

Data Wranglin'



You can't escape it. If you work in an office, a lot of what you do revolves around client information. Contact information, client notes, and a myriad of other bits of data here and there. This session deals with using databases, from Excel to Access, to get that data under control, and use it for projects such as mail merges and report writing. Strong mouse skills and basic keyboarding skills are required for this session.

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Data, Data Everywhere. And I Don't Know What to Think.

You can't help it. It is inescapable. We are surrounded by a sea of information, and we have to make sense of it all.

We have to:

- Input it
- Import it
- Export it
- Filter it
- Merge it
- Share it
- Link it

And most importantly, Preserve it.

Data Management is one of those amorphous terms that means different things to different people. On the whole, however, it is usually a pretty vast subject, and an hour and a half is about long enough the scratch the tip of the iceberg.

With that in mind, this session will involve a handful of skills you can use to work with data in a very practical, day to day sense. Hopefully, it will give examples of some of the skills required to fulfill that little list of skills near the top of the page.

Specific Skills We Will Work to Cover in This Session:

- Flipping text into a table.
- Copying and Pasting Data as a Method of Data Input.
- Outlook – Importing and Exporting Data to PST's and/or Excel for backup.

Excel:

- Using forms to Enter Data in Excel.
- Validation Rules

- Using Autofilter
- Basic Data Sorts
- Mail Merges with Excel
- Paste Linking Between Word and Excel to share data.

Access:

- Constructing a Basic Access Database
- Importing Data from Excel into Access
- Database Queries for Reports and Mail Merges

What is a Database?

Simply put, a database is a base of data. A collection of information organized into sortable records. Databases can be created in Word, Excel or Access, and we have all seen custom-made databases that have been constructed in languages like Visual Basic or SQL. However, almost all databases are based on one very simple thing. It is a simple thing we have all used at one point or another, either on a computer or on a sheet of paper.

The most rudimentary database we usually work with day to day is a contact database. We can either create our own contacts database, or if we use an email program, the contact database is built right into that program.

One could even argue that if you still use an address book that you carry with you in your pocket or purse, that that is an example of a “hard copy” database.

Another example of a database we may come into contact with every day is when we go to the grocery store. As the person at the checkout scans the barcode on that can of beans, the computer in the till interacts with a database to print your receipt, as well as tell the inventory database that another can of beans will need to be ordered to be put back on the shelves. After a week’s worth of grocery sales, the store manager can run a report from the database that cannot only show weekly profits, but also let them know what groceries have to be ordered for the store.

All Roads Lead to a Table

The core of any database, and the basic storage unit of any database, is a table. The table includes an item called a header row, which contains the field names (the general category) of each type of data. For instance, throughout these examples, we may use field names like first name, last name, address, city, province, postal code, etc.

The header row is very important. Not only does it tell the user what kinds of data you are tracking in your database, but it also helps connect other items like queries, reports or merge documents to our database. Other programs look for the information in that header row to figure out how a report may be constructed, or what fields are required in items such as form letters.

After the header row come the actual data records. A record, simply put, is a single row of data in a table. We usually try to include in each record a unique value that will differentiate one record from another. A good example of this is something like an employee number. Some people may rely on a person's last name as the unique value, but if you have a contacts database with a hundred people, the chance of two people having the same last name are pretty good. A unique value such as an employee number, or even a record number, makes it easier to find a single record in a mass of data. Some database programs may assign their own unique values to each record, or you can opt to go without them, but that latter choice may cause issues as the database grows.

However, let's look at putting together a basic table in Microsoft Word.

NOTE: The steps in this handout are applicable to Microsoft Office 2007 and 2010. If you are using Microsoft Office 2003, you will notice a distinct visual difference, and a difference in the steps you follow. You will still be able to use the steps in this handout, but you may need to modify them slightly for use in Office 2003 applications.

Set a Table in Word

1. Open Microsoft Word
2. Click the Insert Tab your Ribbon.
3. Click on the Table button on the Ribbon.
4. A grid with a group of squares will pop out from this button.
5. Once that grid that pops out, just move your mouse pointer from the upper left square, across as many squares as you need for columns.
6. Also move the pointer down as many squares as you need for rows. If you need more rows or columns than the grid initially shows, just keep moving your pointer beyond the edges of the initial grid, and the grid will expand to accommodate your request for additional columns or rows.
7. Click on the last square you have selected on the grid, and you should see a table on your page with the required number of columns and rows.
 - a. NOTE: it is good to figure out how many rows and columns you need in your table before making inserting the table. Although you can add more columns or rows later, it is still better to get it right the first time around.

One of the nice things about Word 2007 and Word 2010 is that when you use the method above, a feature called “Live Preview” comes into play, and if you watch the page you are working on, the table will appear on the page as you click and drag over the squares on the grid.

From there, you can simply click in the table, and type the requisite data into the table. Once again, the top row of the table will include the field names (essentially the labels that describe the data that follows). You can move between the cells to enter data by using the cluster of 4 arrow keys, usually located in the lower right corner of any keyboard.

In the end, you may end up with a table that looks like this:

Fname	Lname	Title	Organization	Address1	Address2	City	Province	Postalcode
Sheila	Smith	ED	Bigtown Food Bank	Standard Bldg.	10021-134 St	Edmonton	AB	T5J 1R7
Wilf	Boscoe			10426-82 Avenue		Edmonton	AB	T5T 1L9
Don	Smyth	Chair	Town Services	4412-88 St		Edmonton	AB	T5P 1B3
Walt	Earwig			Rockefeller Building	10234-Jasper Avenue	Edmonton	AB	T5J 4R7
Einstein	Jones	Secretary	Hospice Foundation	Rockefeller Building	10234-Jasper Avenue	Edmonton	AB	T5J 4R7

For your information, some arbitrarily chosen short labels have been used for the field names. The field names, and their meanings are as follows:

- a. fname indicates first name of contacts
- b. lname indicates last name of contacts
- c. title indicates a title such as Chair, or Executive Director
- d. organization indicates the name of the Organization
- e. address1 indicates the first line of an address
- f. address2 indicates the second line of an address, if required
- g. city indicates the city
- h. province indicates the province
- i. postalcode indicates the postal code

Keep in mind, these were personal choices for field names. When you use your own field names, keep in mind that that may pose problems later if you are trying to import the data into an Access database. The problems are not insurmountable, but may require a process called mapping so that that Access database realizes “fname” actually stands for “First Name”.

This brings us to a quick note about uniformity and consistency.

Uniformity and Consistency

Databases thrive on a uniformity and consistency of data. Information entered in the same format each and every time. So for instance, if you are

entering the province for a specific contact, it makes sense to use the two letter acronym for that province, since it is the postal service standard. Therefore, you have to make sure that anyone else using that same database enters provinces the same way.

What happens if you don't? What if one person uses AB for Alberta and another uses Alberta? Then when it comes time to filter the data and sort records, if you are looking for all of the records in Alberta, and you filter by "AB", any records featuring Alberta may not be found.

Similarly, if I use a table that uses fname as a field name, and another refers to the same type of data as First Name, I may need to "map" the data. This means I tell the database I am importing the data into that "fname" and "First Name" are the same thing.

When we do a mail merge a little later, we will touch on the subject of mapping.

Another thing database designers might do is say right from the outset that all data tables they use will follow one field naming system. So every table of data you have uses the same field names. This makes combining data between tables much easier.

In addition, database designers might use items like validation rules to "force" people inputting data to input the data in a certain way. So you could create a validation rule that makes a person input Alberta as AB. If they don't, the program will pop up an error message, instructing them to use the two letter acronym.

