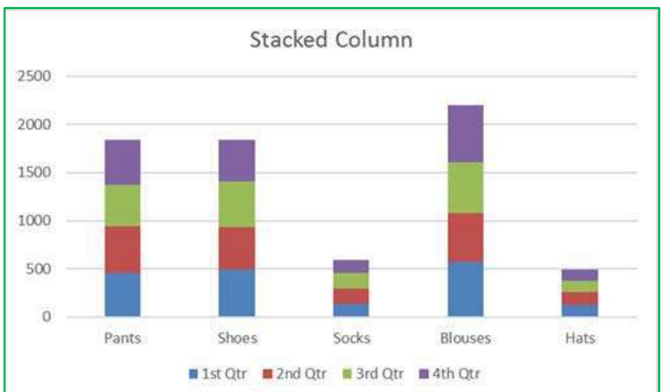


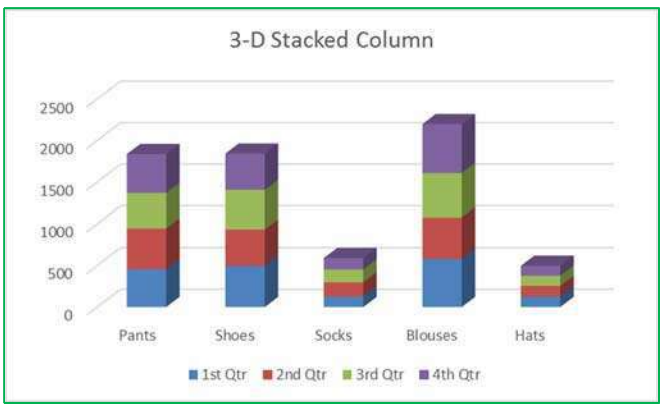
Use this chart type to visually compare values across a few categories.

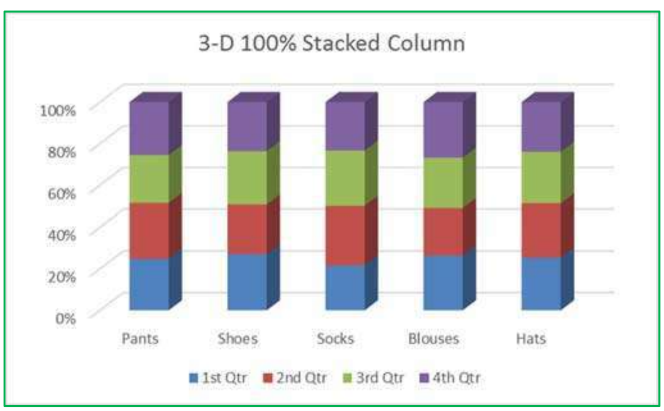
Click the arrow to see the different types of column and bar charts available and pause the pointer on the icons to see a preview in your document.

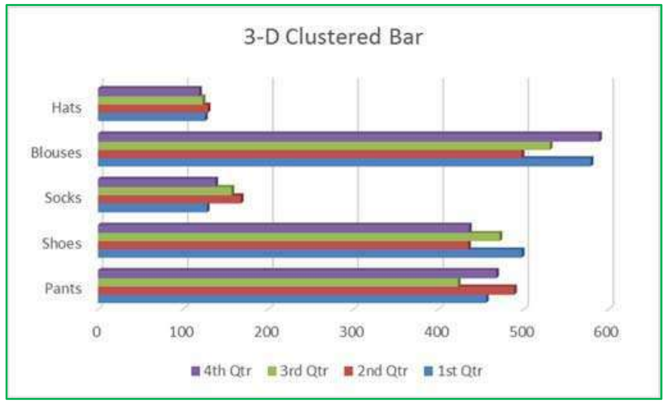


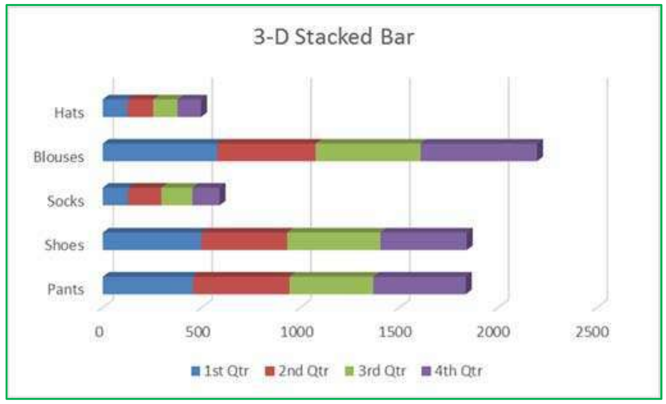




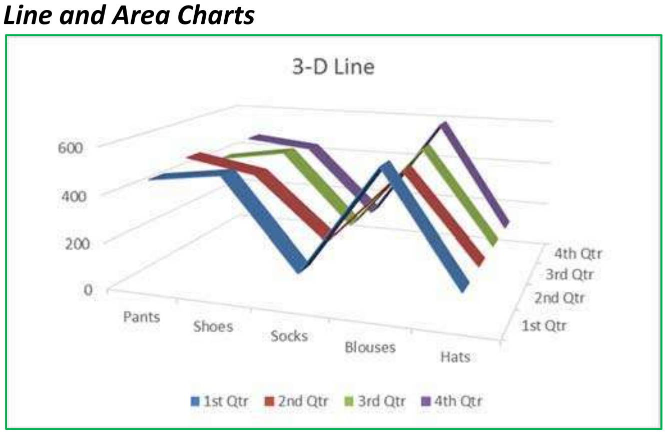








Line and Area Charts

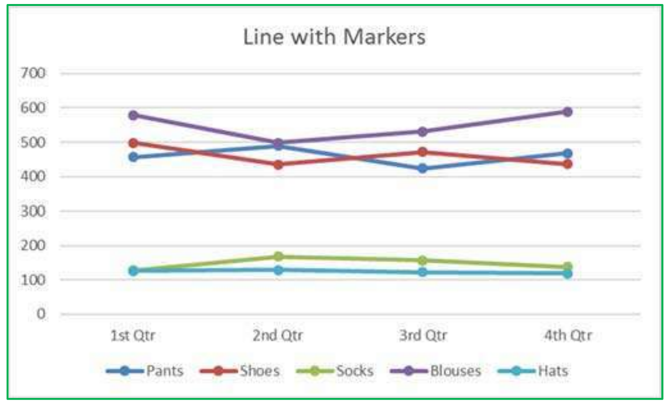


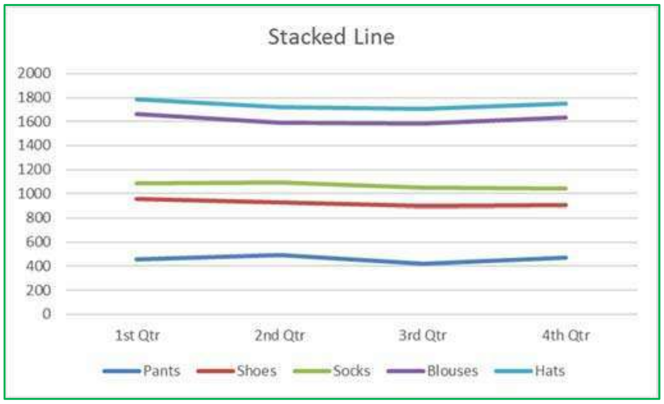
Insert Line or Area Chart

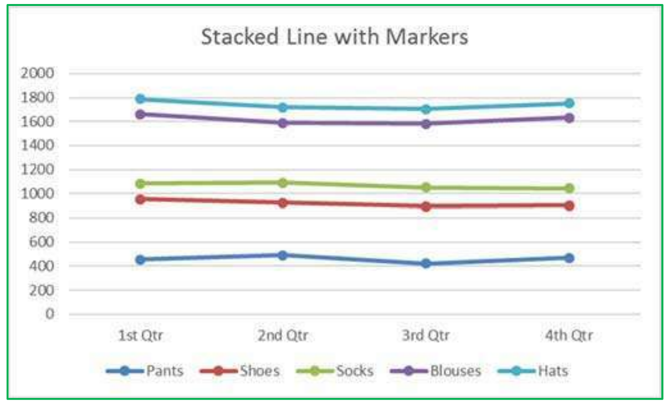
Use this chart type to show trends over time (years, months, and days) or categories.

Click the arrow to see the different types of line and area charts available and pause the pointer on the icons to see a preview in your document.


Line
700
600
500
400
300
200
100
0
1st Qtr
2nd Qtr
3rd Qtr
4th Qtr
Pants
Shoes
Socks
Blouses
Hats

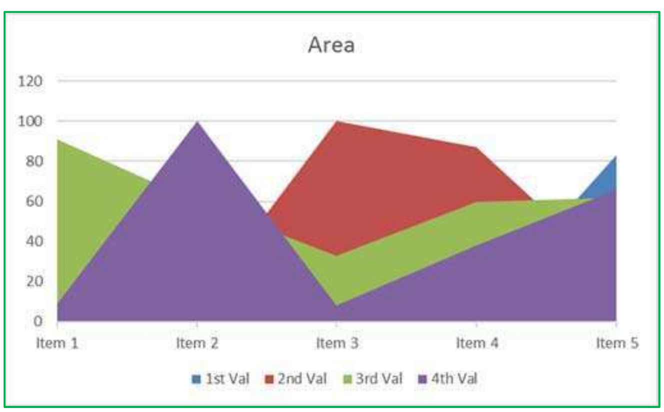

Line with Markers
700
600
500
400
300
200
100
0
1st Qtr
2nd Qtr
3rd Qtr
4th Qtr
Pants
Shoes
Socks
Blouses
Hats

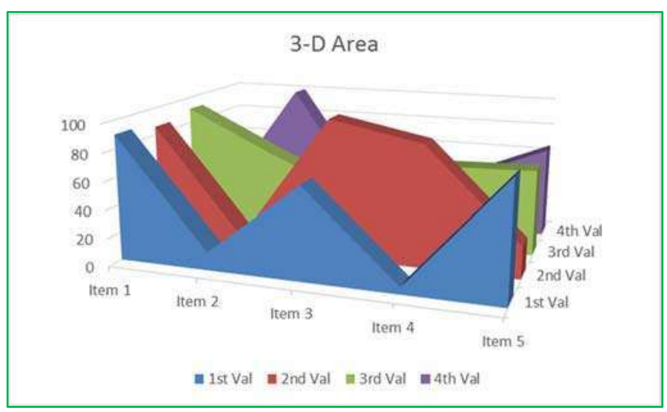

Stacked Line
2000
1800
1600
1400
1200
1000
800
600
400
200
0
1st Qtr
2nd Qtr
3rd Qtr
4th Qtr
Pants
Shoes
Socks
Blouses
Hats

