2.1: Guide to Data Mapping

Instructions for Data Mapping Tools

Module 2 contains two tools to help you understand data mapping and to develop a map. We recommend you use these tools together and follow the step-by-step process.
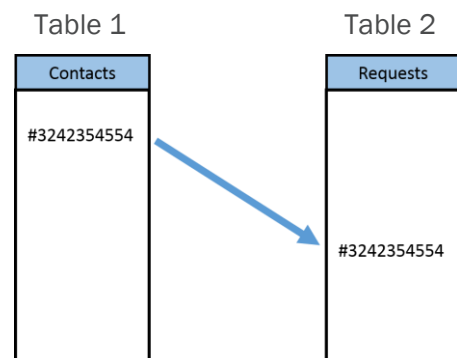
1. Read through **2.1: Guide to Data Mapping** to understand the purpose and benefit of data mapping and the steps necessary for developing a data map.
2. Work with your system vendor to use **2.2: Data Map Template** to develop a map of your system.
3. Use this map as you train staff for data entry, integrate other systems, or prepare for reporting.
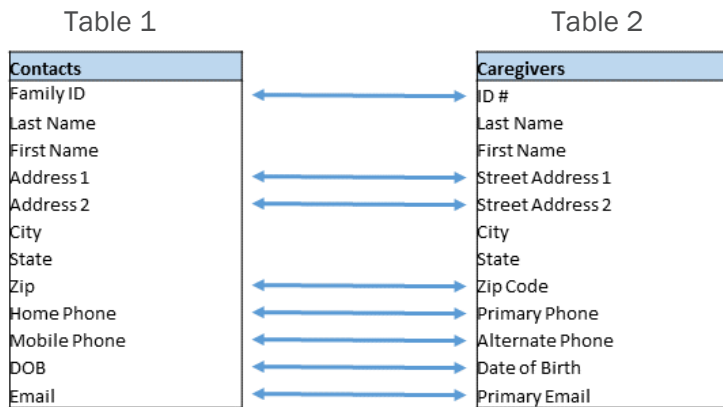
Guide to Data Mapping

Data mapping is a process that documents the links between data points in different tables or databases. The purpose of data mapping is to see where and understand how data are stored and connected. By completing a data map, your team will better understand data system relationships. This understanding assists in training the staff to enter data correctly and prepare for data reporting and migration to new systems.

The same data in most modern systems and databases are stored in multiple **tables** or collections of data values held together in the system. This is called a **relational database** because there are fields of the shared/related data in multiple tables. Names or identification (ID) numbers are examples of shared/related data.

In Table 1 (Contacts), an ID number is assigned to each person listed. The ID number is also used in In Table 2 (Requests) with data entered from a form. The ID number


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appears in both and establishes a relationship between the two different **table names**.

Table 1

Contacts
Family ID
Last Name
First Name
Address 1
Address 2
City
State
Zip
Home Phone
Mobile Phone
DOB
Email

