

Algoritmos y Estructuras de Datos

Catedrático Julio Ayala

Auxiliares Luis y Edgar

Sebastián Gonzales (tabufellin) y Pablo Ruiz 18259 (PingMaster99)

Pruebas de Junit y Profiler

A continuación, se muestran los tiempos para generar los diccionarios según la implementación utilizada. Para esto, se crearon métodos temporales que permitieron realizar el profiling.

Red Black Tree: 955 ms

B-Tree: 739 ms

Main - JProfiler 11.1.1

Session View Profiling Window Help

Start Center Activate IDE Save Snapshot Session Settings Start Recordings Stop Recordings Start Tracking Run GC Add Bookmark Export View Settings Help Show Legend Record CPU Back Forward Show Graph Analyze

Session Profiling View specific

Thread selection: All thread groups

Thread status: Runnable

Call Tree

- 100.0% - 5,320 ms Main.main
 - 66.3% - 3,524 ms java.util.Scanner.nextLine
 - 18.0% - 955 ms Main.generateRedBlackTreeDictionary
 - 13.9% - 739 ms Main.generateBTreeDictionary
 - 0.8% - 44,969 µs java.lang.String.split
 - 0.5% - 24,908 µs Association.addEntry
 - 0.2% - 10,000 µs java.lang.invoke.MethodHandleNatives.linkCallSite
 - 0.2% - 9,971 µs Association.getSpanishWord
 - 0.1% - 5,051 µs java.io.BufferedReader.readLine
 - 0.1% - 5,010 µs java.lang.invoke.Invokers\$Holder.linkToTargetMethod

Q Call Tree View Filters

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1 recording

Pruebas de Junit para insertar y buscar elementos del Red Black Tree

```
1 import org.junit.Test;
2
3 import static org.junit.Assert.*;
4
5 public class RedBlackTreeMapTest {
6
7     BTreeMap<String, String> RBT = new BTreeMap<>();
8     @Test
9     public void put() {
10         RBT.put("This", "TestRBT");
11         assertEquals(RBT.get("This"), "TestRBT");
12     }
13
14     @Test
15     public void get() {
16         assertNull(RBT.get("ThisIsNotOnTheTree"));
17     }
18 }
```

RedBlackTreeMapTest > put()

Run: Main x RedBlackTreeMapTest x

✓ Tests passed: 2 of 2 tests – 0 ms

✓ RedBlackTreeMapTest	0 ms	"D:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.3.1\jbr\bin\
✓ get	0 ms	
✓ put	0 ms	Process finished with exit code 0

4: Run 6: TODO 9: Version Control JProfiler Terminal 0: Messages

Tests passed: 2 (moments ago)

Pruebas de Junit para insertar y buscar elementos del B-Tree

```
1 import org.junit.Test;
2
3 import static org.junit.Assert.*;
4
5 public class BTreeMapTest {
6     BTreeMap<String, String> BTreeTest = new BTreeMap<>();
7     @Test
8     public void put() {
9         BTreeTest.put("This", "Is_A_Test");
10        assertEquals(BTreeTest.get("This"), "Is_A_Test");
11    }
12
13    @Test
14    public void get() {
15        assertEquals(BTreeTest.get("ThisIsNotOnTheTree"), null);
16    }
17 }
18 }
```

BTreeMapTest > get()

Run: Main x BTreeMapTest x

» ✓ Tests passed: 2 of 2 tests – 1 ms		
▼ ✓ BTreeMapTest	1 ms	"D:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.3.1\jbr\
✓ get	1 ms	
✓ put	0 ms	Process finished with exit code 0

4: Run 6: TODO 9: Version Control JProfiler Terminal

Tests passed: 2 (moments ago)