Last but not least, you can create an actual "rule book" or policy manual that people inputting your data have to read and adhere to.

On the opposite end of the scale, you can also create filters and searches with Boolean operators, and say that you wish to have records returned that include "AB or Alberta".

However, IT IS STRONGLY SUGGESTED that you make people enter their data the same way, and that will alleviate a lot of the need creating overly complicated queries and filters.

But be prepared. Databases are logical. People are not.

Quickly Flipping Text Into a Table.

In the best of all worlds, if you have to input additional data into a table, it is great if you get that additional data already in a tabular format. Then you can usually just copy and paste the records from one table into another. Sometimes, however, you may be emailed an address list that is not in a tabular format.

First off, always try to get additional data in an electronic format. You will still get people who will want to hand you a hard copy, in which case you will have to retype the data, or use a scanner with an Optical Character Recognition Program (OCR) to scan the list in as a Word or Plain text document. Either method is cumbersome. If they email you a list of addresses, it is pretty simple to change an address like this:

Shawn Gramiak

7907-80 Avenue

Edmonton AB T6C 0S5

Into a format like this:

Shawn,Gramiak,7907-80 Avenue,Edmonton,AB,T6C 0S5

Now let's say I get a variety of addresses, and reformat them to look like this:

Shawn,Gramiak, , 7907-80 Avenue, ,Edmonton,AB,T6C 0S5

Joe, Dorn, Executive Director, Wilton & Co., ,12991-88
Street,Edmonton,AB,T5L 1P2

Cindy,Trent,Volunteer,HELP Society,Smalltown Youth Centre,9976-88 Street,Lloydminster,AB,T4M 1L7

Now note that in the above format, each piece of data has been separated with a comma. We are using the table that was featured a little earlier in the handout, and for any places in the addresses where we do not have information (for instance, a person’s Title) we insert a blank space surrounded by commas.

Now to “flip” this data into a table:

1. Select the data by clicking and dragging over it.
2. Click the Insert Tab your Ribbon.
3. Click on the arrow at the bottom of the Table button on the Ribbon.
4. From the menu that appears, click on Convert Text to Table.
5. This will present a window that might say it only recognizes two columns in your data. Look near the bottom of this little window for a section entitled “Separate text at”. In this area, click the “Commas” option. You may see that the number of columns now changes to 9.
6. Click the OK button. You should see that addresses change into a table that looks like this:

Shaw n	Gramia k			7907-80 Avenue		Edmonton	A B	T6 C 0S 5
Joe	Dorn	Executiv e Director	Wilton & Co.		1299 1-88 Street	Edmonton	A B	T5L 1P 2
Cindy	Trent	Volunte er	HELP Societ y	Smallto wn Youth Centre	9976- 88 Street	Lloydminst er	A B	T4 M 1L7

Now if you were to highlight and copy the table above, and go to the table earlier in this handout, you could add an empty row to the bottom of the previous table and paste the new data into it.

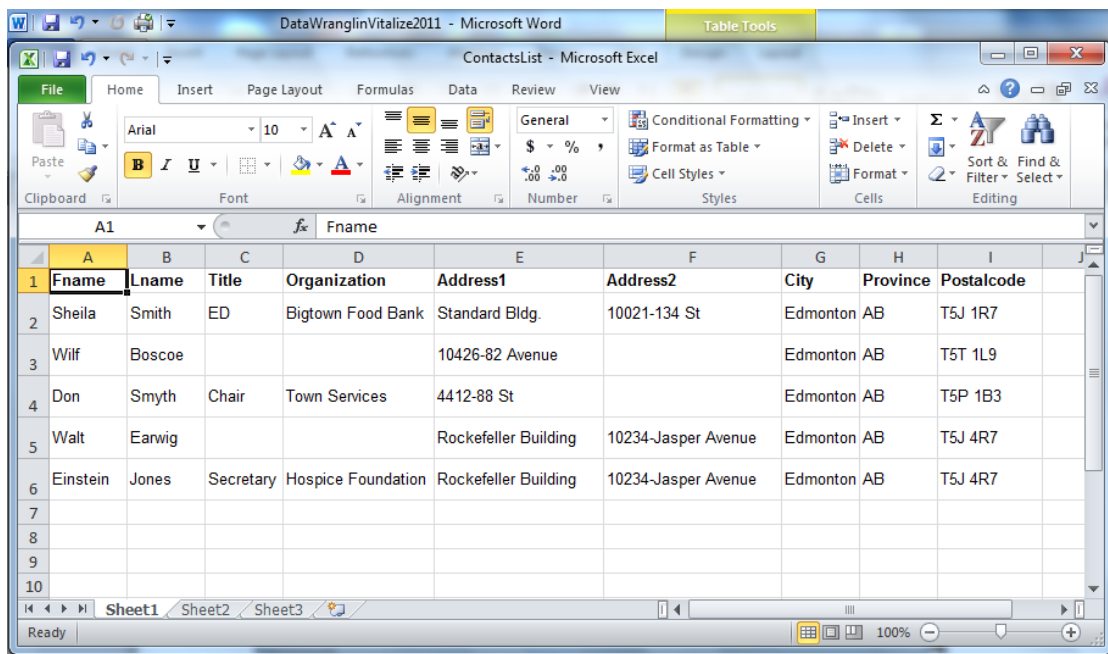
In fact, tables are pretty flexible creatures. When it comes to Word and Excel, for instance, taking data from a Word document and dropping it into an Excel database can sometimes be simply a matter of copying and pasting.

Copying and Pasting Data Between Programs

Be aware that some programs may not react to copying and pasting, but Word Excel seem to be just fine with it.

Once again, in order for this to work well, the structures of the tables in both programs should be similar. Better yet, they should be EXACTLY the same.

So let's say we created a table in Excel that looks like this:



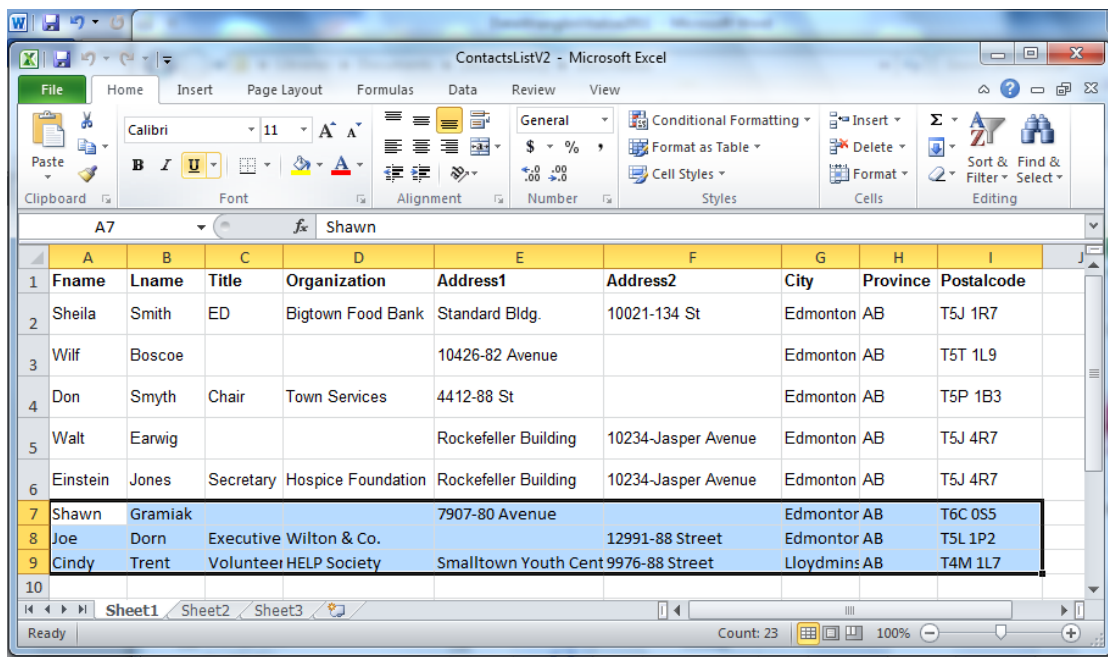
	A	B	C	D	E	F	G	H	I
1	Fname	Lname	Title	Organization	Address1	Address2	City	Province	Postalcode
2	Sheila	Smith	ED	Bigtown Food Bank	Standard Bldg.	10021-134 St	Edmonton	AB	T5J 1R7
3	Wilf	Boscoe			10426-82 Avenue		Edmonton	AB	T5T 1L9
4	Don	Smyth	Chair	Town Services	4412-88 St		Edmonton	AB	T5P 1B3
5	Walt	Earwig			Rockefeller Building	10234-Jasper Avenue	Edmonton	AB	T5J 4R7
6	Einstein	Jones	Secretary	Hospice Foundation	Rockefeller Building	10234-Jasper Avenue	Edmonton	AB	T5J 4R7
7									
8									
9									
10									

