



Specifications: LeafScore

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

1. LeafScore objects must be immutable.
2. If a constructor is passed a key that is null or empty (i.e., "") then the constructor must throw an `IllegalArgumentException`.
3. The `LeafScore(String key)` constructor must construct a LeafScore object with a `value` attribute of `0.0`.
4. The `parseLeafScore()` method (is a factory method that) must throw an `IllegalArgumentException` if the key is null or empty, or if the value does not represent a valid double.