Table 2

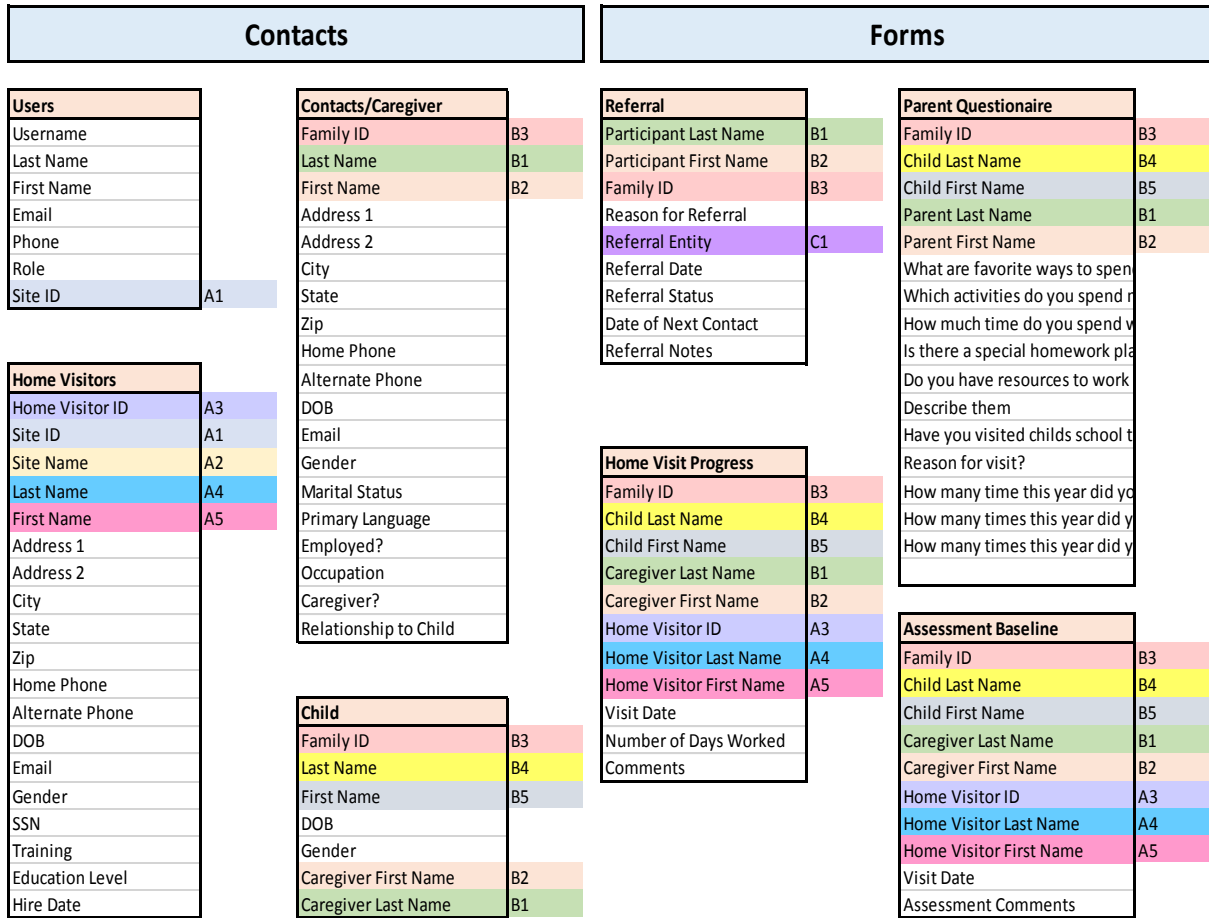| Caregivers |
|---|
| ID # |
| Last Name |
| First Name |
| Street Address 1 |
| Street Address 2 |
| City |
| State |
| Zip Code |
| Primary Phone |
| Alternate Phone |
| Date of Birth |
| Primary Email |

Just as tables can list the same data under different **table names**, the same data can also be under different **field names** (for example, Family ID under Table 1 is the same as ID# under Table 2). These differences necessitate mapping the relationships between the fields. Mapping these tables would mean finding the fields in each table that contain the same data (information).

There are several methods for mapping databases; two methods are most commonly used to map data manually. One method is **graphical mapping** – which involves drawing connections between the tables (as seen below). This method is easy to follow and allows users to quickly see how fields may be shared across multiple tables. However, graphic mapping can become difficult to follow when dealing with very large tables.
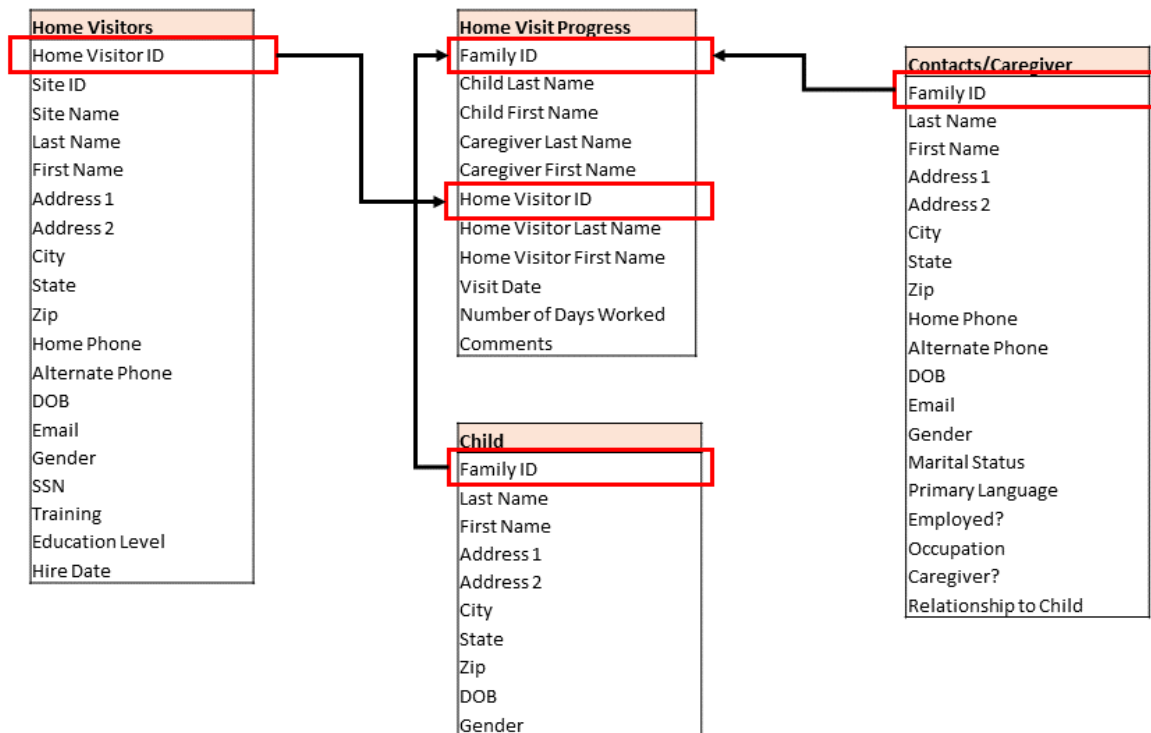
Another method is the **use of codes**. Codes can be manually applied to fields common across multiple tables. An advantage of using codes is they can later be combined with automation files called transforms. The transforms allow much of the data mapping process to be done automatically.

