



## Specifications: TotalStrategy

In addition to the obvious specifications illustrated in the UML class diagram and the specifications for the parent class and interface, the `TotalStrategy` class must satisfy the following specifications.

1. `public` methods must not have any side effects. That is, they must not change the parameters that they are passed in any way (e.g., the `List` that is passed to the `calculate()` method must not be changed in any way) and they must not change attributes that are not “owned” (i.e., attributes that are aliases) in any way.
2. The `calculate()` method must calculate the total of the `List` of `Grade` objects it is passed.
  - 2.1. You may assume that the `calculate()` method is passed a `List` that does not contain any `null` elements.
  - 2.2. If the `List` is `null` then it must throw a `SizeException`.
  - 2.3. If the `List` is empty then it must throw a `SizeException`.
  - 2.4. Otherwise, it must return a `Grade` object with the given key and a value equal to the total of the `Grade` objects in the `List`.
    - 2.4.1. If the value of a particular `Grade` is missing (i.e., `null`) then a value of `0.0` must be used. Note: The `Missing` class has a method that can be used to accomplish this.