The beauty of Excel is that when we open an Excel workbook, the table is already built for us, all we need to do is enter the appropriate data into each

cell. We can also use our arrow keys to move from cell to cell as we enter data.

It is also usually a good idea to bold the text in your header row, as that helps identify it as a row that shouldn't be moved if you sort the data.

Now if we create our table in Excel, and we copy data from a Word document (like the second table we created earlier in this handout) I can simply paste it into the next empty row in the Excel table (for instance, I would click on cell A7 and paste the data from the word table in). The end result should look like this.



	A	B	C	D	E	F	G	H	I
1	Fname	Lname	Title	Organization	Address1	Address2	City	Province	Postalcode
2	Sheila	Smith	ED	Bigtown Food Bank	Standard Bldg.	10021-134 St	Edmonton	AB	T5J 1R7
3	Wilf	Boscoe			10426-82 Avenue		Edmonton	AB	T5T 1L9
4	Don	Smyth	Chair	Town Services	4412-88 St		Edmonton	AB	T5P 1B3
5	Walt	Earwig			Rockefeller Building	10234-Jasper Avenue	Edmonton	AB	T5J 4R7
6	Einstein	Jones	Secretary	Hospice Foundation	Rockefeller Building	10234-Jasper Avenue	Edmonton	AB	T5J 4R7
7	Shawn	Gramiak			7907-80 Avenue		Edmonton	AB	T6C 0S5
8	Joe	Dorn	Executive	Wilton & Co.		12991-88 Street	Edmonton	AB	T5L 1P2
9	Cindy	Trent	Volunteer	HELP Society	Smalltown Youth Cent	9976-88 Street	Lloydmin:	AB	T4M 1L7
10									

NOTE: You might find that you will need to “clean up” or reformat the data you paste in, so that the data looks the same. The data itself, even if you don't reformat it, will still work in processes like mail merges.

We will return for a closer look at Excel in a little while.

Now let's take a look at another program that we may store a lot of data in, and how we can protect it.

Microsoft Outlook

In this handout, we will look at Outlook, which is a program that is used in a lot of businesses and large organizations for people to manage their email, calendars, contacts and task lists.

Outlook is a huge topic unto itself. If you are unfamiliar with the program, take a look at the tutorial handouts at the website www.officetutorials.com for a good overview of Outlook.

Otherwise, you can do a Google Search for “Outlook 2010 tutorials” and you will find hundreds of thousands of potential results. Of course, if you are using an earlier version of Outlook, you can modify your search to look for the correct version.

However, the specific topic we will focus on in regard to Outlook is preserving the information within it. Very often, we might have to take the information presently within Outlook and either back it up to a device we can remove from the computer for safe keeping, and/or move that data to a new or different computer.

Now some people resign themselves to retyping all of their contact information back into their new computer, but Outlook allows you to save all of your Outlook data to a file called a .pst

This sort of file can allow you to save not only your contact information, but all of the entries on your calendar AND all of your email messages.

The process of creating a .pst is often referred to as Exporting. If I am bringing the information from a .pst into a new or different version of Outlook, that is called Importing. Let us first talk about Exporting our Outlook Data to a .pst.

Export Outlook items to an Outlook Data File (.pst)

Information in Microsoft Outlook 2010 can be exported to an Outlook Data File (.pst). This provides a way transfer Outlook 2010 items to another computer or to make a backup.

Folder properties such as permissions and views are not preserved when you export to an Outlook Data File (.pst). Only the content itself is exported.

1. Click the File tab.
2. Click Options.
3. Click Advanced.
4. Under Export, click Export.

Note The Import and Export Wizard can also be opened by clicking the File tab, clicking Open, and then clicking Import.

5. Click Export to a file, and then click Next.
6. Click Outlook Data File (.pst), and then click Next.
7. Select the account — a top level folder — that you want to export. This enables exporting all mail, calendar, contacts, tasks, and notes if available for that account.

Note Only information for one account can be exported information at a time.

8. Make sure that the Include subfolders check box is selected.
9. Click Next.
10. Click Browse to select where you want to save the Outlook Data File (.pst) and to enter a file name. Click OK to continue.

Note If you have previously used the export feature, the previous folder location and file name appear. Make sure that you change the file name if you want to create a new file instead of using the existing file.

11. If you are exporting to an existing Outlook Data File (.pst), under Options, specify what to do when exporting items that already exist in the file.
12. Click Finish.

The export begins immediately unless a new Outlook Data File (.pst) is created or the export is to an existing file that is password protected.

- If you are creating a new Outlook Data File (.pst), an optional password can help protect the file. When the Create Outlook Data File dialog box appears, enter the password in the Password and Verify Password boxes, and then click OK. In the Outlook Data File Password dialog box, enter the password, and then click OK.
- If you are exporting to an existing Outlook Data File (.pst) that is password protected, in the Outlook Data File Password dialog box, enter the password, and then click OK.

If you want to export items for multiple accounts, repeat these steps for each account.

Conversely, if you want to bring data back from an existing .pst, you would have to Import that .pst.

Import Outlook items from an Outlook Data File (.pst)

When you want to migrate Outlook messages, contacts, calendar items, tasks, and notes from one computer to another or restore a backup of your Outlook data, the Import and Export Wizard is the easiest way to complete the task.

1. Click the File tab.
2. Click Open.
3. Click Import.
4. In the Import and Export Wizard, click Import from another program or file, and then click Next.
5. Click Outlook Data File (.pst), and then click Next.
6. Click Browse, and then choose the file to import.

Note Under Options, it is recommended that you click Do not import duplicates unless you want the imported information to replace or duplicate items already in Outlook.

7. Click Next.

8. If a password was assigned to the Outlook Data File (.pst), you are prompted to enter the password, and then click OK.
9. Set the options for importing items. The default settings usually don't need to be changed.
 - The top folder — usually Personal Folders, Outlook Data File, or your email address — is selected automatically.
 - Include subfolders is selected by default. All folders under the folder selected will be imported.
 - The default selection of Import items into the same folder in matches the folders from the imported file to the folders in Outlook. If a folder doesn't exist in Outlook, it will be created.
10. Click Finish.

