ESTABLISH TABLE RELATIONSHIPS

One of the most powerful features of a relational database management system is the ability to define relationships between tables. A common field is used to relate one table to another. This process is often called performing a join. When tables are joined that have a common field, it is possible to extract data from them as if they were one larger table.

When data is placed in two or more separate tables, a way to merge the tables needs to be established so that forms and reports can be created using the data. Establishing how data in one table relates to data in another table is called a Relationship. Access refers to the tables that form this relationship as the:

☞ **Primary Table** – The table that contains one record for each Primary Key. This table is also referred to as the parent or master table.

☞ **Related Table** – The table that contains more than one record for each record in the Primary Table. This table is also referred to as the child table.

Specify Common Fields

Data from one or more tables is related by the establishment of common fields. A Common Field is a field that exists in two or more tables. This allows for the matching of records in each of the tables. For example, the Production Table and the Spot Play Table might both contain a field which is the same data type. This field type might function as a Primary Key in the Production Table and as a regular field in the Spot Play Table. This common field is then used to create forms and reports containing information on both the Production and the Spot Play tables. When a **Primary Key** is used as a common field, it is called a **Foreign Key** in the second table.

Build Table Relationships

Once a way of relating two tables with a common field has been established, the next task is to express the name of the relationship. There are three types of relationships: one-to-one, one-to-many, and many-to-many. The table below explains these three options.

Type	Description
One-to-One	Each record in one table is matched with only one record in a second table, and vice versa. With this relationship, it isn't possible to have more than one record in Table I match more than one record in Table II. The primary key in one table is matched to the primary key in another table.
One-to-Many	Each record in one table is matched to one or more records in a second table, but each record in the second table is matched to only one record in the first table. This is the most common relationship that is established in Access.
Many-to-Many	Each record in one table is matched to multiple records in a second table, and vice versa. With this option, it is necessary to create an additional table that has a one-to-many relationship with the other tables.