

Specifications: History

A `History` object contains a label, a collection of `LabeledDouble` objects, a `Filter`, and a `Calculator`. It might, for example, contain all of the course grades for an individual student.

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

1. Constructors must initialize all attributes.
 - 1.1. All non-String attributes other than `data` must be aliases of the corresponding parameters passed to the constructor.
 - 1.2. The `data` attribute must be initialized to an empty (non-null) `List`.
 - 1.3. If a constructor is passed a label that is null or empty (i.e., "") then the constructor must throw an `IllegalArgumentException`.
2. The `filter()` method must return a filtered copy of the `data` attribute.
 - 2.1. If the `filter` attribute is null, it must return a copy of the `data` attribute (containing aliases of the elements in the `data` attribute).
 - 2.2. Otherwise it must return the result of applying the `filter` attribute to the `data` attribute.
3. The `getValue()` method must return the result of applying the `calculator` attribute to a filtered copy of the `data` attribute.