

Java Collection – Map Interface

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Map

- ★ What is Map.
 - ★ Java Map Hierarchy.
 - ★ HashMap
 - ★ HashTable
 - ★ LinkedHashMap
 - ★ TreeMap
 - ★ Internal Working of HashMap
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What is Map?

★ An object that maps keys to values.

★ A map contains values on the basis of key, i.e. key and value pair. Each key and value pair is known as an entry. A Map contains unique keys.

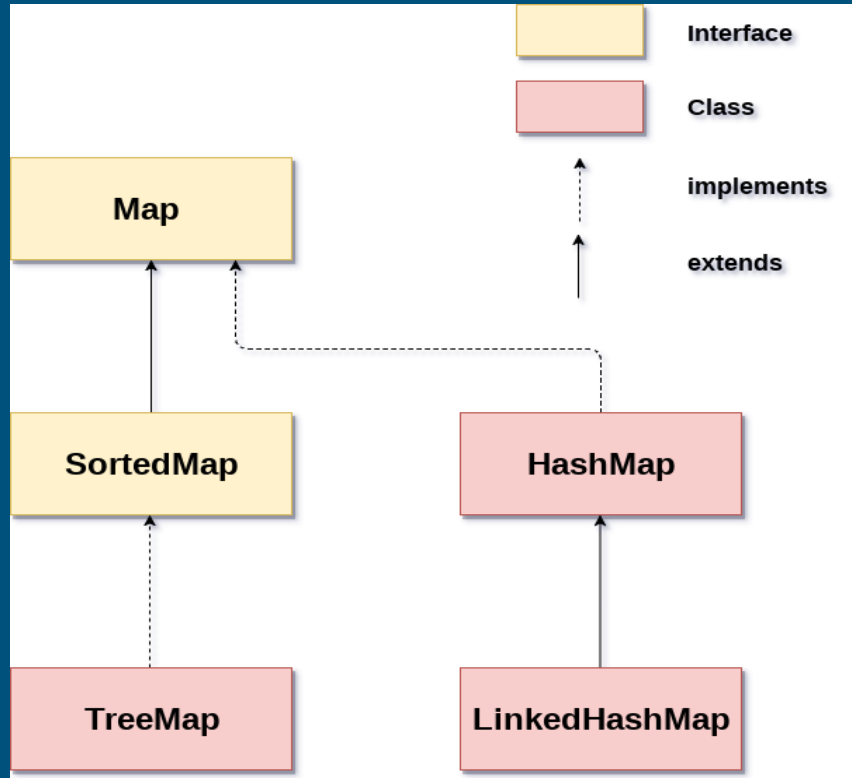
★ Map is a key value pair.

Methods of MAP : `value put(key, value);` & `value get(key);`

★ Maps are perfect to use for key-value association mapping such as dictionaries. The maps are used to perform lookups by keys or when someone wants to retrieve and update elements by keys. Some common scenarios are as follows:

- A map of error codes and their descriptions.
- A map of zip codes and cities.
- A map of managers and employees. Each manager (key) is associated with a list of employees (value) he manages.
- A map of classes and students. Each class (key) is associated with a list of students (value).

★ Java Map Hierarchy.



★ HashMap

- ★ It is collection that store elements in the form of Key and Value pairs.
- ★ It is not Synchronized.
- ★ It allows null key value to be store.

★ HashTable

- ★ It is same as hashMap but the difference is only it is synchronized.

★ LinkedHashMap

- ★ It is same as HashMap but the difference is only it will iterate in the order in which the entries were Put into the map.

★ TreeMap

- ★ It is same HashMap but only the difference is it will store key sorted by ascending order

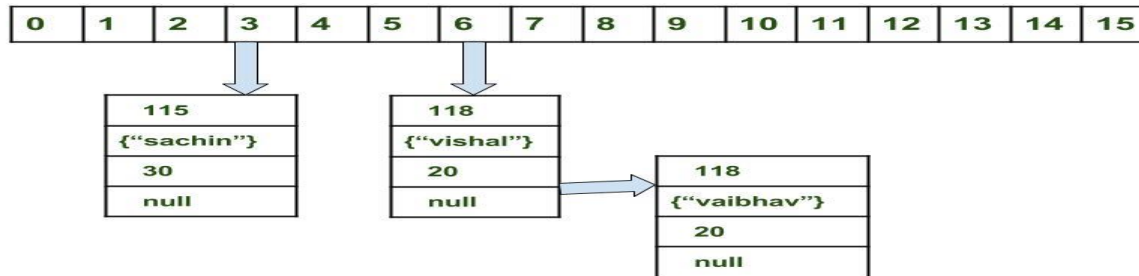
★ Internal Working of HashMap

★ Map Internal Working and Contract Of hashCode and Equals method

★ Please find below some of the article URL's

<https://www.geeksforgeeks.org/internal-working-of-hashmap-java/>

<https://javarevisited.blogspot.com/2011/02/how-hashmap-works-in-java.html#axzz7P7buCPle>



Thank you