Tip If you want to import or restore only a few items from an Outlook Data File (.pst), an easier way is to open the Outlook Data File, and then in the Navigation Pane (Navigation Pane: The column on the left side of the Outlook window that includes panes such as Shortcuts or Mail and the shortcuts or folders within each pane. Click a folder to show the items in the folder.) click and drag the items from Outlook Data File folders to your existing Outlook folders.

Now if you have created a .pst, and you want to back it up to an external device like a USB key (memory key, flash drive) follow these steps:

1. Plug the key into your computer and give the computer a few minutes to realize that the key has been inserted. You might get a screen asking what you want to do with the key. You can cancel or close the screen.
2. Find where you stored the .pst file on your computer.
3. Right-click on the .pst file.
4. From the menu that flies up, move your pointer to the Send To: command.

5. From the menu that flies out, click on the name or letter representing the memory key (it will usually be at the bottom of the list.)

You can use the same steps to copy your .pst to an external hard drive as well.

NOTE: You can also use the Export process above, with minor modifications to the steps, to save your Contacts list to an Excel workbook, if that is all you want to back up.

When you choose to Export just your contacts, you will choose the option to “Export to a file” and when you are asked which type of file, you can choose Comma Separated Values (a .csv file). A .csv file is largely understood by most other database programs, and by default, Windows will usually choose Microsoft Excel as the default program to open .csv files.

When it comes to exporting your data from Outlook, most people elect to use the .pst method, simply because it saves ALL of your data (Email, Contacts, Calendars, Tasks, etc.).

In other email programs, you may also have an Export command, but often, it may only export your Contacts (sometimes called addresses). If .pst is not an option to export to, .csv is the safest route to go.

Also note that if you are using a web-based email program like Hotmail, Gmail or Yahoo, the above steps may not work. With web-based email, it is often assumed that the web server computers that contain your email account and address book are protected by the people who are offering you your email service. If you want to backup your messages and email addresses to an external storage device, you may have to set up a program like Outlook or Windows Live Mail to bring the messages and addresses from your webmail account on to your own computer. In cases of webmail services, your messages and addresses are actually not stored on your computer, all of that information is stored at the company that gives you your webmail. If you use a program like Outlook or Windows Live Mail, that actually stores the messages and contacts/addresses on your

computer, you can then you can back them up to an external storage device.

Now back to Excel!

Excel as a Database

Excel is often one of the first programs people use to assemble a basic database.

Excel offers some advantages, as processes such as filtering and sorting are a little bit smoother and easier in Excel. Excel is also nice because the Excel workbook is basically just a huge table in the first place. It has more columns and rows on one sheet than most people ever need.

Excel also shares it's data with other programs really easily.

Last but not least, you can build rules into an Excel database that force people to input data properly.

Let's start by looking at some ways to easily enter data into our Excel database.

The Form Feature in Excel

Although you can simply add data to an Excel worksheet the same way we have done previously (clicking in an empty row, filling in cells and moving from cell to cell using your arrow key), you might find with databases that collect more than 9 pieces of data per record that this can get complicated.

Some people find using the data form feature in Excel to be useful. To use this, you will first need to click somewhere in the header row or your table, then add the form button to the Quick Access Toolbar in the upper left corner of your screen.

Add the Form button to the Quick Access Toolbar

1. Click the arrow next to the Quick Access Toolbar, and then click More Commands.
2. In the Choose commands from box, click All Commands.
3. In the list box, select the Form button, and then click Add.

If you have clicked in the header row of table, and then clicked on the Form button, you should see a form pop up in the middle of the screen. You can then use this form to enter new records, snoop through existing records, and even delete records.

Validation Rules

As mentioned earlier in this handout, you want to make sure that everyone is typing data into your database the same way. One way to force people to enter data in a specific format is to use a validation rule.

So let's use the example of creating a rule to restrict how people input the provinces in our Excel table.

Create a Data Validation Rule.

1. Highlight the cell or cells that you wish to apply the rule to.
2. Click the Data tab on the Ribbon.
3. From the Data tab, click on the Data Validation button.
4. From the Data Validation window that appears, make sure you are on the Settings tab.
5. Click the drop down arrow on the box titled Allow.
6. From the list that drops down, click on Text length.
7. Click the drop down arrow on the Data box.
8. From the list that drops down, click on Equal to.
9. In the Length box, type 2 (for the number of characters for a provincial acronym).
10. Click the Error Alert tab.
11. In the Title box, type "Two Letter Acronym" (without quotes).

12. In the Error Message box, type in a brief message telling the user how they should be typing in data for the province.
13. Click the OK button on this window.
14. Test the Validation rule.

You should find that if you try typing Alberta into one of the cells with the validation rule applied, that the moment you try to move away from the cell, the error message will pop up, allowing you to Retry typing the correct format of province into the cell.

This is just one example of creating a Validation Rule. You will find that if you play around with these steps, there are a variety of variables you can set to restrict how data gets entered into specific cells.

Autofilters in Excel

To quickly filter data in an Excel table:

1. Click in the Header Row of your data table.
2. Click the Data tab on the Ribbon.
3. Click the Filter button.
4. Drop down arrows will appear by each heading, then you can use them to drop lists to filter your data. You can also remove filters using the drop down arrows.

Remember that when you drop the lists using the drop down arrows, you can erase the check mark by Select All option, and put check mark(s) by the criteria you wish to filter by. Clicking the OK button will activate the filter process. You can drop the list again, and use the Clear filter from command to erase any filters you have applied, and return the database to an unfiltered state.

Basic Data Sorts in Excel

If you are on your Data tab anyway, you will see in the same neighbourhood as your Filter button, there are Sort buttons. Using Sort buttons are simple.

1. Click in the column you wish to sort.
2. Click either the Sort A to Z button or Sort Z to A button, to perform ascending or descending sorts.
3. Clicking on the actual Sort button will allow you to sort by more than one column.

Keep in mind that when sorting by columns, the corresponding data from each record moves with the criteria you are sorting. Therefore, you should never be in a position where you sort the data in one column, and that data comes out of sequence with the rest of the data in the database.

Mail Merges with Excel

Mail Merges are very powerful ways to share data between applications, and are most commonly used to create personalized form letters and mailing labels.

Although you will be taken through a practical example during the session, the actual steps are enough to fill a handout of their own.

That's why we will suggest that you find and print the mail merge handouts at www.officetutorials.com

The steps in the Word 2003 Mail Merge tutorial basically work the same way in Word 2007 and Word 2010. The only slight exception will involve how you get to the Mail Merge Wizard.

How to Start the Mail Merge Wizard in Office 2007 or 2010

1. Click the Mailings tab on the Ribbon.
2. Click the Start Mail Merge button.
3. From the list that drops, click on Step by Step Mail Merge Wizard.

This will bring up a panel on the right-hand side of your screen. If you read the instructions on this panel, it should guide you through the process of completing the merge. However, if you print out the Word 2003 Mail Merge Handout from www.officetutorials.com that will also take you step by step through the remainder of the process.

Alternatively, you could Google “how do I do a mail merge in Word 2010” (without quotes) and you will find numerous online guides and handouts that will guide you through the process.

You might even try looking up videos on Youtube which could guide you through doing a basic mail merge in Word.

Paste-Linking to Share Data Between Excel and Word

Paste-linking can be used to share data between many applications, not just Word and Excel. You can even do Paste-Links between Word and PowerPoint, or PowerPoint and Excel. You can even use Paste-link to connect two Excel workbooks to share data.