In this example, you can see multiple fields with codes to show the matching fields in other tables. Colors have been applied to see matches easier.

Contacts

Users

Username	
Last Name	
First Name	
Email	
Phone	
Role	
Site ID	A1

Home Visitors

Home Visitor ID	A3
Site ID	A1
Site Name	A2
Last Name	A4
First Name	A5
Address 1	
Address 2	
City	
State	
Zip	
Home Phone	
Alternate Phone	
DOB	
Email	
Gender	
SSN	
Training	
Education Level	
Hire Date	

Contacts/Caregiver

Family ID	B3
Last Name	B1
First Name	B2
Address 1	
Address 2	
City	
State	
Zip	
Home Phone	
Alternate Phone	
DOB	
Email	
Gender	
Marital Status	
Primary Language	
Employed?	
Occupation	
Caregiver?	
Relationship to Child	

Child

Family ID	B3
Last Name	B4
First Name	B5
DOB	
Gender	
Caregiver First Name	B2
Caregiver Last Name	B1

Forms

Referral

Participant Last Name	B1
Participant First Name	B2
Family ID	B3
Reason for Referral	
Referral Entity	C1
Referral Date	
Referral Status	
Date of Next Contact	
Referral Notes	

Home Visit Progress

Family ID	B3
Child Last Name	B4
Child First Name	B5
Caregiver Last Name	B1
Caregiver First Name	B2
Home Visitor ID	A3
Home Visitor Last Name	A4
Home Visitor First Name	A5
Visit Date	
Number of Days Worked	
Comments	

Parent Questionaire

Family ID	B3
Child Last Name	B4
Child First Name	B5
Parent Last Name	B1
Parent First Name	B2
What are favorite ways to spen	
Which activities do you spend r	
How much time do you spend w	
Is there a special homework pla	
Do you have resources to work	
Describe them	
Have you visited childs school t	
Reason for visit?	
How many time this year did yo	
How many times this year did y	
How many times this year did y	

Assessment Baseline

Family ID	B3
Child Last Name	B4
Child First Name	B5
Caregiver Last Name	B1
Caregiver First Name	B2
Home Visitor ID	A3
Home Visitor Last Name	A4
Home Visitor First Name	A5
Visit Date	
Assessment Comments	

Step-by-Step Process

Step 1. From your vendor, request a **system diagram** which includes every table in the system. If this does not exist, request a comprehensive list of every table in the system.

Step 2. Create lists of the field names within each table.

Step 3. Identify fields where the same information is requested by using different field name(s).

Step 4. Create a code and highlight color for each field asking for the same information across multiple tables. You may need to ask your system vendor or run test data (enter information for a fictional family) to determine if fields contain the same information.

Step 5. Develop a single document (such as 2.2 Data Map Template) that contains all tables and highlighted field names.

Step 6. Determine which table contains the data entered by staff. In other words, which are the manually entered data and which are the data being automatically completed by the system relationships.

Step 7. Draw arrows between these highlighted fields so all are connected. The data entry point identified in Step 6 is the point where the connected fields begin.