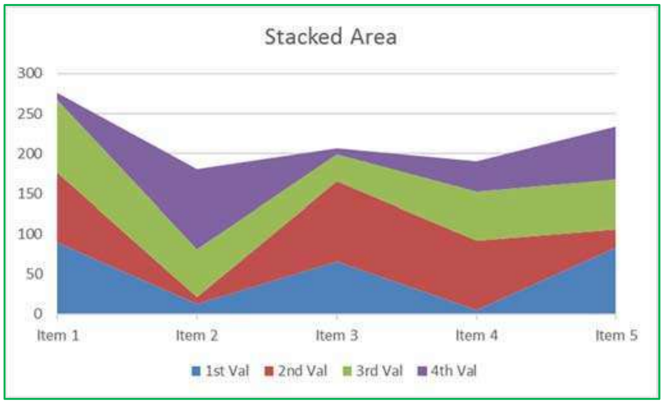

Stacked Line with Markers
2000
1800
1600
1400
1200
1000
800
600
400
200
0
1st Qtr
2nd Qtr
3rd Qtr
4th Qtr
Pants
Shoes
Socks
Blouses
Hats

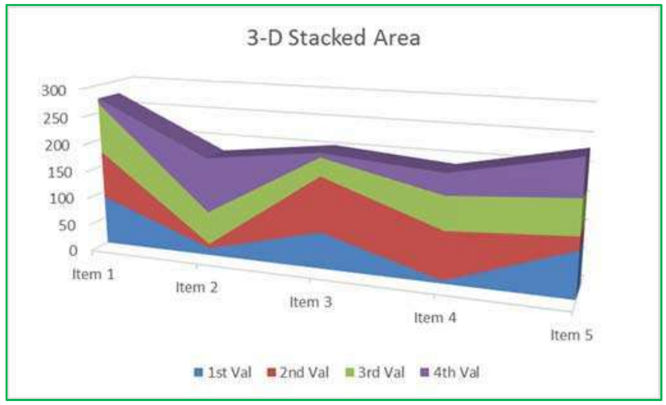

100% Stacked Line
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1st Qtr
2nd Qtr
3rd Qtr
4th Qtr
Pants
Shoes
Socks
Blouses
Hats

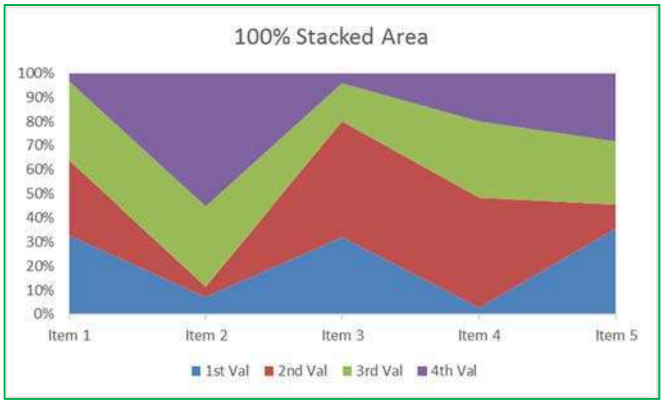

100% Stacked Line with Markers
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1st Qtr
2nd Qtr
3rd Qtr
4th Qtr
Pants
Shoes
Socks
Blouses
Hats

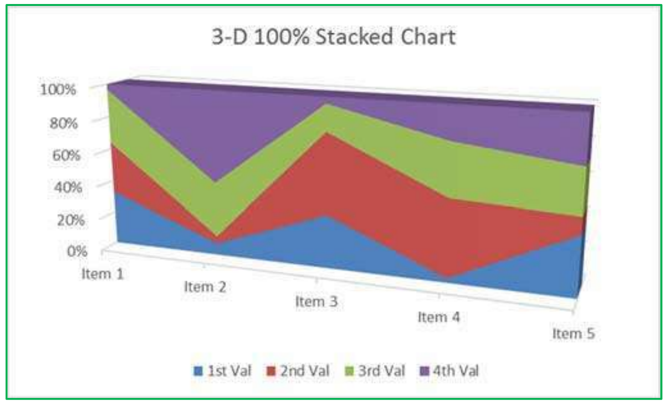

Area
120
100
80
60
40
20
0
Item 1
Item 2
Item 3
Item 4
Item 5
1st Val
2nd Val
3rd Val
4th Val


3-D Area
100
80
60
40
20
0
Item 1
Item 2
Item 3
Item 4
Item 5
4th Val
3rd Val
2nd Val
1st Val
1st Val
2nd Val
3rd Val
4th Val

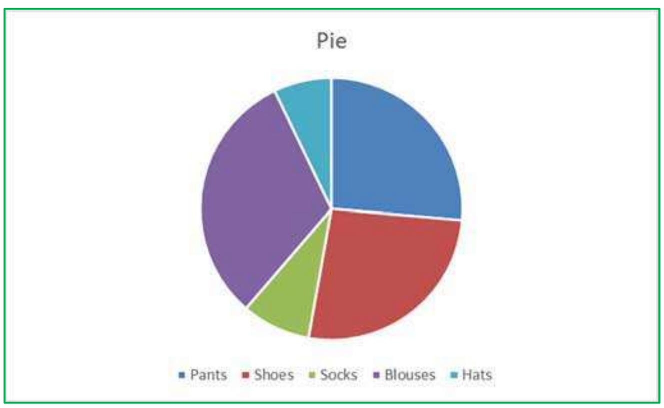








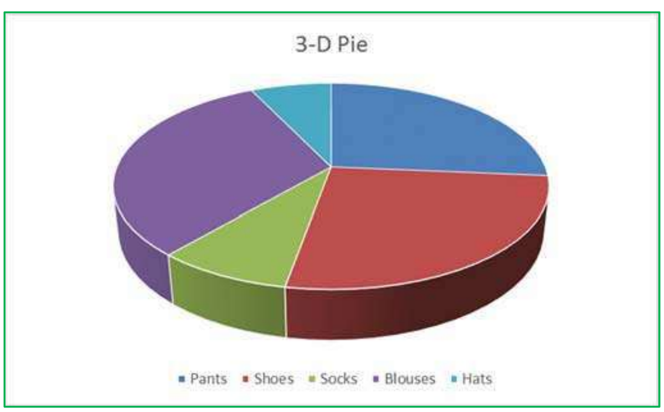
Pie and Donut Charts

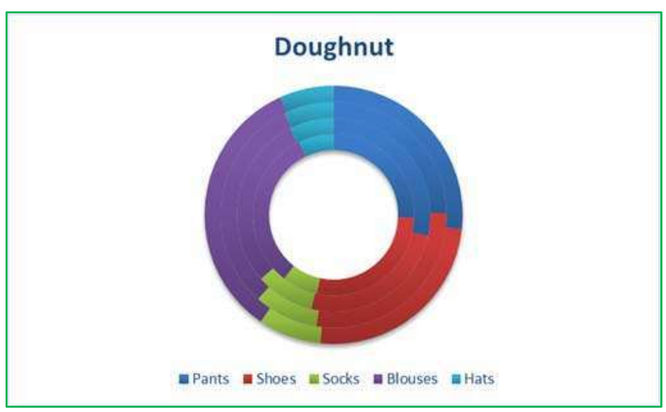


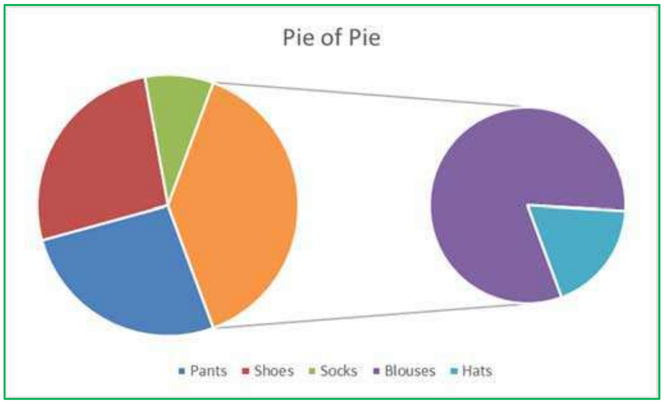
Insert Pie or Doughnut Chart

Use this chart type to show proportions of a whole. Use it when the total of your numbers is 100%.

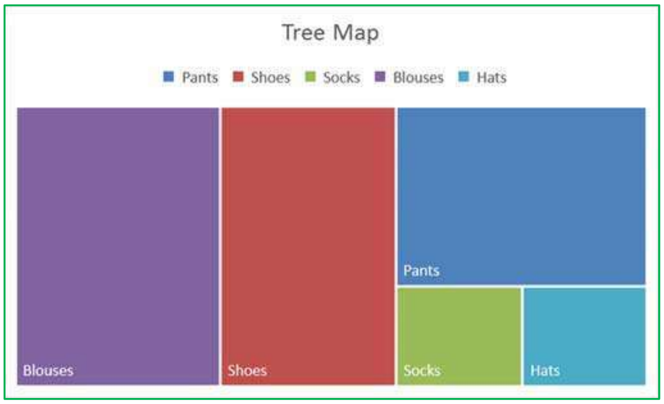
Click the arrow to see the different types of pie and doughnut charts available and pause the pointer on the icons to see a preview in your document.

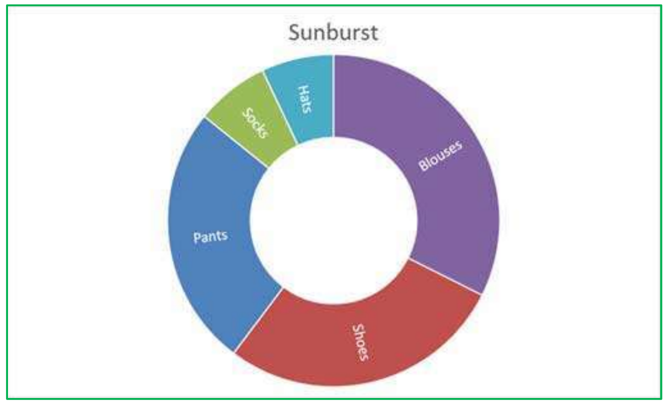






Hierarchy Chart





Insert Hierarchy Chart

Use this chart type to compare parts to a whole, or when several columns of categories form a hierarchy.

