ITMG 100
Microsoft Access Lab Intro

Opening a MS Access Database
1. Download the harkins.mdb file from the course website and save it to your local computer.
2. Upon completion either open up MS Access and then hit FILE | OPEN and search for the harkins file (or just search for the file and MS will open it up. NOTE you may receive a message informing you the database is in Access 2000 format—don't worry about the message and continue to open.

Exploring Access
Once you have the file open start to click around on all of the options that are available to you, ie. Queries, reports, etc.

Go back to the table and double click on any table to open it. Notice in the corner there is an icon that looks like a drafting triangle. Click on the image and notice the change from access data to what is called a design view. Notice that when you are in design view the icon changes to look like a data sheet. Click back on that icon.

Notice in datasheet view that the columns (or ??) are listed on the top and the records are listed below. Also notice on the bottom there are controls to allow you to move from one record to another.

You can also right click on a column and sort any column either Ascending or Descending.

You will also want to note that when you have no tables, queries, or reports open that you cannot save access—nor can you do a save as if you were to want a copy. If you want a copy of your access database then you will have to manually go to windows explorer—find the file, right click—select copy, and then paste to obtain a copy of the file.

Adding Data to an Access Table
Simply move your cursor to the last record and hit tab. Your cursor will appear on the next row and you can immediately start to enter data.

Running a Simple Query
Click on queries in your database. Your screen should show no saved queries and instead give you two options to create a query—one is through design view—the other through the query wizard.

Click on the Query Wizard Option and start to follow the dialog box directions. Notice that you can select from any of the previously created tables. Find the movie table and select that option. Notice that the fields from the movie table are listed below the movie table name. You have the option to select one or all of the fields. Select movie type and click on next.

The result should be a smaller version of the table that lists several different movie types although the movie types may be repeated. Notice again that there is the triangle icon in the corner of your screen. Click on that icon (representing design view) and take a look at your query.

You can make your query more robust by simply hitting the sum button on the toolbar (same look as excel). Notice upon hitting this button that a new row gets added to your design view. Right click on the row group by in any of the populated column. Notice that you now have many more choices. Run your query again and notice the change in result. Upon completion save your results.

Intro to Normalization and Relationships

Locate the unnormalized table. Open it up to observe the data inside. Then proceed to open up the other tables. Notice how the other tables contain most of the information in the unnormalized. Once we have broken up the data into proper normalized tables—we need to tell access how they are related. This is where the concept of primary and foreign keys come into place. First a primary key is the main unique identifier of a single particular table. However, because some items are related we may put a primary key value for one item into another table. If we do this it becomes a foreign key. For example, in the movie table we have a primary key called MOVIE_ID. But this MOVIE_ID value is also in the Sales table—which in this instance is a foreign key. This is done because we want to keep the movie information in one table and only referencing it the sales (mainly because we don't want to have to keep typing in all the movie information every time we record a sales—too redundant!)

Now its time to make the relationship in MS Access. Click on Tools | Relationships. Notice the screen that comes up is a blank canvas. This is the start of our drawing board. Right click anywhere in the screen and notice that you can add tables. Go ahead and add the sales table and the movie table. Once both tables appear notice that each table has their columns listed underneath the table name. Move the mouse to the movie_ID field in the sales screen and then hold the right button down on your mouse. Once you have done this drag the mouse to the movie_ID field underneath the movie table. If successful a new screen will appear that looks like the following:
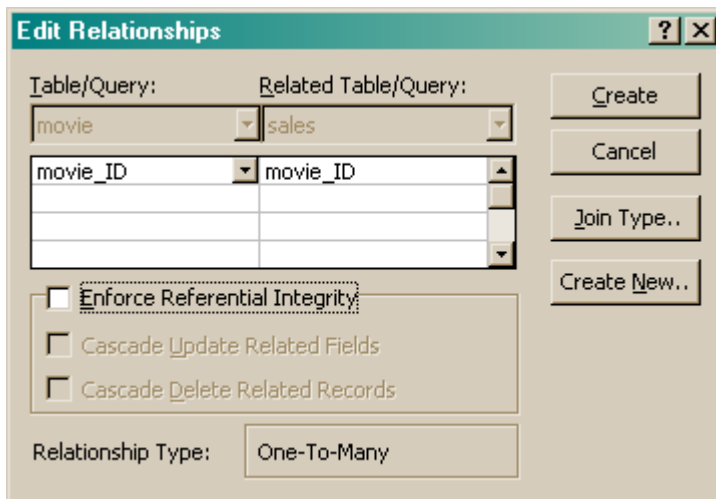
At this point in time you can just click on the create button. We'll deal with the other stuff later. After you click create you should see a line between the two tables. If so, you have successfully created a relationship. You can now close out of the relationship window.

Running A More Complex Query

Go back to the query option in your access database. Again click on query wizard and select movie_type so that it appears on the right hand side. This time notice that you can select from other tables. Once are done selecting movie_type search for the sales table and select the item sales so that it appears on the right. Upon completion hit next and then notice you have two options in the dialog box—one that allows you to select detailed or summary reports. Click on the summary selection and then hit the summary options box. A new screen will come up asking you what type of summary options you want—select sum and then hit OK. The next screen will ask you to name your query and ask how you want to open it—just select the option that says to run the query upon hitting Finish. If successful you will a listing of all of the different movie types and the sum of their sales. Which movie typed produced the most sales?