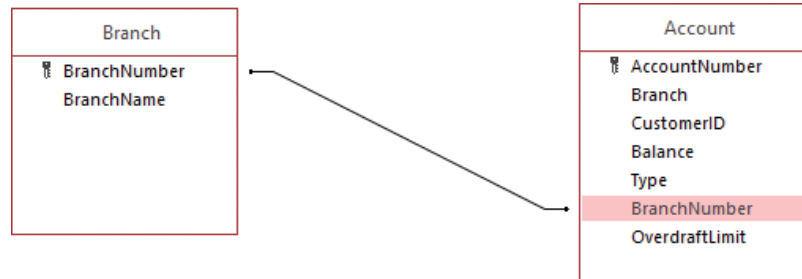


# Understanding relationships

A relational database simply wouldn't be relational without relationships – but what exactly are these relationships? And why are they so important? A relationship is a logical connection between one Table and another. The connection is made between a field in one Table and a field in another Table. For example, below are two Tables – a branch Table and an account Table:



One-to-Many relationships link ONE record in the first Table to MANY records in the second Table – this is the most common Table relationship.

One branch of a bank will contain many customer accounts. By relating the BranchNumber field of the Branch Table to the BranchNumber field in the Accounts Table, you are creating a “One-to-Many” relationship between the two Tables. There are three different types of relationship you can define between Tables – One-to-Many, One-to-One, and Many-to-Many:

## One-to-Many

A One-to-Many relationship occurs when one Table, known as the “parent” Table, has many matching records in another Table, known as the “child” Table. In the example above, the “Branch” parent has many matching records in the “Account” child Table.



One-to-One relationships link ONE record in the first Table to exactly ONE record in the second Table.

## One-to-One

A One-to-One relationship occurs when there is a direct match between a record in one Table and a record in another. For example, at the top of the next page are two Tables – a customer Table and an address Table. The business logic behind the relationship states that a customer may only have one address at any one time. Every one record in the “Customer” Table therefore directly matches one record in the “Address” Table.

...cont'd

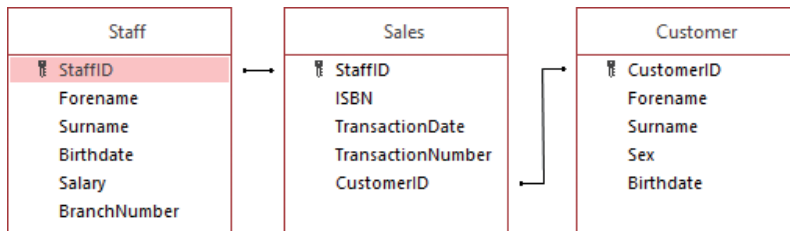


### Many-to-Many

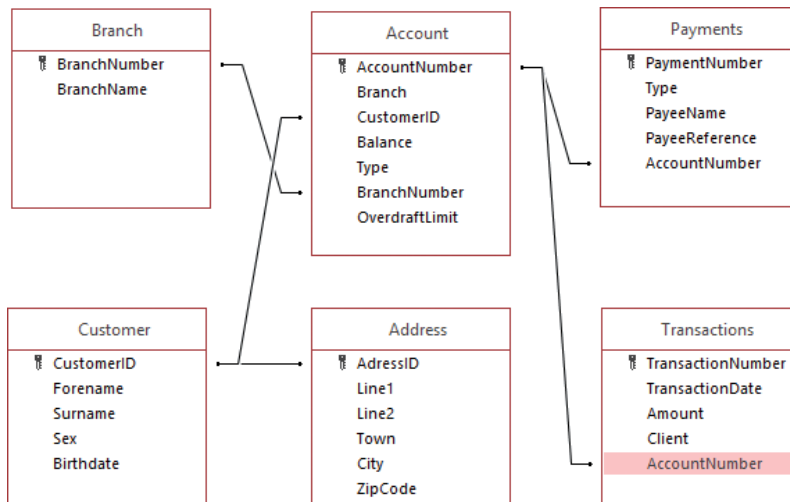
A Many-to-Many relationship occurs when one Table can have many possible matches with records of another Table, and vice versa. To model this relationship in Access, you must create a third Table, known as a “Junction” Table, and reduce the Many-to-Many relationship between two Tables into two One-to-Many relationships – using the Junction Table as the intermediary:



Many-to-Many relationships link MANY records in the first Table to MANY records in the second Table.



Relationships in a typical database might look like this:



A Junction Table keeps track of related records in two other Tables.