Some Definitions
A database is a structured set of data held on a computer. It is designed to be accessed in different ways. Users should be able to run queries to get just those records that are of interest to them.

Databases hold the data within tables. A table can be thought of as similar to a spreadsheet. There are columns for the different data fields and rows for the individual records.

A relational database can connect the tables by an element that’s common to each.

Why Use a Database
With a database, you can manipulate data, allow users to get just the data they want (without having to work with a ton of data they don’t), you can re-use data in myriad ways, you can make the data easier to access.

Not All Types of Data Are the Same
Databases allow you to store different types of data. How you store a field will depend upon what the field contains and what you want to do with it. For example, “1” stored as an integer is different than “1” stored as a text string. The first thing you should do when learning any new database language is get a handle on the data types it supports.

Being Unique
It is crucial for each record in a table to be unique. If you have two or more records that are identical, it will be impossible to make a change to just one of them. TIP: Never assume that the data will make each record unique. Add a field that will automatically increment, giving each record its own unique number.
**Reviewing the Data**
Look at the data you are working with and review what fields you need. This will keep your data consistent, which will make for a better user experience. Whether you are entering data or converting from something like a word processing document, keeping the data consistent is crucial. Where do you put a suffix if there isn’t a separate field for it? Does it go with the first name (William, Jr.) or the surname (Jones, Jr.)?

Does the data in question belong in that field? Forcing data into a field where it doesn’t fit can prevent users from finding records that they are looking for. If you have a field for “Cemetery Section” and add the lot number in that field in some of the records, users might not those records.

**Granularity**
Granularity refers to how specific the fields are. A table with separate fields for first name and surname is more granular than a table where both names are in the same field. Typically, the more granular a table is, the more options you have for presenting the data and the more options you can give the user for searching. Reviewing the data and thinking about how users will search will help you determine how granular to be.

**Reviewing the Use of the Data**
As you’re deciding which fields to create in your table, consider how your user will want to use the data. For names, you’ll want, at a minimum, fields for first names and surnames. Beyond that, think about how a user might want to search for the records. For example, users might want to search by cemetery section and lot to find everyone buried in the same lot. It will be much harder to do that search without those items being in separate fields.

**Data in Context**
The great thing about relational databases is that you can connect tables. How does the data you’re working with fit with other data sets? Are there items that are repeated over and over? Are there data elements that could be reused in different ways?

Use relational databases to your advantage. You can re-use the data in multiple ways. You can also make your workflows more efficient by only having to change the data in one place.