

Before we finish with Normalisation there are a couple of little extras we need to consider.

Multiple and Nested Repeating Groups

As we mentioned earlier, First Normal Form is probably the most important step in the normalisation process as mistakes here will have a ripple effect on the rest of the normalisation process. Where some people get caught out is in applying 1st Normal Form steps and then moving on quickly to 2nd Normal Form and this is where many people are caught out.

One of the most vital steps for 1st Normal Form is to make sure you revisit each relation after you have normalised it to 1st Normal Form and make sure the rules are still not applicable to the new relation. In other words hidden within the first run through is another un-normalised relation.

Multiple Repeating Groups

A multiple repeating group is where there are two or more repeating groups within the relation to be normalised. The data within each repeating group is unconnected with any other data within a repeating group.

The normalisation process is exactly the same as described previously, except it needs to be carried out for **each** repeating group. Each group of repeating domains will result in a separate table.

Nested Repeating Groups

A nested repeating group is where there are two or more repeating groups within the relation to be normalised. The data within one repeating group is nested within another repeating group. That is, the data is related.

The normalisation process is exactly the same as described previously, except it needs to be carried out repeatedly till the relation is in 1st Normal form.

The upshot of both of these anomalies is you should never move on to 2nd Normal Form until you are absolutely sure the relation you are dealing with is defiantly in 1st Normal Form.