

Specifications: CompositeLabeledDouble

In addition to the obvious specifications illustrated in the UML class diagram, the `CompositeLabeledDouble` class must satisfy the following specifications.

1. If a constructor is passed a key that is null or empty (i.e., "") then the constructor must throw an `IllegalArgumentException`.
2. The `add()` method must add the given `LabeledDouble` object to the collection of `LabeledDouble` objects.
3. The `filter()` method must return a filtered copy of the data attribute.
 - 3.1. If the `filter` attribute is null, it must return a copy of the data attribute (containing aliases of the elements in the data attribute).
 - 3.2. Otherwise it must return the result of applying the `filter` attribute to the data attribute.
4. The `getValue()` method must use the `Filter` and `Calculator` parameters passed to the constructor to calculate the value to return.
 - 4.1. The `getValue()` method must first call the `apply()` method of the `Filter` object (if there is one).
 - 4.2. The `getValue()` method must then calculate the value to return using the "filtered" `List<LabeledDouble>` (if there is a `Filter`) or the original `List<LabeledDouble>` (if there is not).
 - 4.2.1. It must return null if there is no `Calculator`.
 - 4.2.2. Otherwise, it must return `Double` associated with the result of calling the `calculate()` method of the `Calculator` and passing it the appropriate `List<LabeledDouble>`.