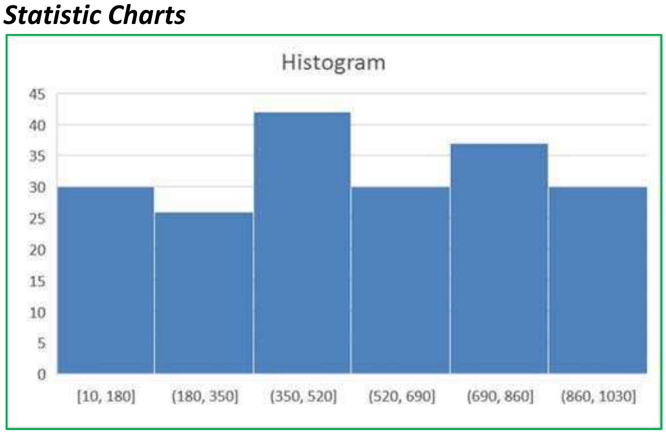
Click the arrow to see the different types of hierarchy charts available and point to the icons to see a preview in your document.

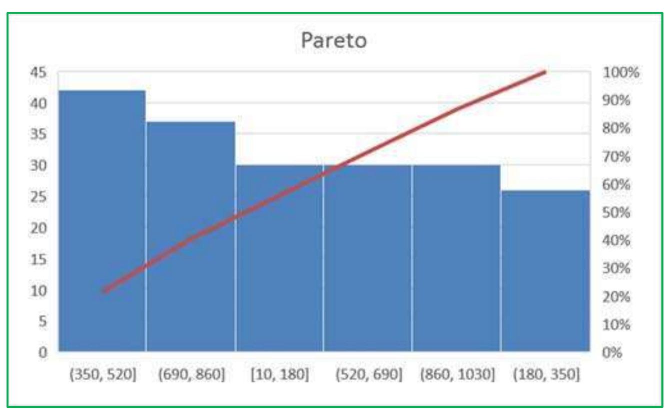
Insert Statistic Chart

Use this chart type to show statistical analysis of your data.

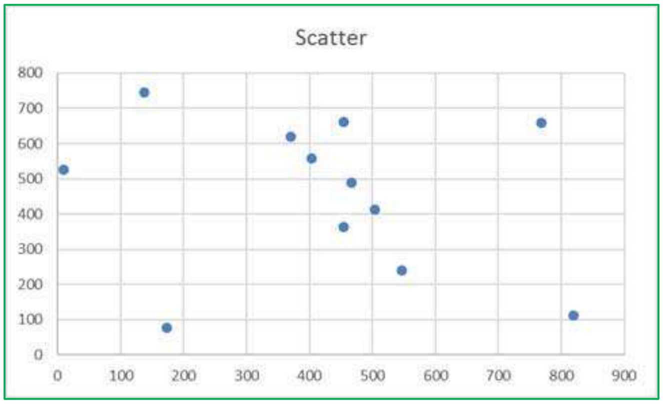
Click the arrow to see the different types of statistic charts and pause the pointer on the icons to see a preview in your document.

Statistic Charts





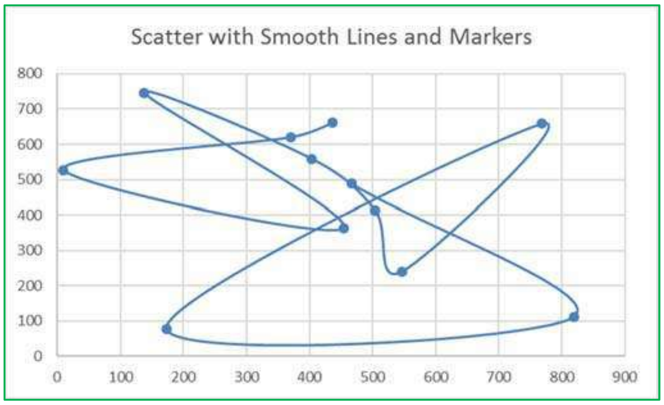
Scatter (X,Y) and Bubble Charts

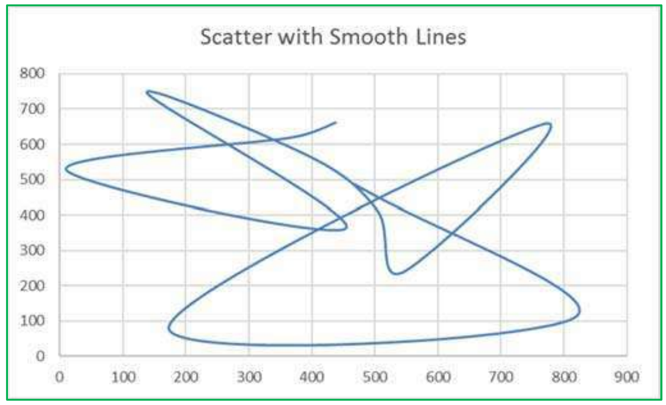


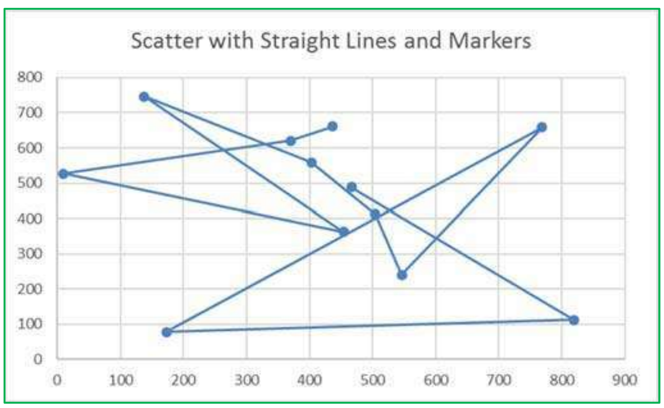
Insert Scatter (X, Y) or Bubble Chart

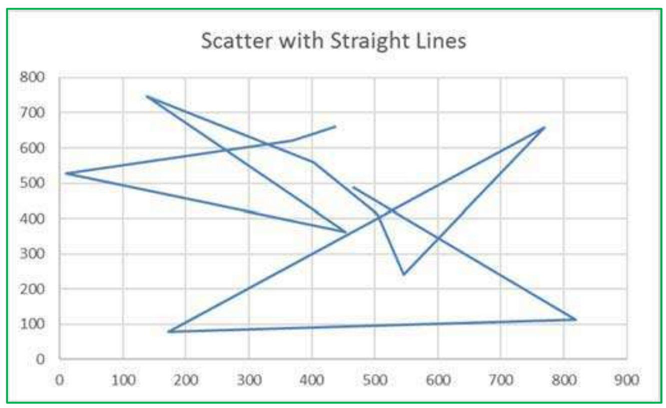
Use this chart type to show the relationship between sets of values.

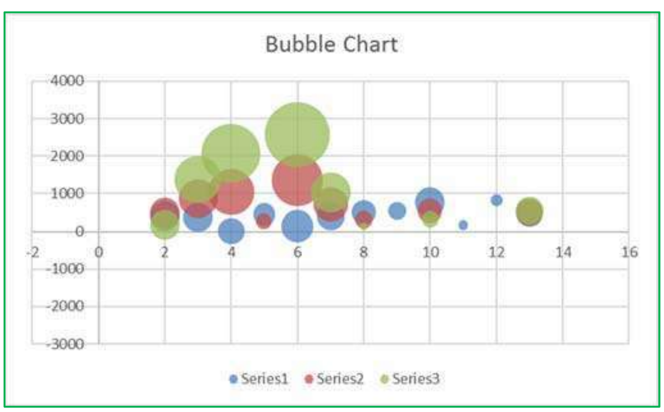
Click the arrow to see the different types of scatter and bubble charts available and pause the pointer on the icons to see a preview in your document.

