**HASH MAP**

* Has map implements clone-able, serlizeable and map interface.
* It extends Abstract Map class
* Allow null values and only one null key
* Doesn’t allow duplicate key but allow duplicate values
* Not Synchronized
* Internal implementation use array of the linked List
* Clone method use shallow copy
* **Performance of Hash Map depends on 2 parameters:**

Initial Capacity and Load Factor

* **Constructor in hash map**
* **Hash Map** (): It is the default constructor, which creates an instance of Hash Map with initial capacity 16 and load factor 0.75.
* **Hash Map** ( **int initial capacity)** : It creates a Hash Map instance with specified initial capacity and load factor 0.75.
* **Hash Map** **( int initial capacity, float load Factor**) : It creates a Hash Map instance with specified initial capacity and specified load factor.
* **Hash Map (Map map):** It creates instance of HashMapwith same mappings as specified map.
* **Race condition in hash map:** Two thread trying to resize has map same time
* **Resizing happened in which order in has Map and use which algorithm :** linked List is reversed during rehashing
* **Internal implementation of hash Map**
* **Why Need Hash function :**
* The main purpose of hash operation is to make the hash code differences visible in the least significant bits so that the hash map elements can be distributed evenly across the buckets
* **Why need index For Function :**