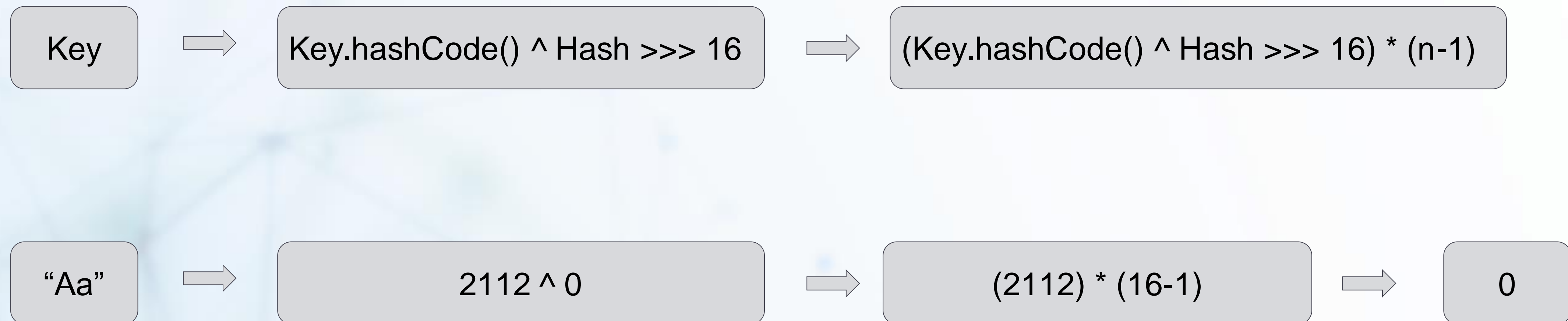
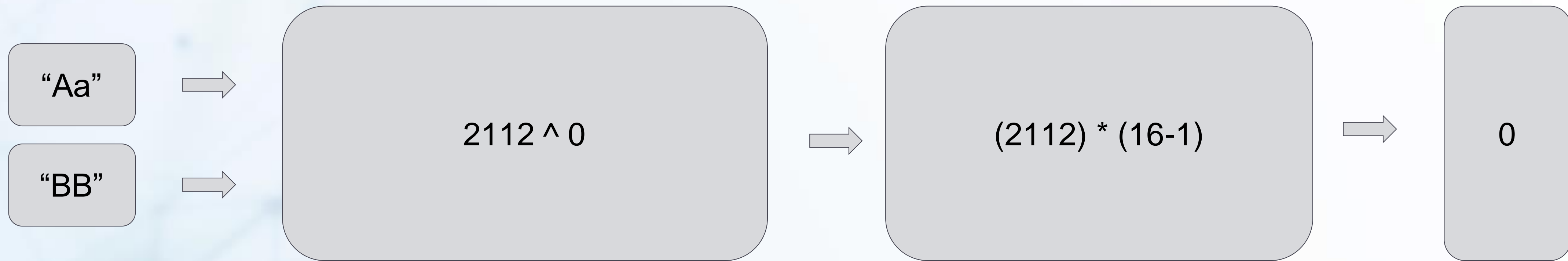


HashMap

HashMap – Hashing calculation



HashMap – Hash Collision



HashMap – Java 8 Enhancements



Java 8 improves the performance by converting the linked list into a **Red-black Tree** if the size is bigger than a threshold.

Methods

- `entrySet()`
- `put(Object key, Object value)`
- `putAll(Map map)`
- `get(Object key)`
- `getOrDefault(Object key, V default Val)`
- `clone()`
- `containsValue(Object value)`
- `containsKey(Object key)`
- `keySet()`
- `values()`
- `remove(Obj key, Obj value)`

HashSet

HashSet Internals

HashSet Methods



Complexity

First Problem

Given an array of integers `nums` and an integer `target`, return indices of the two numbers such that they add up to `target`.

You may assume that each input would have exactly one solution, and you may not use the same element twice.

Input: `nums = [2,7,11,15]`, `target = 9`

Output: `[0,1]`