MAP PROGRAM:

**package** Mapassignment7;

**import** java.util.\*;

**public** **class** Map7 {

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

//Hashmap

HashMap hm = **new** HashMap();

hm.put("1","1");

hm.put("2","SECOND");

hm.put("3","THIRD");

hm.put("4",**null**);

hm.put(1, 23);

hm.put(**null**,"FIFTH");

System.***out***.println("hashmap is "+ hm);

System.***out***.println("Value of 3 key: "+ hm.get("3"));

System.***out***.println("Is HashMap empty? "+hm.isEmpty());

hm.remove("2");

System.***out***.println("After removal process, the hashmap is "+hm);

System.***out***.println("Size of the HashMap: "+hm.size());

System.***out***.println(hm.containsValue("FIFTH"));

//Linkedhashmap

Map<Integer, String> linkedHashMap = **new** LinkedHashMap<Integer, String>();

linkedHashMap.put(1, **new** String("Samsung"));

linkedHashMap.put(2, **new** String("Mi"));

linkedHashMap.put(3, **new** String("Toshiba"));

linkedHashMap.put(4, **new** String("HCL"));

linkedHashMap.put(5, **new** String("Wipro"));

System.***out***.println("Contents of LinkedHashMap : " + linkedHashMap);

System.***out***.println("\nValues of map after iterating over it : ");

**for** (Integer key : linkedHashMap.keySet()) {

System.***out***.println(key + ":\t" + linkedHashMap.get(key));

}

System.***out***.println("\nThe size of the LinkedHashMap is : " + linkedHashMap.size());

System.***out***.println("\nIs LinkedHashMap empty? : " + linkedHashMap.isEmpty());

System.***out***.println("\nLinkedHashMap contains 2 as key? : " + linkedHashMap.containsKey(2));

System.***out***.println("LinkedHashMap contains HCL as value? : " + linkedHashMap.containsValue("HCL"));

System.***out***.println("\nRemove entry for key 3 : " + linkedHashMap.remove(3));

System.***out***.println("Content of LinkedHashMap after removing key 2: " + linkedHashMap);

linkedHashMap.clear();

System.***out***.println("\nContent of LinkedHashMap after clearing: " + linkedHashMap);

//Treemap

TreeMap<String, Integer> marks = **new** TreeMap<String, Integer>();

marks.put("Student1", 100);

marks.put("Student5", 89);

marks.put("Student6", 120);

marks.put("Student2", 180);

marks.put("Student3", 79);

marks.put("Student4", 132);

**for**(String key: marks.keySet()){

System.***out***.println(key +" : "+ marks.get(key));

}

}

}