**Normalization :**

The key process that translates that translates data models from flat files to efficient , relational formats. Lets take example of purchases table.

**First Normal Form** : Any columns that occur multiple times ina table should be removed and placed in a different table. There may be more than one items for purchase at once so split the purchase table into purchases and products\_ordered.

**Second Normal Form :** In addition to the design complying with First Normal Form, all data not relying on a table key to uniquely identify it should be removed and placed in a different table. Many products belong to same category so make a different table for category.

**Third Normal Form :** This eliminates dependencies within a table. It states that , in addition to the design complying with second Normal Form, all non-key data that is dependent on other non-key data in the same table should be placed in a different table. Imagine that the table customers includes every customer’s address, the name of the country in which the customer lives, and the ISO abbreviation for that country. The ISO code and country name are dependent as same country has same ISO code always. So you have to place only one of these , i.e., ISO code in the customer table and place the country name along with ISO in a third table.

**Disadvantages of Normalization :**

* Increases complexity , with keys having to be added as part of the normalization process, and is difficult to manage.
* Doing cross referencing between tables may slow down the live system.