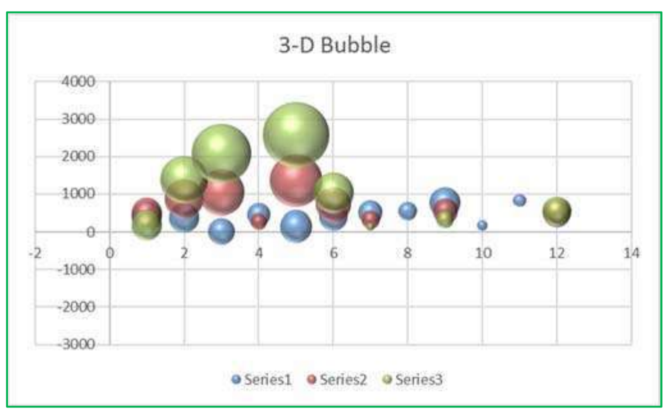




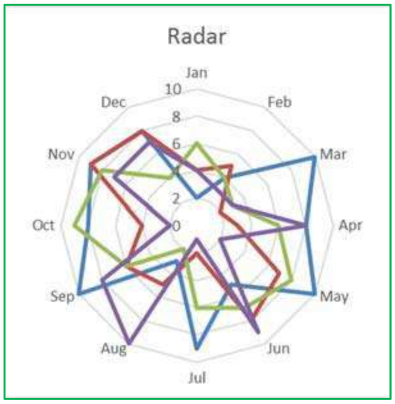


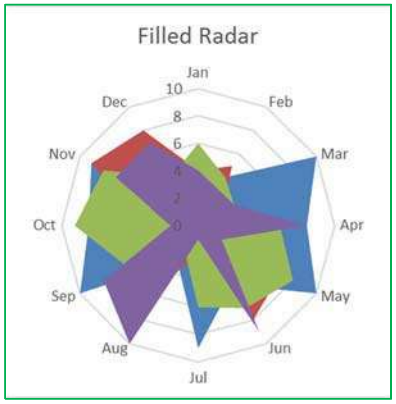






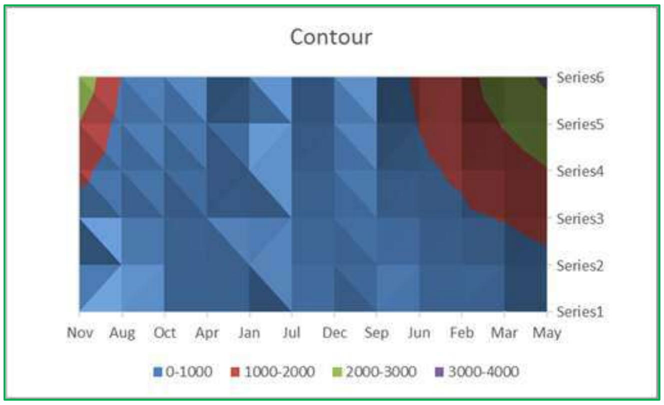
Radar and Surface Charts

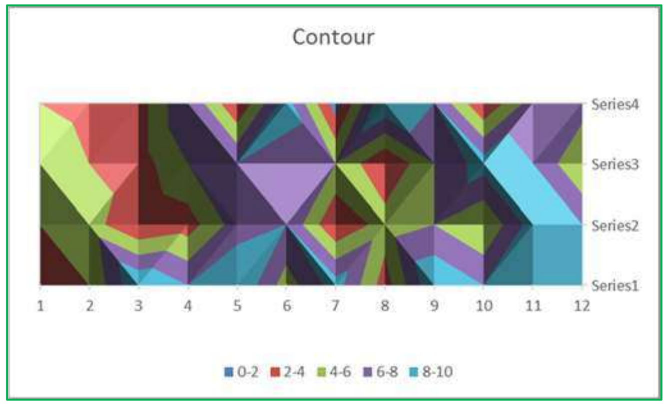


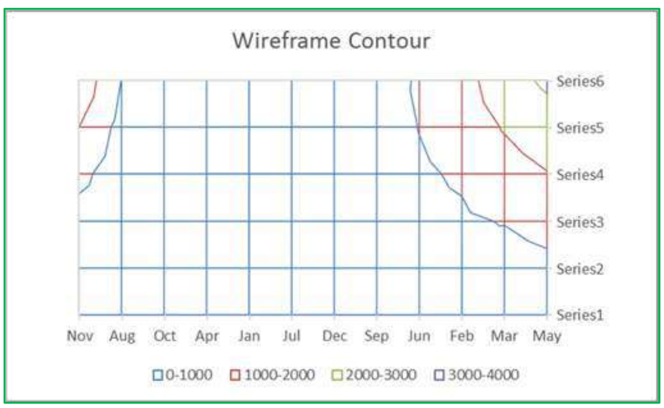


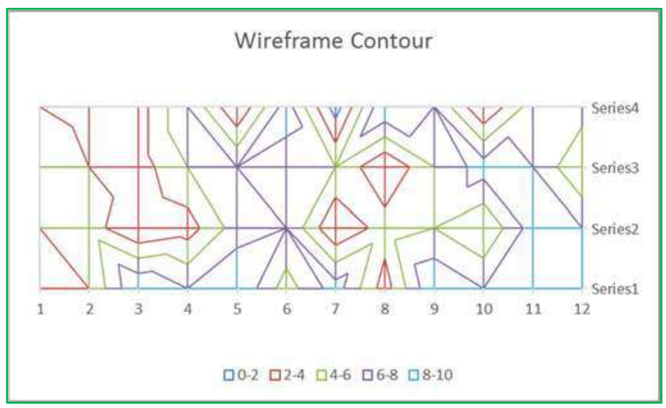
Insert Surface or Radar Chart

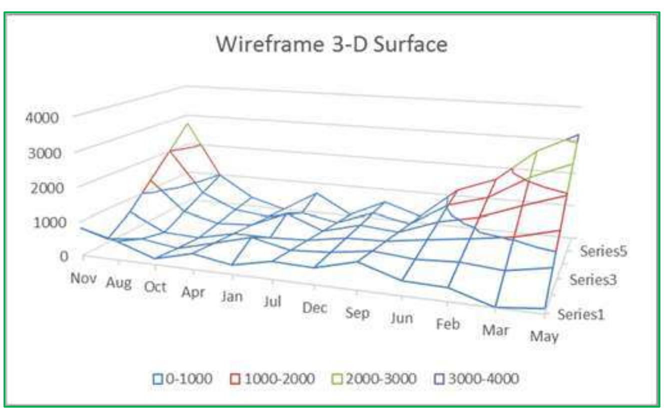
Click the arrow to see the different types of surface and radar charts available and pause the pointer on the icons to see a preview in your document.

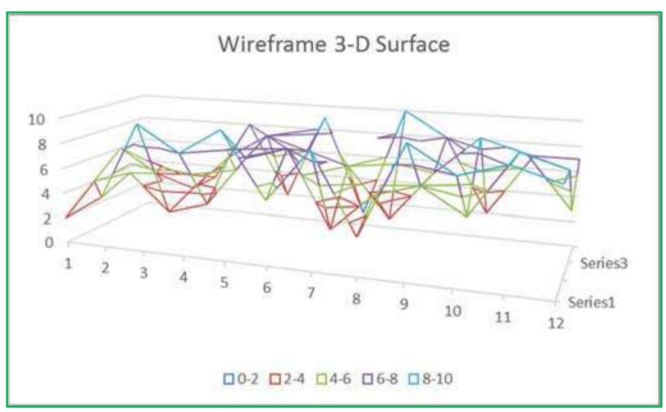












Class Exercise

Explore workbook

- Open ChartData.xlsx
- View each worksheet
- Discuss 'consistent' range of data

	COLUMN TITLE	COLUMN TITLE
ROW TITLE	DATA	DATA
ROW TITLE	DATA	DATA

Create Chart

- Turn to Sheet 'Sales by Quarter'
- Turn to the **Insert** Tab
- Click on Recommended Charts
    - Click on each suggestion to see a preview of our dataset
    - Click on the ALL CHARTS page at the top of the window and explore the options
    - Choose first **Column Chart**
- Chart Tool tabs – **Design** and **Format**
- Click outside of chart to deselect
    - Tabs disappear

Design Tab

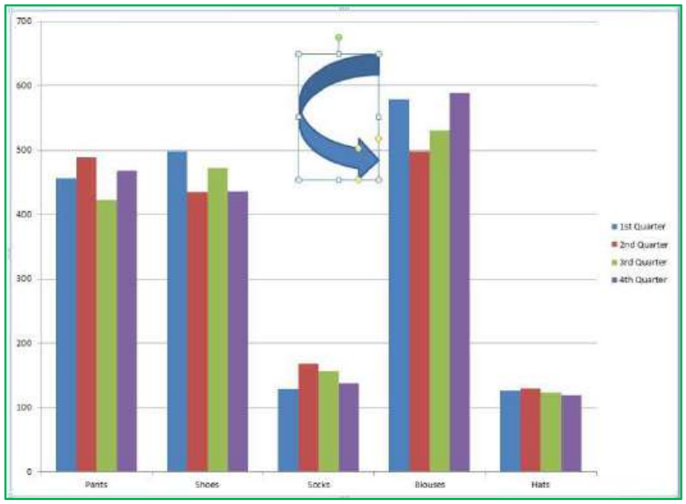
- Add Chart Element
    - **Add:** Data Labels on the Outside End
    - **Remove:** Chart Title
    - **Move:** Legend to the top
- Explore different Quick Layouts
    - Choose first layout (title above, legend on right)
- Explore different Chart Colors
- Explore different Chart Styles
    - Notice it changes the Chart Layout
    - Return to the Quick Layout menu and choose the first one again
- Switch Row/Column
    - Notice it's switching the legend with the category axis
    - Leave the chart with quarter in the legend
- Select Data
    - Rearrange legend 4th Qtr - 1st Qtr
    - Cancel the window
- Change Chart Type to different options
    - Reset it back to the original, first column chart
- Move chart to its own sheet

Format Tab – Current Selection

- Select Legend from Current Selection dropdown
- Click **Format Selection** button
    - Legend Options
        - Move legend to different positions
        - Try it with overlapping the chart
    - Fill
        - Solid Fill
        - Gradient Fill
            - Preset Colors
        - Picture or Texture Fill
            - Textures
            - Insert a file
    - Border
        - Solid line
        - Increase width
        - Gradient
    - Effects
        - Add a Shadow
        - Add a Glow
- In the **Format** tab in the ribbon, click **Reset to Match Style**

Layout Tab – Insert

- Insert Shapes
    - Insert Block Arrow
    - Uses yellow diamond to modify arrow
    - Use green circle to rotate
    - Delete
- Insert Text Box
    - Type inside
    - Move around
    - Delete



Delete Chart

- Right-click on Chart 1 Sheet name
- Select Delete
- Confirm deletion

Create Chart

- Turn to Sheet 'Sales by Year
- Insert Tab, Chart Group, Column
    - Choose first Column Chart
- Move to a new worksheet
- Change Font
    - Right-click on Category Axis (pants, shoes…)
    - Choose Font, sent size to 14
    - Undo
    - Right-click in Chart Area (blank space)
    - Choose Font, sent size to 14
- Change Title to read "Yearly Sales
- Add Minor Horizontal Gridlines
    - So you have Major and Minor lines

Format Tab - Styles

- Select Major Gridlines
- Change Shape Styles
    - Use Preset options
    - Use Shape Outline
    - Use Shape Effects
- Select a column
- Change Shape Styles
    - Use Preset options
    - Use Shape Fill
    - Use Shape Outline
    - Use Shape Effects
- Format
    - Fill, Outline, and Effects for each column, independently
    - Fill for Plot Area
    - Fill for Chart Area
- Format Chart Title
    - Change font size to 40
    - See Shape Styles, don't change it
    - See WordArt Styles
        - Text Fill
        - Text Outline
        - Text Effects

Save as Template

Saving the template then closing the file without saving it.

