

Github link: <https://github.com/DayanaRalucaMardari/FLCD/tree/main/lab%202/flcd-lab2>

SymbolTable

Implemented a SymbolTable based on a **HashTable** which can be used for both the IDENTIFIERS and CONSTANTS, in separate tables or in the same one. The methods of the **HashTable** are also implemented in the **SymbolTable**, except the `hash(String key)` method.

Pair

Implemented the pair class which has the integer `firstItem` and `secondItem` attributes, used for storing the position of an element from the SymbolTable (HashTable).

HashTable

It is implemented as a list of lists, meaning that on each position from a list there is another list.

It has the following methods:

- * `getSize()` - returns the size of the list which has as elements other lists
- * `hash(String key)` - returns the hash value of a given element as parameter
- * `findElemPosition(String elem)` - returns the position of the element as a `Pair` object if found; otherwise, it returns null
- * `containsElem(String elem)` - returns `true` whether the given element is found; otherwise, it returns `false`
- * `findByPosition(Pair position)` - returns the element found on the given position. If the position is invalid, it throws `IndexOutOfBoundsException`
- * `addElem(String elem)` - returns `true` whether the given element was added successfully; otherwise, it returns `false` if the element already exists
- * `toString()` - override method that returns the size of the hash table and the elements