

```

1 package Modelo;
2
3 import java.util.ArrayList;
4 import java.util.concurrent.locks.Lock;
5 import java.util.concurrent.locks.ReentrantLock;
6
7 /**
8  *
9  * @author sergi
10 */
11 public class RegistroNinno {
12     private ArrayList<Ninno> listaNinnos;
13     private Lock cerr = new ReentrantLock();
14
15     public RegistroNinno(){
16         listaNinnos= new ArrayList<Ninno>();
17     }
18
19     public void annadir(Ninno ninno){
20         cerr.lock();
21         try{
22             if (listaNinnos.isEmpty()) listaNinnos.add(ninno);
23             else{
24                 int i = listaNinnos.size()-1;
25                 while (ninno.compareTo(listaNinnos.get(i)) < 0){
26                     i--;
27                 }
28                 listaNinnos.add(i+1, ninno);
29             }
30         } finally {
31             cerr.unlock();
32         }
33     }
34
35     private int binarySearch(String idNinno){
36         int left = 0, right = listaNinnos.size() - 1;
37         while (left <= right)
38         {
39             int mid = left + (right - left) / 2;
40
41             // Check if x is present at mid
42             if (listaNinnos.get(mid).equals(idNinno))
43                 return mid;
44
45             // If x greater, ignore left half
46             if (listaNinnos.get(mid).compareTo(idNinno) < 0)
47                 left = mid + 1;
48
49             // If x is smaller, ignore right half
50             else
51                 right = mid - 1;
52         }
53
54         // if we reach here, then element was
55         // not present
56         return -1;
57     }
58
59     public int numActividadesNinno(String idNinno){
60         cerr.lock();
61         try{
62             int pos = binarySearch(idNinno);
63             if (pos < 0 || idNinno.equals("N")){
64                 return -1;
65             }
66             return listaNinnos.get(pos).actividadesRealizadas();
67         } finally {
68             cerr.unlock();
69         }
70     }
71 }

```

70 }

71 }

72