Understanding Quantitative Attributes

Quantitative Attribute (QA) is a special attribute that is used to compare two values, i.e., it is used to compare a user-defined value against an upper limit and a lower limit. For example, the result for a test is inferred by comparing the user-defined value against an upper and a lower limit. The quantitative attribute helps compare the given value to a range. In addition, the single attribute can be used to compare against the lower as well as the higher limit.

For example, consider a query to find all patients with low or high blood glucose levels. In CIDER, for each patient a lower value and an upper value for blood glucose level is stored in the `Result` class. To find patients with low/high level of blood glucose, without QA you would have to specify a limit on the `Low` attribute or the `High` attribute of the `Result` class. QA provides you the ability to define a limit on a single attribute `Result` and it will take care of comparing it to the lower limit or upper limit according to the condition defined in the query.

QA can be used to define the queries using the Simple or the Advanced option. Define Limit page does not differentiate between a normal attribute and a QA. While defining limit you can use Between, Equals, Less than, Less than or Equal to, Greater than, Greater than or Equal as relational operators.

This attribute can also be used to define temporal queries (TQ). The only condition that you need to keep in mind is that a TQ can be defined between the same type of attributes. For example, while defining a TQ using two `Lab Tests` category you can define a TQ between `Source Quantitative Result` from both the categories. You cannot define a TQ between the `Source Quantitative Result` from one of the category and `Normalized Quantitative Result` from the other category. To know more about TQs refer to, Creating a Temporal Query.