A very common example of a Paste link is copying a chart created in Excel, and Paste-linking it into a Word document, such as a quarterly or annual report.

This is so common that in 2010, when you copy a chart from Excel into Word, it is automatically linked.

What is the advantage? The advantage is that if you change the data in the Excel worksheet that the chart is based upon, the chart will update and change in the Word document. So I can use the chart in multiple different documents, and if I make a change to the chart in Excel, it changes throughout all of the other documents.

Paste-linking eliminates the need to cross-reference to make sure multiple documents are showing the same data. It helps update multiple documents quicker, and it always forces the user to return to the source of the data to make edits. So you are only correcting the data in one spot, but that in turn, corrects all linked documents.

Sometimes, depending on what you are copying and pasting, you may need to manually establish a Paste-link to make sure updates happen across the two programs.

Making a Paste Link

1. For this example, you will need a table of data (perhaps a budget) already made in Excel, and a Word document that you wish to put a copy of that table into.
2. In Excel, highlight and copy the table of data.
3. Go to your Word document.
4. Make sure you are on your Home tab and click the arrow at the bottom of the Paste button.
5. From the menu that drops, click on Paste Special.
6. From the window that appears, click on the Paste Link option and click on Microsoft Excel Worksheet Object from the list that appears.
7. Click the OK button.

You may want to save both documents. To test if the linking has actually worked, try changing the data in the table in Excel. When you return to the Word document, the table should be updated. Word may tell you that the document is linked, and will ask if you wish to update the links. If you click OK, the update takes place.

Once again, charts copied and pasted from Excel are automatically linked, so you should not need to go through the steps listed above. If the automatic updating does not take place, however, you can follow the steps above to manually create a link.

Using Access for Databases

Access is an actual database program, and that is what it is built for.

It is a close cousin to Excel, but it is much more powerful, but along with that power comes much more complexity.

In this session, we will take a rudimentary look at Access.

Yet once again, check out the Office 2007 tutorials at www.officetutorials.com for a free handout that will go over the basics in more detail. The handout itself is about 51 pages long.

At this point, however, we can go through a little basic database theory, and from there, we can create a simple database.

Understanding the relationships between tables, forms, queries and reports

A Field is a data category that holds a specific type of data. For instance, I could have a Data Field of “First Name” in my database, and that would contain all of my contacts’ first names.

A Record is a collection of Fields. For instance, every record in a Contacts database would include fields such as First Name, Last Name, Address, City, Province and Postal Code. There would be a record for each and every contact in the database. (If the database is well maintained, the records would be comprehensive, meaning they would have all possible fields filled with the most updated information.)

Tables are the overall information containers within a database. Any data entered into a database winds up being stored in a table. A table can also be thought of as a collection of records.

Forms are user-friendly screens that act as templates for inputting data.

Queries act as filters. When you create and run a query, you are asking for specific information from the huge pool of information that the database may hold.

Reports are a cosmetically pleasing way to see the output of queries. Think of creating a book report on paper. You take all of the information you can get, filter out the unimportant bits, and present the remaining information in a clear and understandable format.

When building a database, you:

1. Create your tables first, after deciding what data you want to track.
2. Once the tables are created, you create forms based on those tables, allowing users to easily input data into your database.
3. Once you have entered data into the tables through your forms, you can create queries to filter and sort the data.
4. Once queries are created, reports can be made based upon those queries. So a database user can open a report at any time, and see the current results of that query.

An example of this would be the database that is used to manage a store. All of the products within a store would be listed in tables, along with their prices and how many of each item are in stock. When I buy something at this store, the clerk enters my purchases through the form on the computer screen of their cash register. This information gets fed into the store's overall database. The database also tells the cash register the prices of the items, and assists in calculating the grand total of my purchase. All of these transactions are entered into the database. At the end of each month (or even more frequently), queries are run in the database, and inventory reports can be viewed and/or printed out for the store manager to see how business is going.

In this session, the instructor will either take you through the basic steps of creating a simple database, or show you a sample that is already constructed, and show you the pertinent parts of it, and how they relate to each other.

Once again, for further details on how to build a database step by step, print the appropriate handout from www.officetutorials.com

Importing Records Into an Access Database

The following steps are based on an actual data importation into a database. When you do your own record importation into a database, you will have to substitute the names of your own Excel spreadsheets and table names in Access into the steps. The general process, however, should remain the same.

A Quick Overview of Importing Data

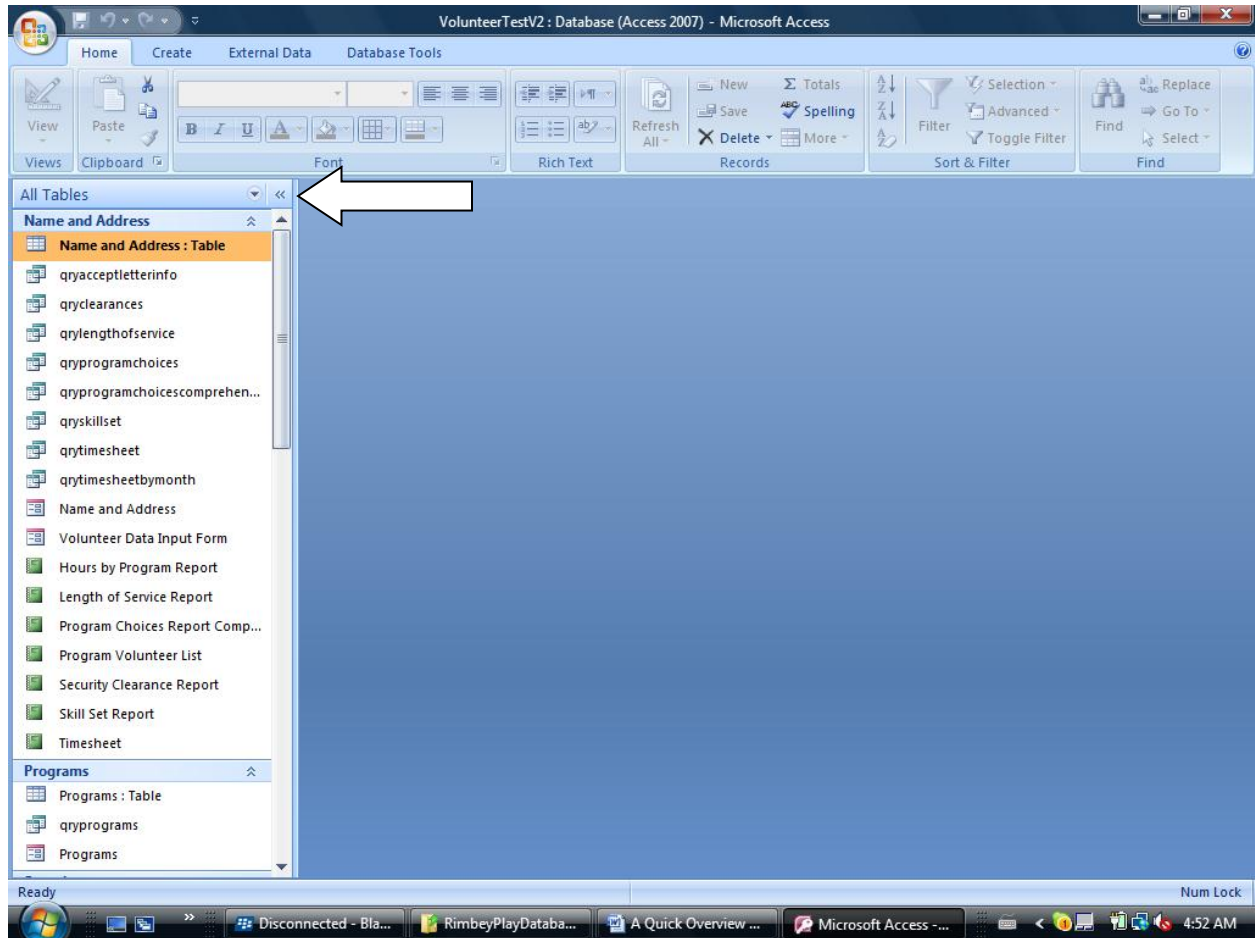
THE MOST IMPORTANT THING!

