package Collections.Maps;  
  
import java.util.TreeMap;  
  
public class TreeMapWithComparableDemo {  
 public static void main(String[] args) {  
 TreeMap<EmployeePQTreeMapCom, String> map3 = new TreeMap<EmployeePQTreeMapCom, String>();  
 EmployeePQTreeMapCom employeeMap1 = new EmployeePQTreeMapCom( 30001,"Anjali");  
 EmployeePQTreeMapCom employeeMap2 = new EmployeePQTreeMapCom( 29001,"Geetanjali");  
 EmployeePQTreeMapCom employeeMap3 = new EmployeePQTreeMapCom( 24001,"Ashwini");  
 EmployeePQTreeMapCom employeeMap4 = new EmployeePQTreeMapCom( 20701,"Anjaliu");  
 EmployeePQTreeMapCom employeeMap5 = new EmployeePQTreeMapCom( 20501,"Anjali");  
 EmployeePQTreeMapCom employeeMap6 = new EmployeePQTreeMapCom( 20501,"Roy");  
  
 map3.put(employeeMap1,"Karnataka");  
 map3.put(employeeMap2,"Maharashtra");  
 map3.put(employeeMap3,"Bengal");  
 map3.put(employeeMap4,"Gujrat");  
 map3.put(employeeMap5,"Kerala");  
 map3.put(employeeMap6,"Kerala");  
  
 System.*out*.println(map3);  
 }  
}  
class EmployeePQTreeMapCom implements Comparable<EmployeePQTreeMapCom> {  
  
 Integer id;  
 String name;  
  
 public EmployeePQTreeMapCom(Integer id, String name) {  
 this.id = id;  
 this.name = name;  
 }  
  
 public String toString() {  
 return this.id + " " + this.name;  
  
 }  
  
 public int compareTo(EmployeePQTreeMapCom other){  
 return Integer.*compare*(this.id,other.id);  
// return this.id.compareTo(other.id)  
// return this.id - other.id;

//String comparision  
// return a.name.compareToIgnoreCase(b.name);  
 }  
}

C:\Users\Roystan\.jdks\openjdk-21.0.2\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2023.3.3\lib\idea\_rt.jar=61217:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2023.3.3\bin" -Dfile.encoding=UTF-8 -Dsun.stdout.encoding=UTF-8 -Dsun.stderr.encoding=UTF-8 -classpath C:\Users\Roystan\IdeaProjects\JavaWorkspace\out\production\JavaWorkspace Collections.Maps.TreeMapWithComparableDemo

{20501 Anjali=Kerala, 20701 Anjaliu=Gujrat, 24001 Ashwini=Bengal, 29001 Geetanjali=Maharashtra, 30001 Anjali=Karnataka}

Process finished with exit code 0

package Collections.Maps;  
  
  
  
import java.util.Comparator;  
import java.util.HashMap;  
import java.util.TreeMap;  
  
public class TreeMapWithComparatorDemo {  
 public static void main(String[] args) {  
 TreeMap<EmployeePQMap, String> map3 = new TreeMap<EmployeePQMap, String>(new SortByIdPQMap());  
 EmployeePQMap employeeMap1 = new EmployeePQMap( 30001,"Anjali");  
 EmployeePQMap employeeMap2 = new EmployeePQMap( 29001,"Geetanjali");  
 EmployeePQMap employeeMap3 = new EmployeePQMap( 24001,"Ashwini");  
 EmployeePQMap employeeMap4 = new EmployeePQMap( 20701,"Anjaliu");  
 EmployeePQMap employeeMap5 = new EmployeePQMap( 20501,"Anjali");  
 EmployeePQMap employeeMap6 = new EmployeePQMap( 20501,"Roy");  
  
 map3.put(employeeMap1,"Karnataka");  
 map3.put(employeeMap2,"Maharashtra");  
 map3.put(employeeMap3,"Bengal");  
 map3.put(employeeMap4,"Gujrat");  
 map3.put(employeeMap5,"Kerala");  
 map3.put(employeeMap6,"Kerala");  
  
 System.*out*.println(map3);  
 }  
}  
class EmployeePQMap {  
  
 Integer id;  
 String name;  
  
 public EmployeePQMap(Integer id, String name) {  
 this.id = id;  
 this.name = name;  
 }  
  
 public String toString() {  
 return this.id + " " + this.name;  
  
 }  
}  
  
class SortByIdPQMap implements Comparator<EmployeePQMap> {  
 // Used for sorting in ascending order of ID  
 public int compare(EmployeePQMap a,EmployeePQMap b) {  
 return Integer.*compare*(a.id,b.id);  
// return this.id.compareTo(other.id)  
// return this.id - other.id;  
  
 //String comparision  
// return a.name.compareToIgnoreCase(b.name);  
 }  
}

C:\Users\Roystan\.jdks\openjdk-21.0.2\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2023.3.3\lib\idea\_rt.jar=61246:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2023.3.3\bin" -Dfile.encoding=UTF-8 -Dsun.stdout.encoding=UTF-8 -Dsun.stderr.encoding=UTF-8 -classpath C:\Users\Roystan\IdeaProjects\JavaWorkspace\out\production\JavaWorkspace Collections.Maps.TreeMapWithComparatorDemo

{20501 Anjali=Kerala, 20701 Anjaliu=Gujrat, 24001 Ashwini=Bengal, 29001 Geetanjali=Maharashtra, 30001 Anjali=Karnataka}

Process finished with exit code 0