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**Bucket Sort**

**Environment:**

MacBook, 4 CPU cores, 8GB RAM

Bucketsort test

Sequential Distribution time : 0.001794

Sequential Sorting time : 7.8e-05

Sequential Merging time : 0.062275

Total Sequential time : 0.064176

Freelock

Number of cores: 4

Parallel Distribution time : 0.00384808

Parallel Sorting time : 0.00500393

Parallel Merging time : 0.00989199

Total parallel time freelock: 0.018769

Biglock

Number of cores: 4

Parallel Distribution time : 1.551e+09

Parallel Sorting time : 0.00531507

Parallel Merging time : 0.00851393

Total parallel time parallelbiglock: 1.551e+09

Fine-grained

Number of cores: 4

Parallel Distribution time : 0.00439596

Parallel Sorting time : 0.00541711

Parallel Merging time : 0.00775194

Total parallel time parallelfinegrainedlock: 0.017616

Program ended with exit code: 0

Likely, the Parallel version had performed much faster than the serial version.