IN THE EXCEL ADDRESS LIST THE HEADINGS MUST EXACTLY MATCH THE FIELD NAMES IN THE DATABASE. That means their case must match as well.

YOU DO NOT NEED TO INCLUDE A “Record Number” field in your Excel sheet. Any columns you do not have in your Excel sheet that are in the database will simply remain blank after the import of data.

Personal #
Record Number
Status
Title
Last Name
First Name
Address
City
Province
Postal Code
Home Phone
Work Phone
Cell Phone
Fax Number
Email
Date of Birth
Start Date

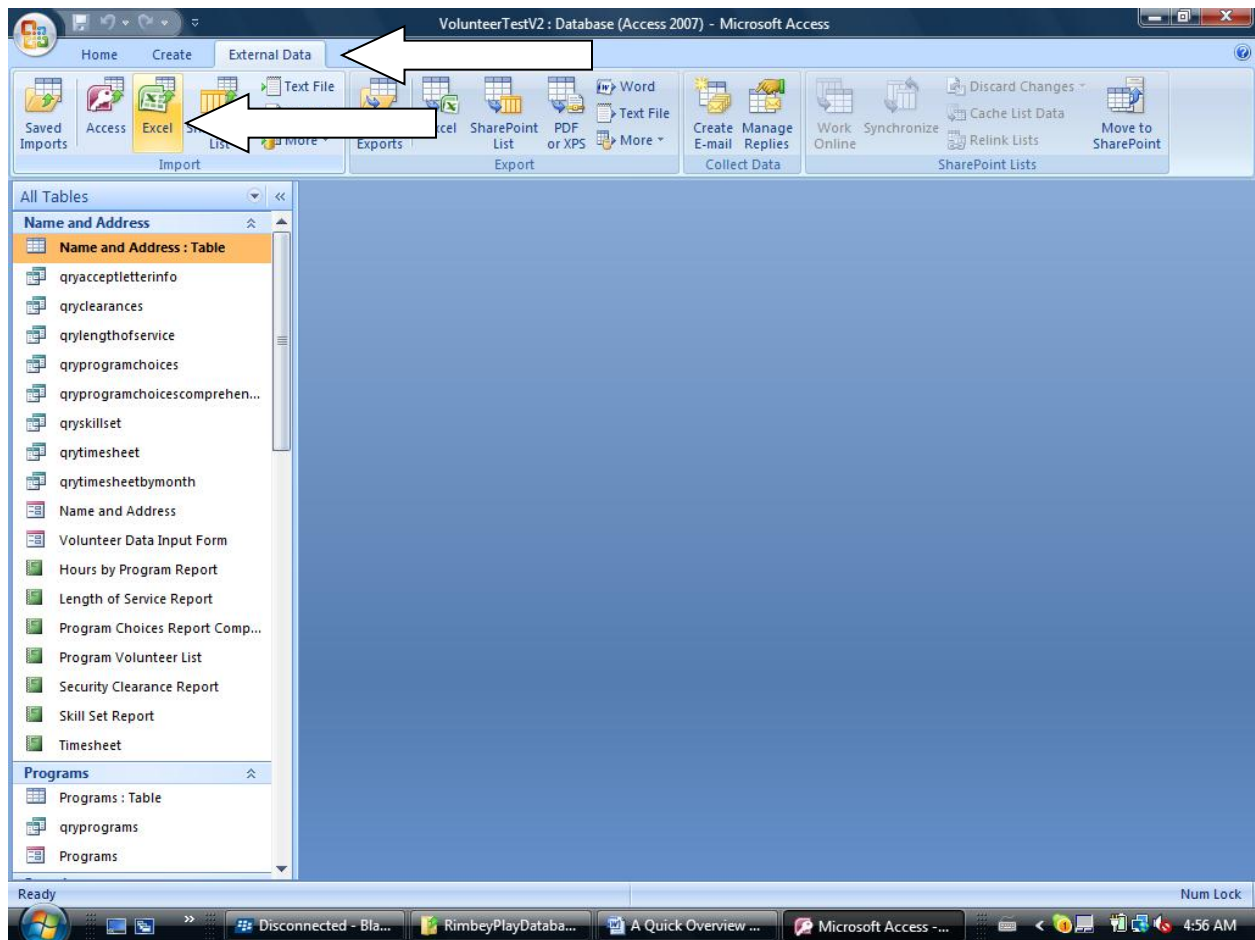
Step One: Open the Database



You don't need to open up the Name and Address Table, you can leave it closed.

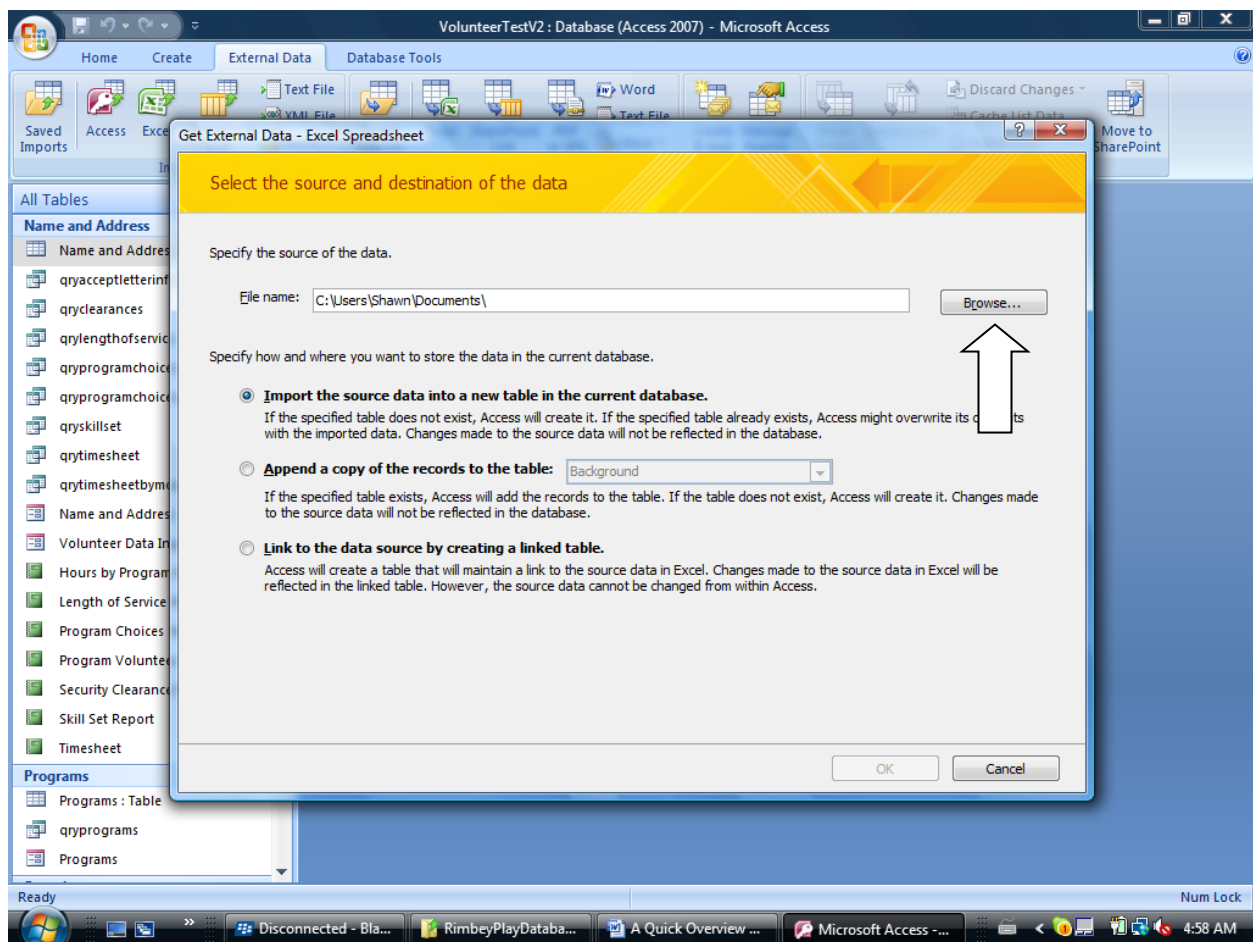
If you don't see the list on the left hand side, click the double arrows on the top of the Navigation Pane bar at the left side of the window. If you cannot see the Navigation Pane, the arrows will point to the right. They will point to the left once the Navigation Pane is visible.