- Right-click on the chart
- Save as Template…
  - 'Chart1' is fine
- Exit the file
  - Don't save

Use Template

- Reopen the Charts file
- Turn to Sheet 'Sales by Year'
- Insert Tab, Chart Group, Column, First chart
- Design Tab - > Change Chart Type
- Templates
  - First option in pane on left
- Choose Chart1, Click OK
- Delete Chart

Default Chart

- In Sheet 'Sales by year' Press F11

Modify Default Chart

- In new chart, Design Tab - > Change Chart Type
- Right-click on the Template
- Set as Default Chart
  - Click OK
- Return to sheet 'Sales by year'
- Press F11
- In Sheet 'Sales by Quarter' Press F11
  - Note only the first column was formatted
- Close but don't save the file

Manually Changing Data Ranges

- Insert a column chart on Sheet 'Sales by Quarter'
- Notice color Coding around original data
- Use fill handle to change the selection
  - If the colors go away, click inside the chart again.
  - Adjust the chart to include only the data

Remove Data

- Click on a column for 4th Quarter
    - Press Delete on the keyboard
- Click on a column for 2th Quarter
    - Press Delete on the keyboard
- Notice the color grouping around our dataset is gone
- Switch row/columns to remove your shoes
- Switch row/columns back
- Open the filters button. There is only the first and third quarter, and no shoes
- Delete Chart

- Insert a column chart
- Use the Filter to remove second and fourth quarter, and remove your shoes
- Use the Filter to add them back in

Chart Specific Data

- Select Items through 3rd Quarter, A1:D6
- Insert a column chart
- Delete 2th Quarter
- Delete Chart

- Select Items through 1st Quarter, A1:B6
- Use **Ctrl** key to select 3rd Quarter, D1:D6
- Insert a Column chart
- Delete Chart

Pie Chart

- Turn to Sheet 'Sales by Year
- Insert Tab, Chart Group, Pie, First chart
- Remove Title & Legend
- Add labels for %, Delete labels
- Explode Pie
- Rotate Pie (in the options)
- Pull individual pieces
- Delete Chart

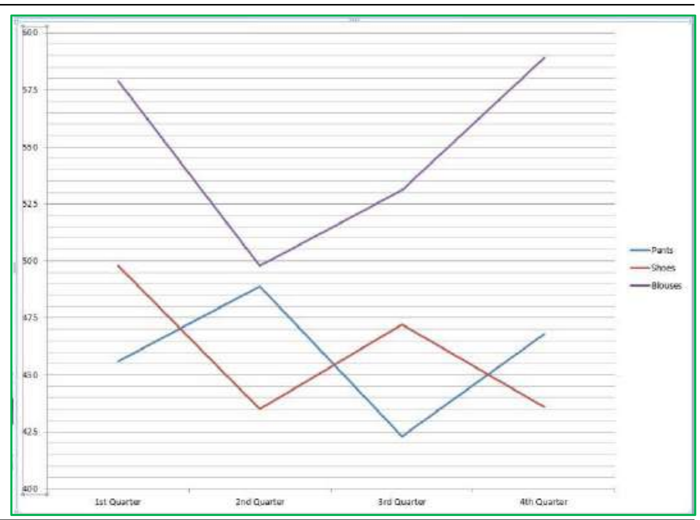
3-D Pie Chart

- Insert a 3-D Pie chart
- Explode Pie
  - Re-connect/Implode
- Select Plot Area from the Format Pane
- View the effects, 3-D Rotations
- Change X & Y rotations
  - Use little scroll up and down arrows
- Uncheck Autoscale
- Change Height (% of base)
- Delete Chart

3-D Column Chart

- In Sheet 'Sales by Quarter'
- Insert Tab, Chart Group, Column, Last 3-D option
- Delete Legend
- Design tab - Switch Row/Columns
- Design tab – Select Data
  - Rearrange Legend so smaller values are in the front
- Delete Chart

Line Chart



- In Sheet 'Sales by Quarter'
- Insert Tab, Chart Group, Line, First option
- Design tab - Switch Row/Columns
- Remove Smaller Values
- Move to new sheet
- Format **Axis Options**
  - Minimum 400
  - Maximum 600
  - Major Unit 25

Layout Tab - Analysis

- Trend Line
- Error Bars
  - More Error Bar Options
  - Fixed Value 5
- Delete Chart

KENNESAW STATE UNIVERSITY

University Information Technology Services

Microsoft Office Word 2016 for Windows

Reviewing Your Document

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Learning Technologies, Training & Audiovisual Outreach

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Microsoft Office: Word 2016 for Windows
Reviewing Your Document

Table of Contents

Introduction

This booklet is the companion document to the Word 2016: Reviewing Your Document workshop. Several of the tools available under the *Review* tab provide the user with a way for tracking the changes in their document and leaving notes for others to see (e.g. when a professor returns a paper to the student, it usually has corrections in addition to comments), as well as combining and comparing changes across multiple documents.

Learning Objectives

After completing the instructions in this booklet, you will be able to:

- Turn track changes on and off.
- Understand the different review display settings and how to apply them.
- Accept/reject changes to the document.
- Add/delete/reply to comments in the document.
- Lock tracking changes for your document.
- Combine changed documents.
- Compare changed documents.

Collaborating on Documents

Word contains features that make it easy for several people to work on a document together. Rather than passing a hard copy of the document containing manual changes back and forth, you can have Word automatically track the changes, and then you can pass the document electronically.

Track Changes

By using the *Track Changes* tool, you can easily see what changes have been made to the existing document. This feature is very useful if you are collaborating with others, or wish to make suggestions that can be later accepted or rejected. Furthermore, you can quickly switch between different views to see the extent of the changes, or if you wish to view the original document in its entirety.

If you wish to make changes to a document that you want to share with others, you must enable *Track Changes* first before making any changes to your document.

1. Click on the **Review** tab (See Figure 1).
2. In the *Review* tab, click on **Track Changes** (See Figure 1).

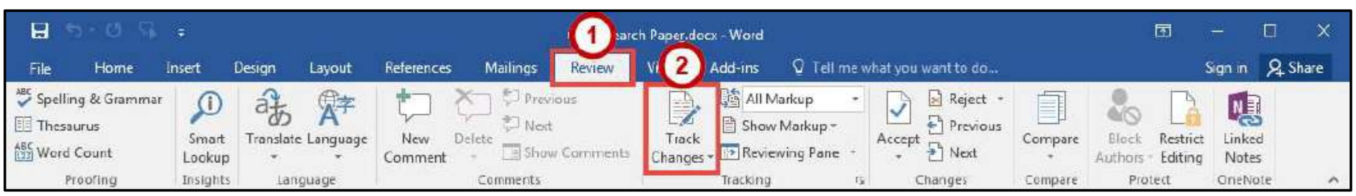

Figure 1 - Track Changes

3. Word will now begin to track changes to your document (e.g. inserting text, deleting text, etc.). The *Track Changes* button will be shaded to indicate track changes has been activated.
4. To turn off T*rack Changes,* click the **Track Changes** button.

Note: *Track Changes* will remain on unless it is deactivated; even if you save your document. Be sure to turn off Track Changes if you don't want others to track changes. If you want to prevent others from turning off Track Changes, see Locking Track Changes.

Making Changes to Your Document with Track Changes

Once *Track Changes* has been activated, Word will make note of all changes made to your document. To make changes to your document, simply edit the document as you normally would. The default settings for changes will appear as red lettering for insertions, and red lettering with a strikethrough for deletions.


The·largest·elephants·are·the·~~African~~·Asian·elephants.·They·grow·to·be·20·to·25·feet·(6·to·7·1/2·meters)·long,·~~11~~·10·feet·(about·3·1/2·meters)·tall~~,·and~~.·These·elephants·weigh·up·to·13,200·

Figure 2 - Changes to the Document

Leaving Comments

You can leave notes in your document for others to read that ask for clarification, explain a revision, etc. When your review settings are set to *Simple Markup*, all comments will be hidden and areas that have had a comment added will display a speech bubble.

New Comment

1. Click within your **document**, or select a **section of text** that you want to add the comment to.
2. Click on the **Review** tab (See Figure 3).
3. In the *Review* tab, click on **New Comment** (See Figure 3).

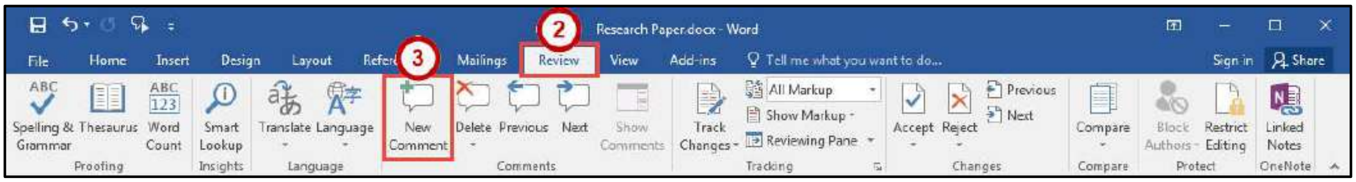

Figure 3 - New Comment

4. A *comment textbox* will be added to your document. Type your **message** within the *comment textbox* to leave your comment.

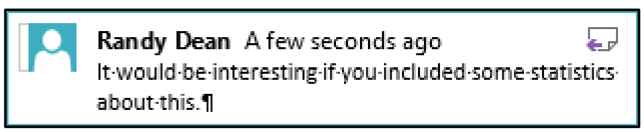

Figure 4 - Comment Textbox

5. Once finished, click **anywhere** inside your document to leave the *comment textbox*.

Edit a Comment

1. Search within your **document** for the comment to edit.
2. Click on the comment **speech bubble**.
3. Once you are finished editing, click **anywhere** inside your document to leave the *comment textbox*.

Reply to a Comment

The following shows how to reply to a comment while in *Simple Markup* view:

1. Click on the comment **speech bubble** to display your comment.
2. In the *comment window*, click on the **Reply** icon.

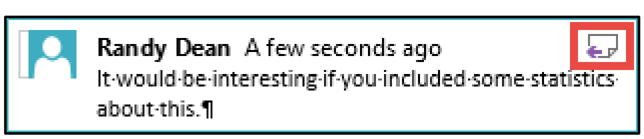

Figure 5 - Reply to a Comment

3. Your *username* will be added to the *comment window*. Type your **response** to the comment.

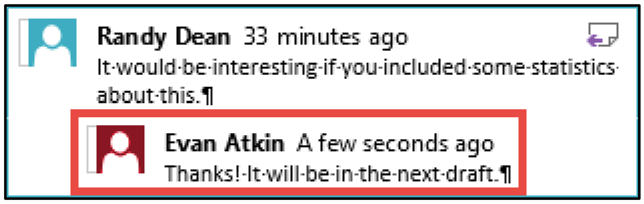

Figure 6 - Response to a Comment

Delete a Comment

The following shows how to delete a comment while in *Simple Markup* view:

1. Click on the **speech bubble** to display your comment.
2. Click on the **Review** tab (See Figure 7).
3. In the *Review* tab, click on **Delete** (See Figure 7).

