**Maps – ConcurrentHashMap:**

ConcurrentHashMap stores the data in Key Value pairs. It implements the Map Interface. To know a value of ConcurrentHashMap, one must know the key for it. It uses a technique called Hashing internally. ConcurrentHasMap is fail safe that means it is thread safe.

If we run selenium tests parallelly and if we have to use maps use ConcurrentHashMap.

The following example shows:

1. How to declare a ConcurrentHashMap
2. Check if the ConcurrentHashMap is empty
3. Adding key value pairs to the map
4. Printing the map
5. Check if the map contains a key
6. Get a value using a key
7. Check to see if the map accepts duplicate key value pairs
8. Remove a key value pair using a key
9. Check if the map contains a value
10. Removing all key value pairs using clear()

**package** package1;

**import** java.util.concurrent.ConcurrentHashMap;

**public** **class** ConcurrentHashMapExample {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

ConcurrentHashMap<String, String> hm = **new** ConcurrentHashMap<String, String>();

//Check if the map is empty

**if**(hm.isEmpty()) {

System.***out***.println("Map is empty");

}

//Add key value pairs to map

hm.put("name", "Subbu");

hm.put("role","Test Manager");

hm.put("company", "IBM");

//Printing map

System.***out***.println(hm);

//check if the map contains a key

**if**(hm.containsKey("name")) {

System.***out***.println("Map contains key name");

}

//Getting a value using key

System.***out***.println(hm.get("name"));

//Checking to see if map accepts duplicate key value pairs

hm.put("name", "Subbu");

System.***out***.println(hm);

//Removing a key value pair (Company:IBM)

hm.remove("company");

System.***out***.println("Removed company IBM");

System.***out***.println(hm);

//Check to see if map contains a particular value

**if**(hm.containsValue("Subbu")) {

System.***out***.println("Map contains value Subbu");

}

//Removing all the key value pairs from a map

hm.clear();

System.***out***.println("Removed all key value pairs");

System.***out***.println("Size of map is "+hm.size());

}

}