Step Two: Click the External Data Tab

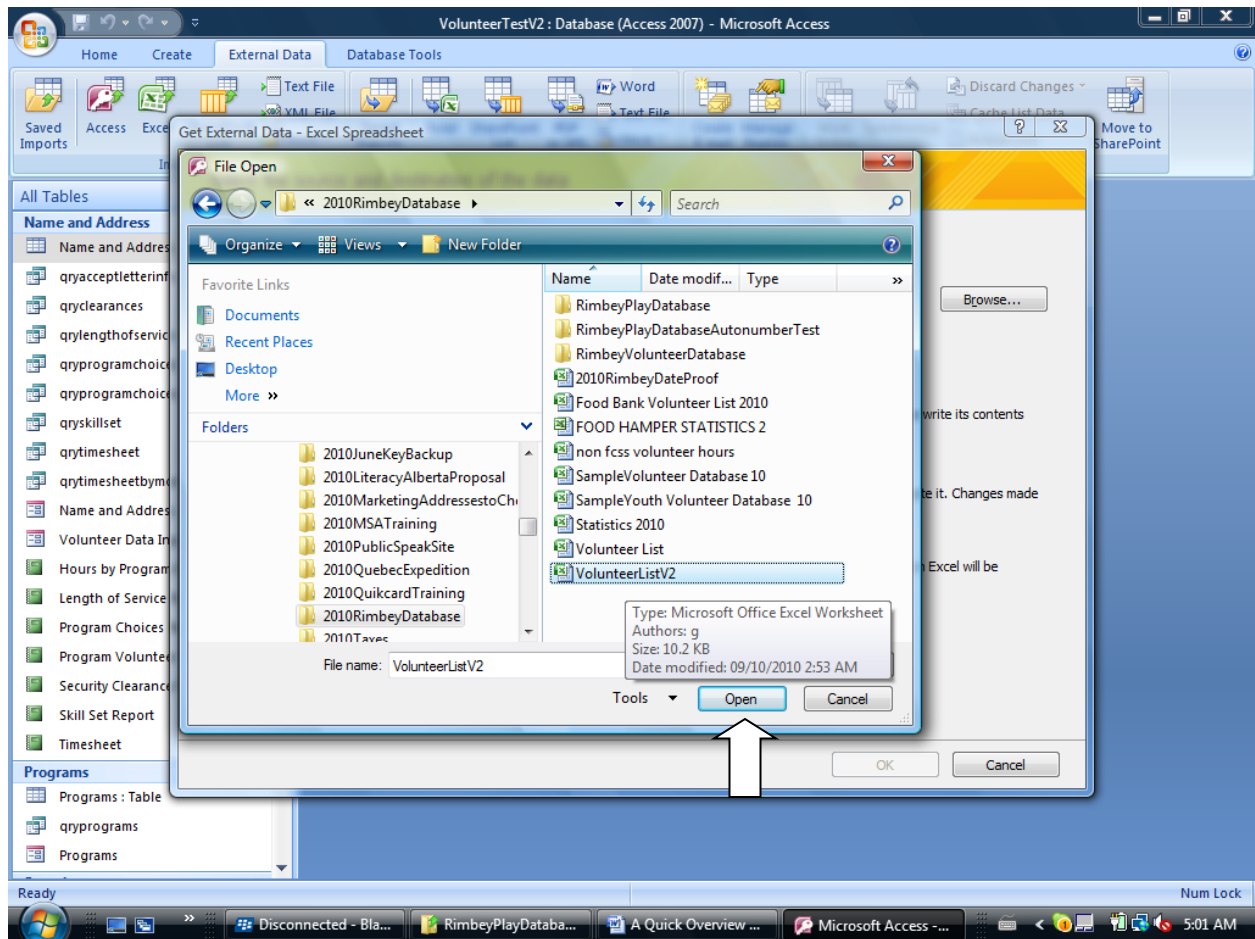


Click the External Data tab and then click the Excel button on the Ribbon.

Step Four: Click the Browse button on the Get External Data – Excel Spreadsheet Window that Appears