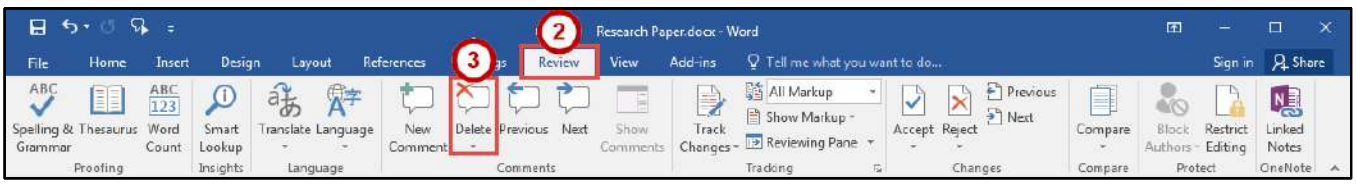

Figure 7 - Delete a Comment

Changing Your Review Display Settings

While *Track Changes* is active, you can alter your display settings to show how changes appear in your document. To alter your settings:

1. Click on the **Review** tab (See Figure 8).
2. In the *Review* tab, click on the **Display for Review drop-down** (See Figure 8).
3. A list of display options will appear. Select one of the following to apply:
    a. **Simple Markup** - Provides a clean, uncomplicated view of your document. You will see indicators where tracked changes have been made as a red line. It will also show comments as a speech bubble (See Figure 8).
    b. **All Markup** - Will show all changes and comments made to your document (See Figure 8).
    c. **No Markup** - Will show how the final version of the document will look with changes. No comments will be shown (See Figure 8).
    d. **Original** - Will show how the original version of the document looks without changes and comments (See Figure 8).

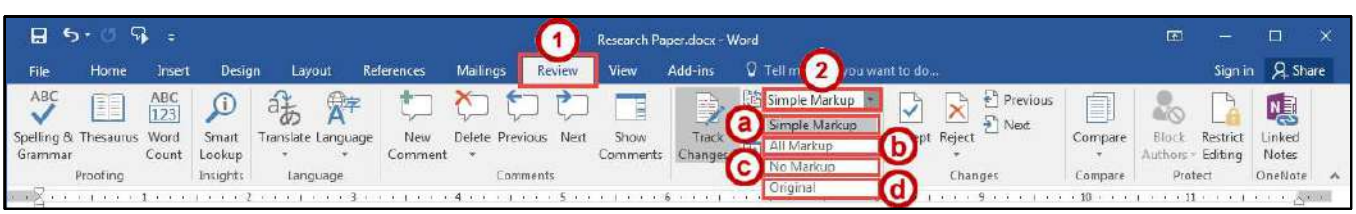

Figure 8 - Display for Review

Using the Simple Markup Display Settings

The *Simple Markup* display setting will show you sections of your document that have had changes made to them as a red line in the left side margin. Comments will also be shown as a speech bubble in the right margin of your document. The changes will remain hidden until you click the red line, upon which the changes and comments will be made visible.

1. Ensure that *Simple Markup* has been selected as your *Display for Review* on the *Review* tab.
2. *Red lines* will appear in the left margin of your document, indicating that a change has been made on this line (See Figure 9).
3. Click the **red line** to show the changes made in your document (See Figure 9).

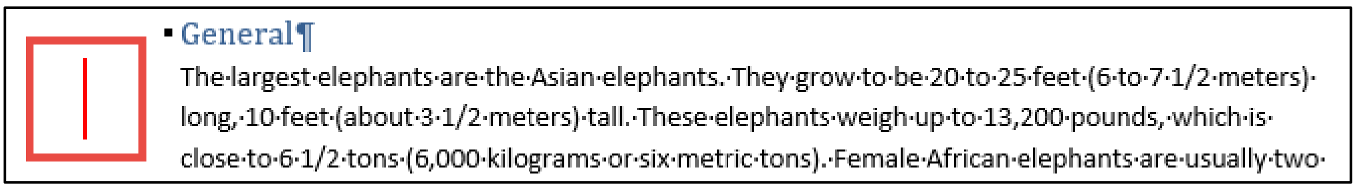

Figure 9 - Red Line Indicating a Change

4. The red line will become gray and the changes in your document will become visible.
5. To hide the changes again, click the **Gray Line** (See Figure 10).

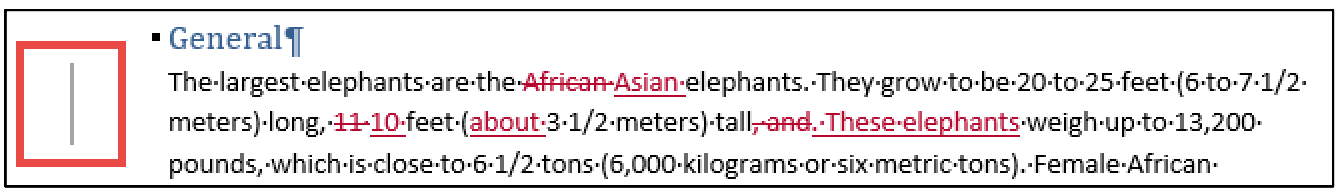

Figure 10 - Gray Line Indicating Changes Visible

Activating the Reviewing Pane

When active, the *Reviewing Pane* will display the number of revisions in the document, the type of change made, and what was changed. You can also use the *Reviewing Pane* to quickly jump to revisions within your document by selecting them. The following shows how to activate the *Reviewing Pane*:

1. Click on the **Review** tab (See Figure 11).
2. In the *Review* tab, click on **Reviewing Pane** (See Figure 11).

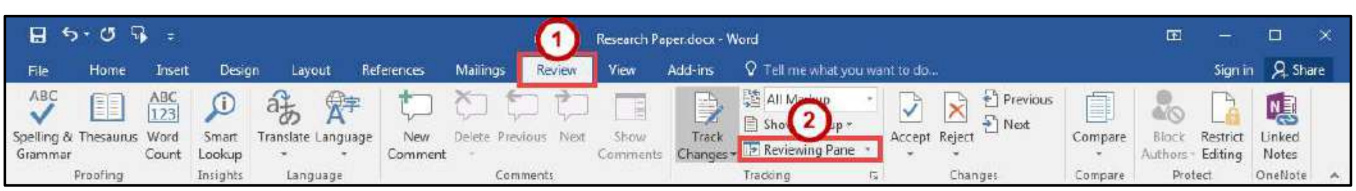

Figure 11 - Enable Reviewing Pane

3. The *Reviewing Pane* will appear on the left side of your document.

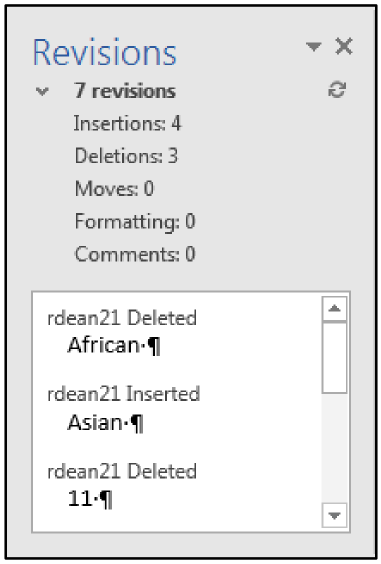

Figure 12 - Reviewing Pane

Locking Track Changes

If you are collaborating on a document with users, and want to ensure that *Track Changes* is used, you can *Lock Tracking* so the tracking option cannot be turned off.

Enable Lock Tracking

1. Click on the **Review** tab (See Figure 13).
2. In the *Review* tab, click on the **lower-half of the Track Changes** icon (See Figure 13).
3. In the *Track Changes* drop-down, click **Lock Tracking** (See Figure 13).

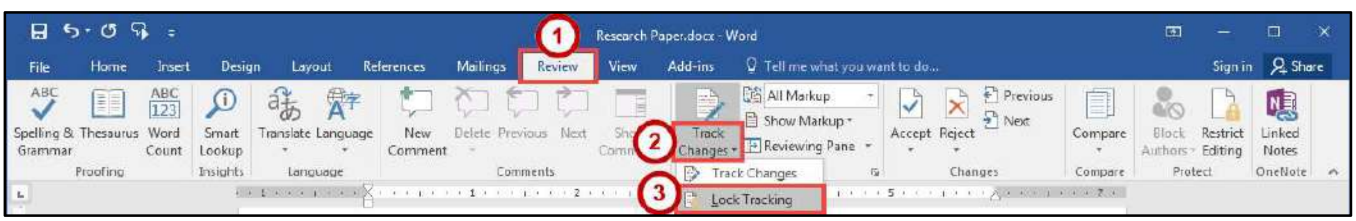

Figure 13 - Lock Tracking

4. In the *Lock Tracking* window, set a password (if desired) and click **OK**.

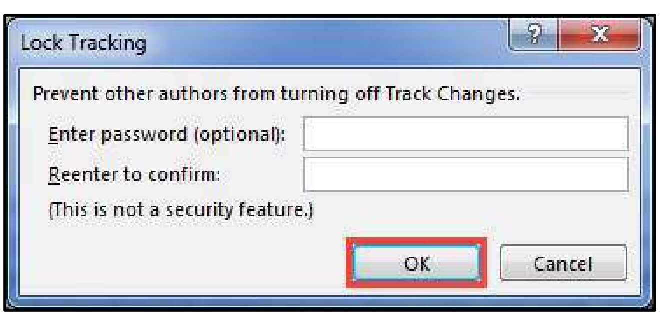

Figure 14 - Lock Tracking

Disable Lock Tracking

1. Click on the **Review** tab (See Figure 15).
2. In the *Review* tab, click on the **lower-half of the Track Changes** icon (See Figure 15).
3. In the *Track Changes* drop-down, click **Lock Tracking** (See Figure 15).

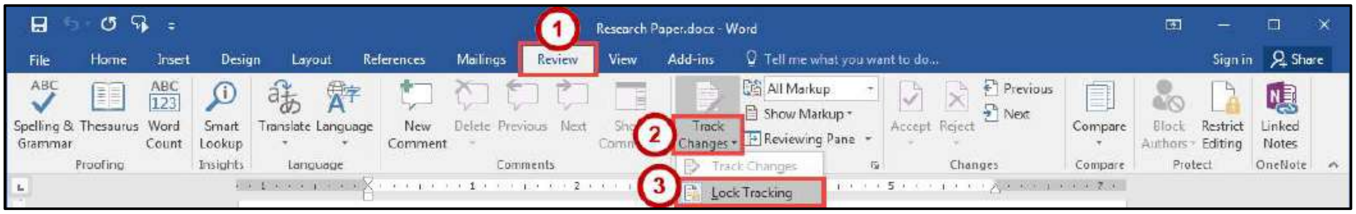

Figure 15 - Disable Lock Tracking

Accepting and Rejecting Changes

If you receive a document that has had changes made, you can move through the document to accept or reject the changes in the document. Once the changes have been accepted/rejected, the track markings will disappear.

