

### ADTs Hash Entry

HashEntry={ Key= <Key>, Value<Value>}

{Inv:  $\forall (HashEntry.key) \in (String \vee R) \}$

#### Operaciones Primitivas:

- |                     |                   |             |
|---------------------|-------------------|-------------|
| • Create HashEntry: | Key x Value       | → HashEntry |
| • Change Key:       | HashEntry x Key   | → HashEntry |
| • Change Value:     | HashEntry x Value | → HashEntry |
| • Info Key:         | HashEntry         | → Key       |
| • Info Value:       | HashEntry         | → Value     |

#### Create HashEntry( a, b):

“Creates a new Hash Entry that can be stored in a hash table, a hash entry is composed of a unique key and a value”

{pre:  $a \in (String \vee R) \}$

{post: HashEntry = {Key = a, Value = b}}

#### Change Key( HashEntry, a):

“Changes the key of an existing Hash Entry with a new key”

{pre: HashEntry = {Key = < Key >, Value = < Value >}  $\wedge a \in (String \vee R) \}$

{post: HashEntry.key = a }

#### Change Value( HashEntry, a ):

“Creates a new Hash Entry that can be stored in a hash table, a hash entry is composed of a unique key and a value”

{pre: HashEntry = {Key = < Key >, Value = < Value >}

{post: HashEntry.Value = a }

**Info Key( HashEntry ):**

*“Returns the key of an existing Hash Entry“*

{pre: HashEntry = {Key = < Key >, Value = < Value >} }

{post: < Key > }

**Info Value( HashEntry ):**

*“Returns the value of an existing Hash Entry“*

{pre: HashEntry = {Key = < Key >, Value = < Value >} }

{post: < Value > }