

Database Terminology

- A “**database**” is a collection of related information. This information is broken down into “**records**”.
- A *record* is all the information about an individual/subject/topic. For example, In the Holy Trinity database called “Course Options 2006”, each student has a record of the courses they have chosen for next year.
- Each piece of information in a record is called a “**field**”. For example, in the “Course Options 2006” database, some fields are:
 - Name
 - Student ID Number
 - Grade
 - Course Choice 1, Course Choice 2, ..., Course Choice 12
- Fields must be defines as being of a certain “**datatype**”. What this means is “What type of data will it hold?” Possible answers:
 - Numeric – numbers; anything that will have math done on it
 - Text – words (CAN include numbers)
 - Container (contains anything)
 - Calculated field (based on the contents of some other fields)
 - Date – knows the calendar
 - Time
- Each field has certain information that must be specified when it is created in a database:
 1. Field Name
 2. Datatype
 3. Size – how big the field will be on the screen
- Data is collected (this process is called data collection) by using forms (usually paper). For example, the data for the “Course Options 2006” database was collected using the green option sheets that all students filled out. This data was then transferred to Scantron forms because they are **machine readable**, then read into the computer for processing.

The paper form (the equivalent of a record) is:

Mc Donald’s Application

Name: _____

Street Address: _____

City: _____

Postal Code: _____ Phone: _____

DOB: _____

Past Work Experience:

1. Job Title: _____

2. Phone: _____

Steps for Creating a Database

1. **Decide on a topic** – what will you do? What will the database do? This will be a report created on a word processor, including:
 - a. Title,
 - b. a paragraph to explain what the database will do, and
 - c. a list of questions that the database should be able to answer.
2. **Decide what information is to be included in the database.** This will take the form of a list. Include:
 - a. field names,
 - b. datatypes, and
 - c. validations (value lists – so the user can only select certain values; only certain values are valid).It should be produced in a word processor.
3. **Create a Data Collection Form.** This is the required data organized logically. Include the field size (number of characters). Be aware of what you want to do with the data and organize it appropriately. It will look like a form with the layout indicated by lines and numbers (to indicate field sizes – # of characters). It will be a picture of the form.
4. **Collect your information.** You will have to do research (family, friends, internet, in stores...whatever is appropriate). Create as many copies of the form as there will be records in the database, and fill them out appropriately. This step is done on paper.
5. On the computer (in FileMaker): create the fields, define the value lists.
6. Populate the database with the collected information
7. Create appropriate layouts (refer to step #1 to know the information that must be in each)
8. Create a navigation system (main menu, navigation buttons)
9. Functionality (buttons that “do things” and scripts)