The easiest way to accept/reject changes is to start from the beginning of your document. The following explains how to accept/reject changes:

1. Click to **place your cursor** at the beginning of the document.
2. Click on the **Review** tab (See Figure 16).
3. In the *Changes* group on the *Review* tab, you can do the following:
   a. **Accept** - Accept the change and move to the next change in your document (See Figure 16).
   b. **Reject** - Reject the change and move to the next change in your document (See Figure 16).
   c. **Previous/Next** - Navigate between changes without accepting/rejecting (See Figure 16).
4. Continue this process until you have moved through the entire document.

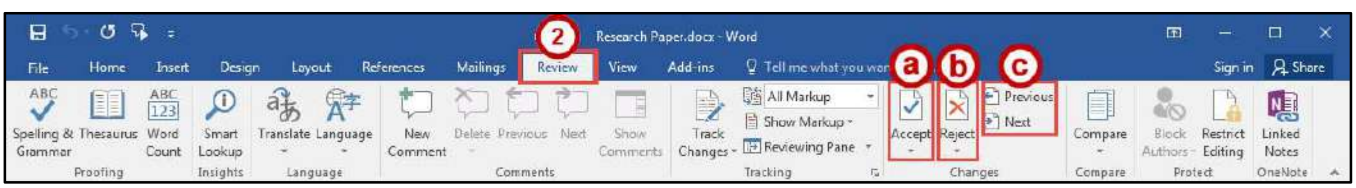

Figure 16 - Accepting and Rejecting Changes

Personalize Your Copy of Word

By personalizing your copy of Word, changes made to the document will show your "User name" and make it easier for others to identify your revisions when multiple reviewers are involved. This is helpful if you plan to collaborate with other users. The following explains how to modify your user information:

1. Click the **File** tab.
2. In the *Backstage View*, click **Options**.
3. The *Word Options* window will appear, click **General** (See Figure 17).
4. In the *Personalize your copy of Microsoft Office* section, enter your **name** and **initials** (See Figure 17).
5. Click the **OK** button (See Figure 17).

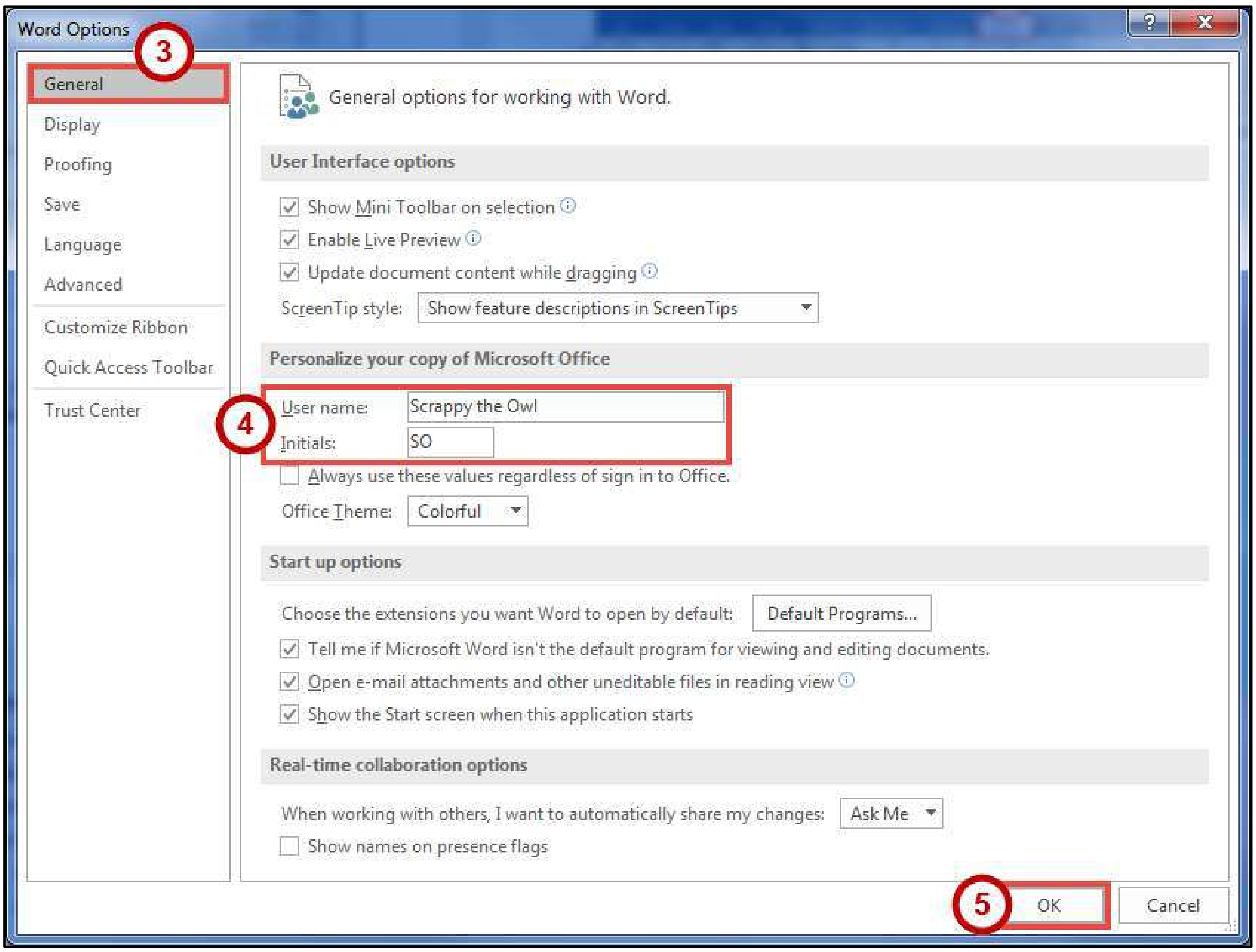

Figure 17 - Personalize your copy of Microsoft Office

Compare Changed Documents

If you receive a document that has been revised, but *track changes* were not enabled, then you can use the *Compare* tool in Word to determine what changes were made between the original document and the revised one. Please note, that to use this tool, you will need the original document and the revised document in order to compare.

1. Click on the **Review** tab (See Figure 18).
2. In the *Review* tab, click on **Compare** (See Figure 18).
3. In the *Compare* drop-down, click **Compare** (See Figure 18).

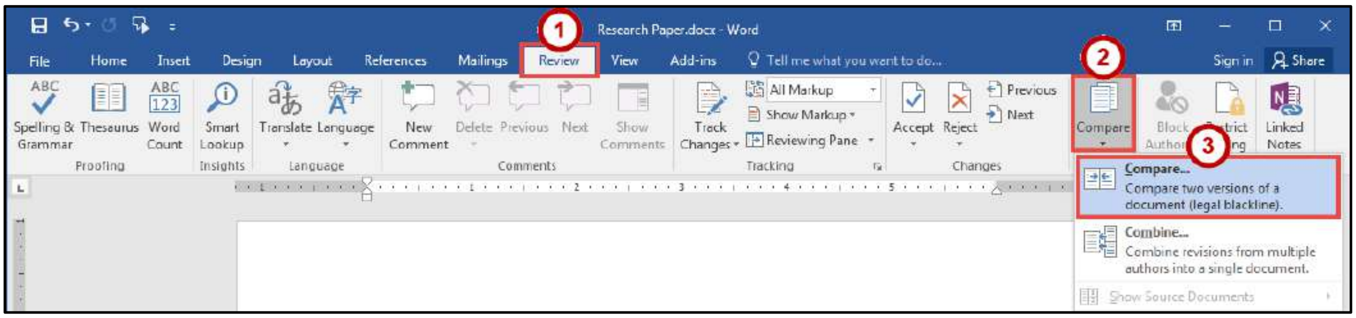

Figure 18 - Compare Changes

4. In the *Compare Documents* window, click on the **Folders** next to O*riginal document* and R*evised document* to browse through your computer and select the appropriate documents (See Figure 19).
5. Click the **OK** button (See Figure 19).

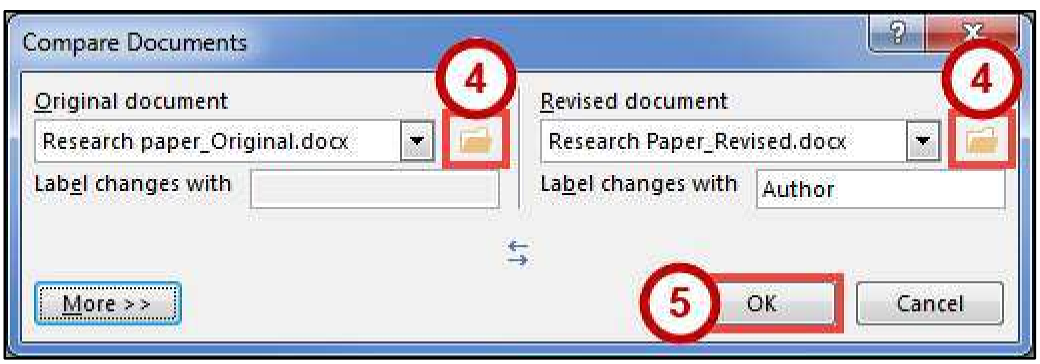

Figure 19 - Compare Documents Window

6. A screen will appear that shows three documents (from left to right): *Compared Document*, *Original Document*, and *Revised Document*.

