

Student STDOUT.txt

```
1Generating 110462 books... OK
2
3Profiling listdb
4-----
5
6Total Inserts           :          110462
7Num Insert Errors       :              0
8Avg Insert Time         :    0.000005 s
9Var Insert Time         :    0.000003 s
10Total Insert Time      :    1.144462 s
11
12Total Title Searches    :          11046
13Num Title Search Errors :              0
14Avg Title Search Time   :    0.001089 s
15Var Title Search Time   :    0.005015 s
16Total Title Search Time :   12.111948 s
17
18Total Word Count Searches :          11046
19Num Word Count Search Errors :              0
20Avg Word Count Search Time :    0.001150 s
21Var Word Count Search Time :    0.005754 s
22Total Word Count Search Time :   12.794456 s
23
24STAT
25Avg comparisons per search -> 55439.383080
26List size matches expected? -> Y
27
28Profiling bstddb
29-----
30
31Total Inserts           :          110462
32Num Insert Errors       :          110462
33Avg Insert Time         :    0.000008 s
34Var Insert Time         :    0.000007 s
35Total Insert Time      :    1.421093 s
36
37Total Title Searches    :          11046
38Num Title Search Errors :          11046
39Avg Title Search Time   :    0.000006 s
40Var Title Search Time   :    0.000000 s
41Total Title Search Time :    0.116045 s
42
43Total Word Count Searches :          11046
44Num Word Count Search Errors :          11046
45Avg Word Count Search Time :    0.000006 s
46Var Word Count Search Time :    0.000000 s
47Total Word Count Search Time :    0.119344 s
48
49Press Enter to quit...
50
```

Expected STDOUT.txt

```
1Generating 110462 books... OK
2
3Profiling listdb
4-----
5
6Total Inserts           :          110462
7Num Insert Errors       :              0
8Avg Insert Time         :    0.000002 s
9Var Insert Time         :    0.000001 s
10Total Insert Time      :    0.308184 s
11
12Total Title Searches    :          11046
13Num Title Search Errors :              0
14Avg Title Search Time   :    0.001039 s
15Var Title Search Time   :    0.004601 s
16Total Title Search Time :   11.495933 s
17
18Total Word Count Searches :          11046
19Num Word Count Search Errors :              0
20Avg Word Count Search Time :    0.001047 s
21Var Word Count Search Time :    0.004785 s
22Total Word Count Search Time :   11.593082 s
23
24STAT
25Avg comparisons per search -> 55316.806898
26List size matches expected? -> Y
27
28Profiling bstdb
29-----
30
31Total Inserts           :          110462
32Num Insert Errors       :              0
33Avg Insert Time         :    0.000002 s
34Var Insert Time         :    0.000000 s
35Total Insert Time      :    0.346291 s
36
37Total Title Searches    :          11046
38Num Title Search Errors :              0
39Avg Title Search Time   :    0.000003 s
40Var Title Search Time   :    0.000000 s
41Total Title Search Time :    0.048275 s
42
43Total Word Count Searches :          11046
44Num Word Count Search Errors :              0
45Avg Word Count Search Time :    0.000003 s
46Var Word Count Search Time :    0.000000 s
47Total Word Count Search Time :    0.043346 s
48
49Press Enter to quit...
50
```

I used a hash function to generate the doc_id's. The modulus used was a prime number, approximately 1.5 million. I halved the prime number and made it the doc_id of the first node in hopes the right and left side might have some semblance of balance.