Queries

We ran the following three queries:

```
SELECT * FROM Sailors, Reserves, Boats WHERE Sailors.A = Reserves.G AND Sailors.A = Boats.D;

SELECT * FROM Sailors S, Reserves R WHERE S.A = R.G AND R.H = S.B;

SELECT * FROM Sailors S, Reserves R, Boats B WHERE S.A = R.G AND R.H = B.D;
```

Description

We used the same schema as in the sample queries:

- Sailors table with columns A, B, C
- Boats table with columns D, E, F
- Reserves table with columns G, H

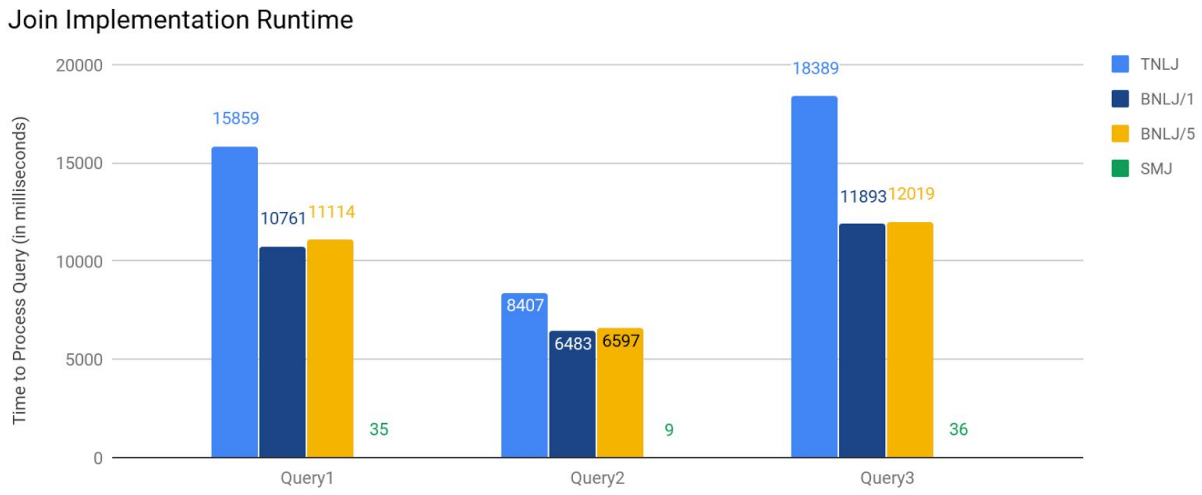
We generated 5000 tuples per relation, where each attribute value was chosen uniformly at random in the range 0 (inclusive) to 3000 (exclusive).

Buffer Size

We used 5 pages as the buffer size for the sort in Sort-Merge Join.

Benchmark Graph

These are the results of our performance benchmarking. Note that the bar for SMJ is not very visible because of the large differences in time.



Page Reads Graph

Although this was not required of us, we thought it would be interesting to plot a graph of the number of page reads each join implementation did for these queries. Since TNLJ has so many more reads than the other three, we used a log scale.