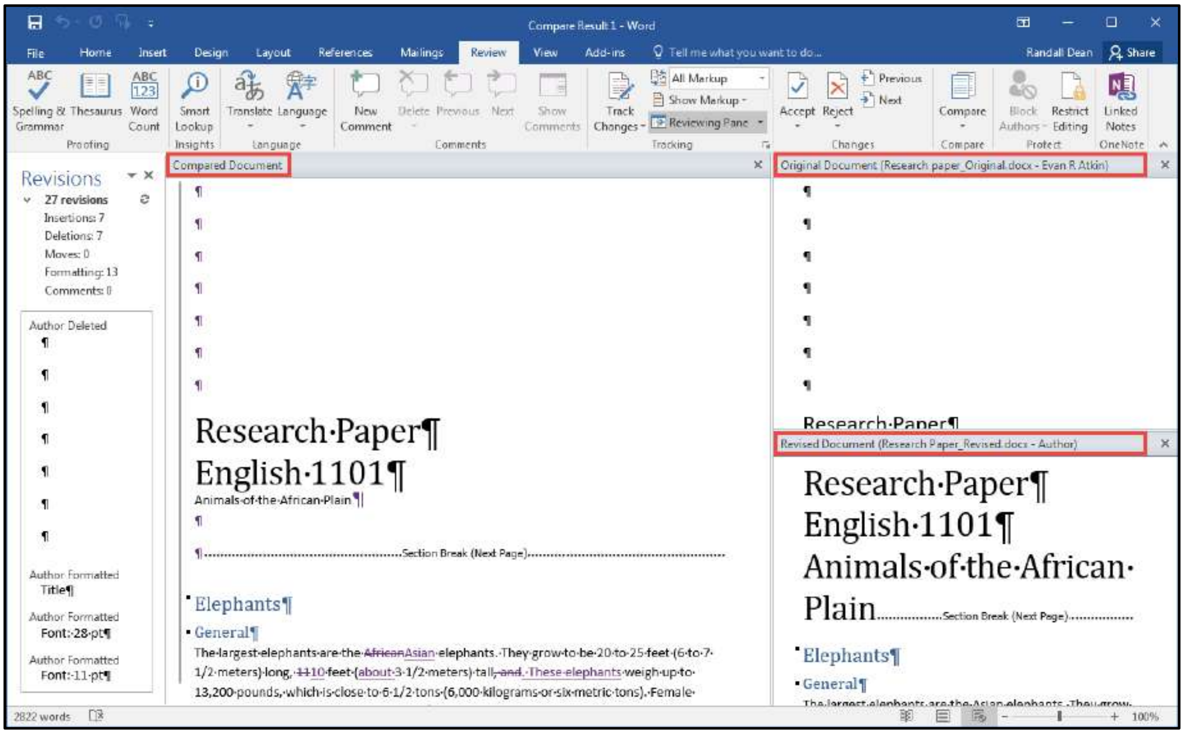

Figure 20 - Documents Compared

7. You can go through the changes in the *Compared Document* section and accept/reject changes as needed.
8. When finished reviewing the *Compared Document*, you can save it as its own version of the document.

Combine Changed Documents

If you send a document for review to several reviewers, and each reviewer returns the document, you can *combine* the documents two at a time until all the reviewer changes have been incorporated into a single document. The following explains how to combine multiple documents:

1. Click on the **Review** tab (See Figure 21).
2. In the *Review* tab, click on **Compare** (See Figure 21).
3. In the *Compare* drop-down, click **Combine** (See Figure 21).

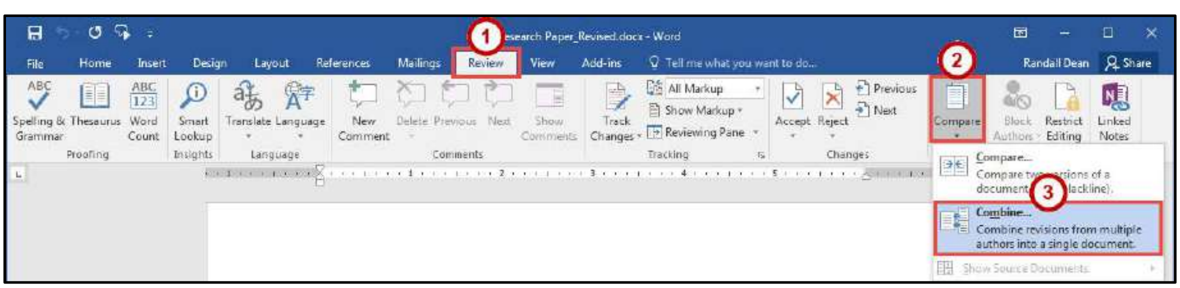

Figure 21 - Combine Changes

4. In the *Combine Documents* window, click on the **Folder** next to *Original document* and *Revised document* to browse through your computer and select the appropriate documents (See Figure 22).
5. Click the **OK** button (See Figure 22).

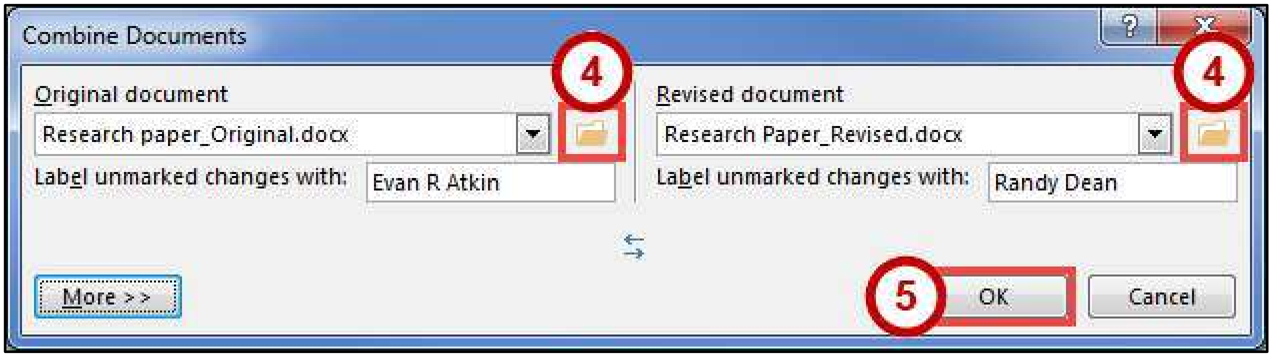

Figure 22 - Combine Documents Window

6. In the *Microsoft Word* window, select the document you want to **Keep formatting changes from** (See Figure 23).
7. Click the **Continue with Merge** button (See Figure 23).

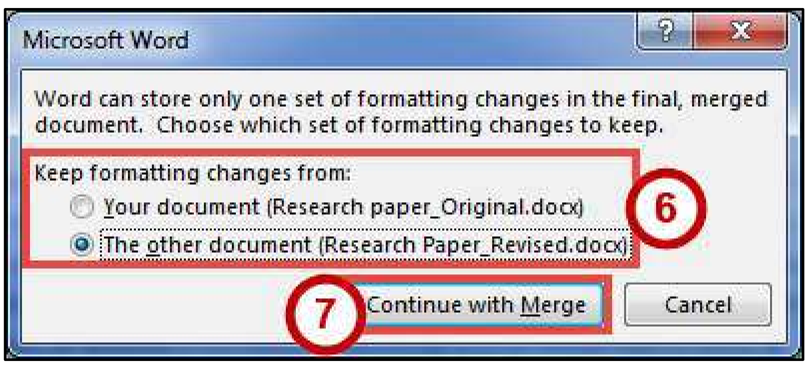

Figure 23 - Keep Formatting Changes From

8. A screen will appear that shows three documents (from left to right): *Combined Document*, *Original Document*, and *Revised Document*.

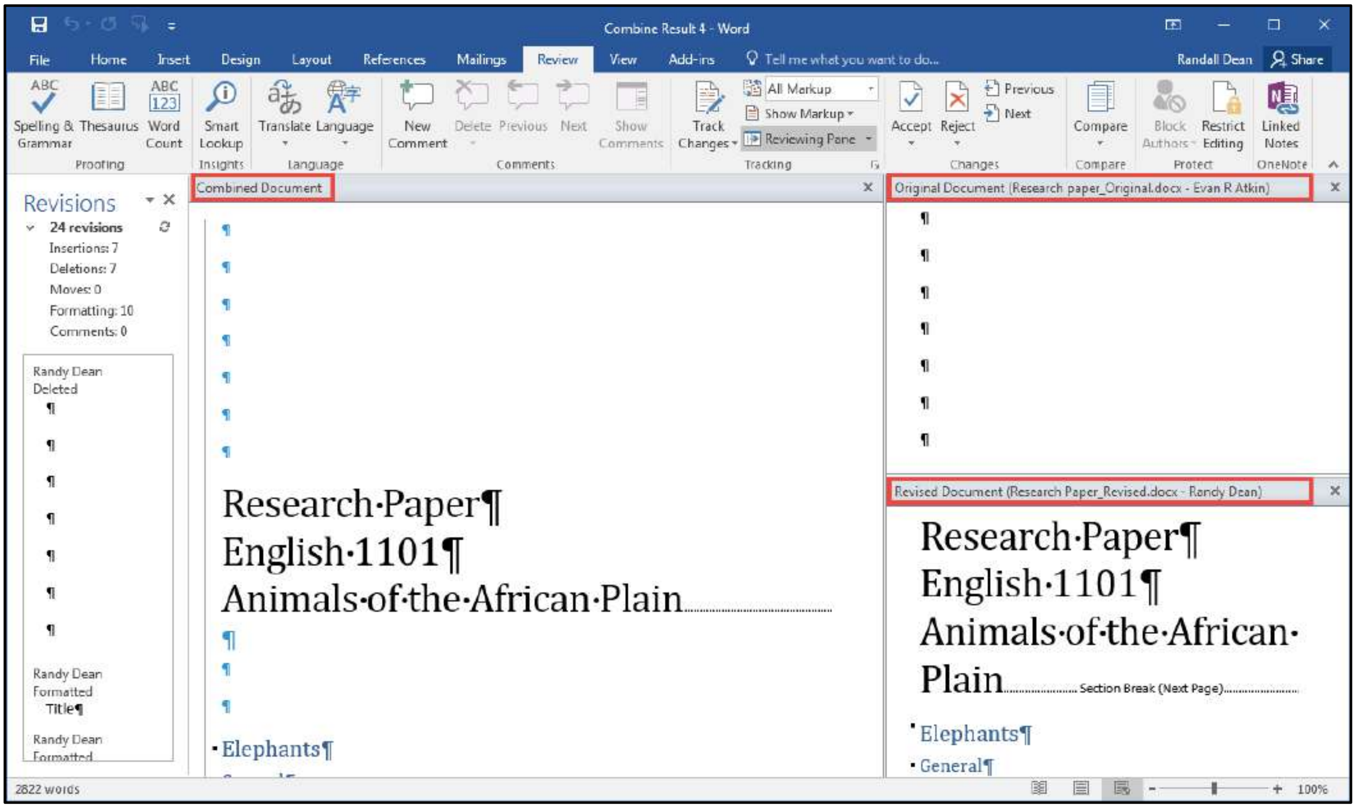

Figure 24 - Documents Combined

9. You can go through the changes in the *Combined Document* section and accept/reject changes as needed.
10. When finished reviewing the *Combined Document*, you can save it as its own version of the document.

Additional Help

For additional support, please contact the KSU Service Desk:

KSU Service Desk for Faculty & Staff

- Phone: 470-578-6999
- Email: service@kennesaw.edu
- Website: http://uits.kennesaw.edu

KSU Student Helpdesk

- Phone: 470-578-3555
- Email: studenthelpdesk@kennesaw.edu
- Website: http://uits.kennesaw.edu