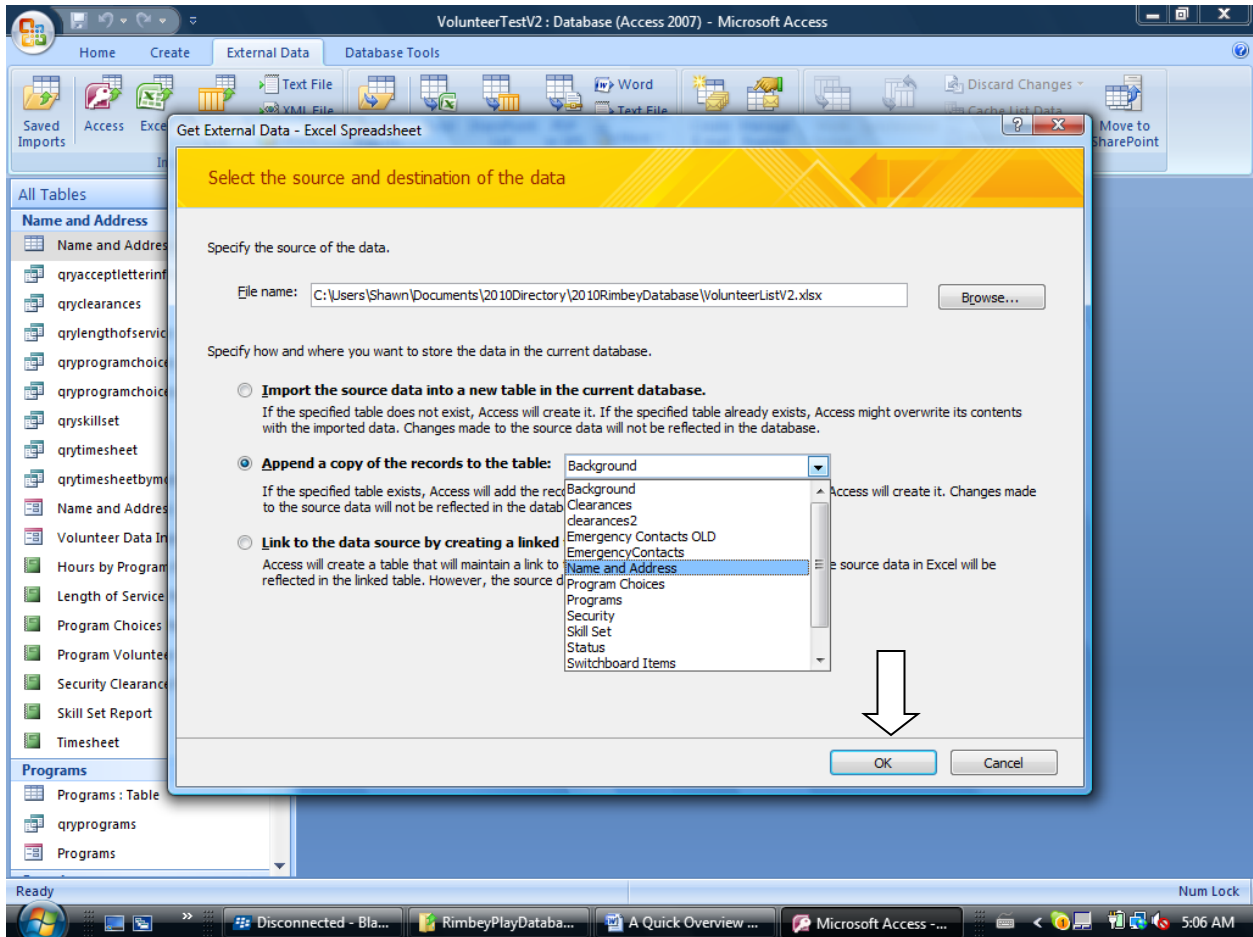


Like any other Browse button, this will open a window that will let you go and find where your Excel Worksheet is located on your computer.



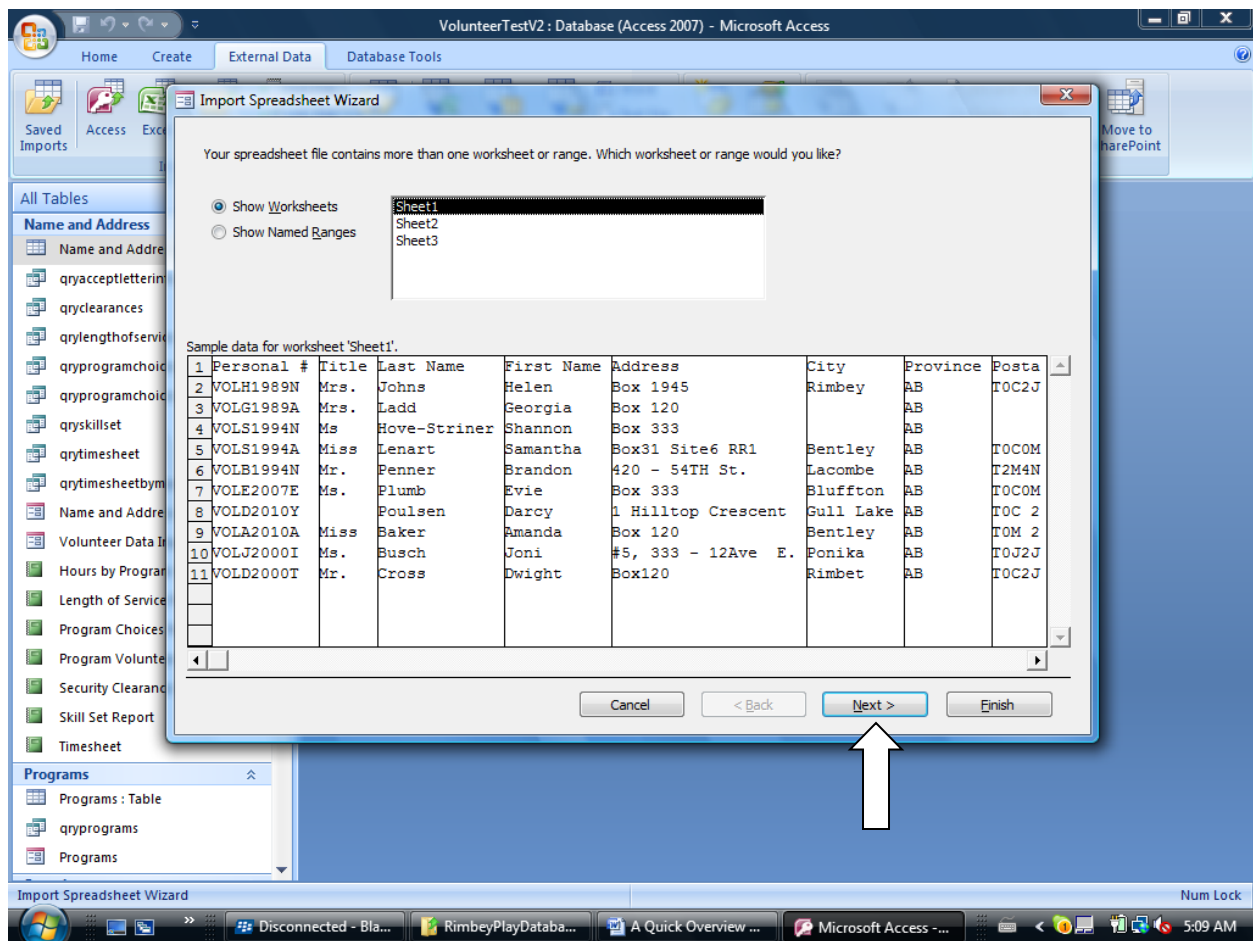
Step Five: Once You Find Where Your Excel Address List file is Located, Click on it, and click the Open button in the lower right corner of the window.

Step Six: When You Are Returned to the Get External Data – Excel Spreadsheet Window, Choose the Table You Want to Import the Addresses Into.



Make sure to click the circle beside “Append a copy of the records to the table:” and click the drop down arrow in the drop down list box. This will show you a list of all tables in the database. Click the Name and Address item in the list. Then click the OK button in the lower right corner of the window.

Step Seven: Go Through the Import Spreadsheet Wizard



When the Import Spreadsheet Wizard appears, MAKE SURE THE HEADINGS appear at the top of the data being imported. If they do not, you might have to cancel the process, and go back to the Excel worksheet. Pull out any rows that are above your headings. Your headings should be the only thing at the top of your Excel worksheet. Then try the Import process over again.

If all is going smoothly, however, you can simply click the Next button in the lower right corner of the Import Wizard.

Keep clicking the Next button until you arrive at a window that has a Finish button in the lower right corner (you might have to click the Next button a couple of times).

Step Eight: Check to See if the Import was Successful!

merge document to your Access database. When you do this, the mail merge will ask whether you wish to connect the document to a particular table in the database, or to a specific query. As long as you tell the Mail Merge Wizard which query to connect to, you should be able to complete the rest of the mail merge process as normal, and the results of the query will be incorporated into your form letters, labels etc.

And In Conclusion...

Again, we have just scratched the surface of data management. However, it is hoped that in this short session, we have at least planted the seeds of what a handful of data management skills can do for you. Hopefully you will come to see ways you can avoid needless retyping of data, and how you can harness data you already have to mass communicate, as well as report useful summarized information to you.

Good luck, and get wranglin'!