**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 bstdb

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.