**Benchmark-Project 2**

Xinqi Lyu(xl358), Xinzhe Yang(xy269), Sitian Chen(sc2294)

For the benchmarking, we selected three queries:

1, SELECT \* FROM Sailors, Reserves, Boats WHERE Sailors.A = Reserves.G AND Reserves.H = Boats.D AND Sailors.B < 950;

2, SELECT \* FROM Sailors S1, Sailors S2 WHERE S1.A = S2.B AND S1.B > 600;

3, SELECT DISTINCT \* FROM Sailors S, Reserves R, Boats B WHERE S.A = R.G AND R.H = B.D ORDER BY S.C;

Here is our schema:

* Sailors A B C

We generated 7000 tuples and each attribute value was chosen uniformly at random in the range 0 to 1500.

* Boats D E F

We generated 5000 tuples and each attribute value was chosen uniformly at random in the range 0 to 1500.

* Reserves G H

We generated 8000 tuples and each attribute value was chosen uniformly at random in the range 0 to 1500.

For the SMJ, we used external sort with 5 buffer pages.

Here is our results:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Query** | **TNLJ** | **BNLJ(1)** | **BNLJ(5)** | **SMJ(Ext 5)** |
| **Q1** | **38109** | **32623** | **30375** | **1183** |
| **Q2** | **7252** | **5683** | **5692** | **573** |
| **Q3** | **61903** | **44816** | **44254** | **2494** |

