Java Summary(Execution time)

1. JOIN: film, rental

No. of rows	NO MAP	TREE MAP	HASH MAP	LINHASH MAP
100	10.2724	1.2605	1.2498	6.8912
250	19.1836	2.1821	1.846	7.8981
500	50.3752	1.2313	1.4058	14.1325
750	74.3952	2.3802	2.3926	21.6667
1000	94.3122	2.0918	2.2754	25.2132
2500	314.4532	4.016	3.4904	56.0152
5000	561.0446	6.076	5.4288	94.7302
7500	608.119	5.8534	4.9624	118.2702
10000	600.8507	9.5859	7.1654	127.1508
17000	637.8829	7.3702	5.1461	181.8385
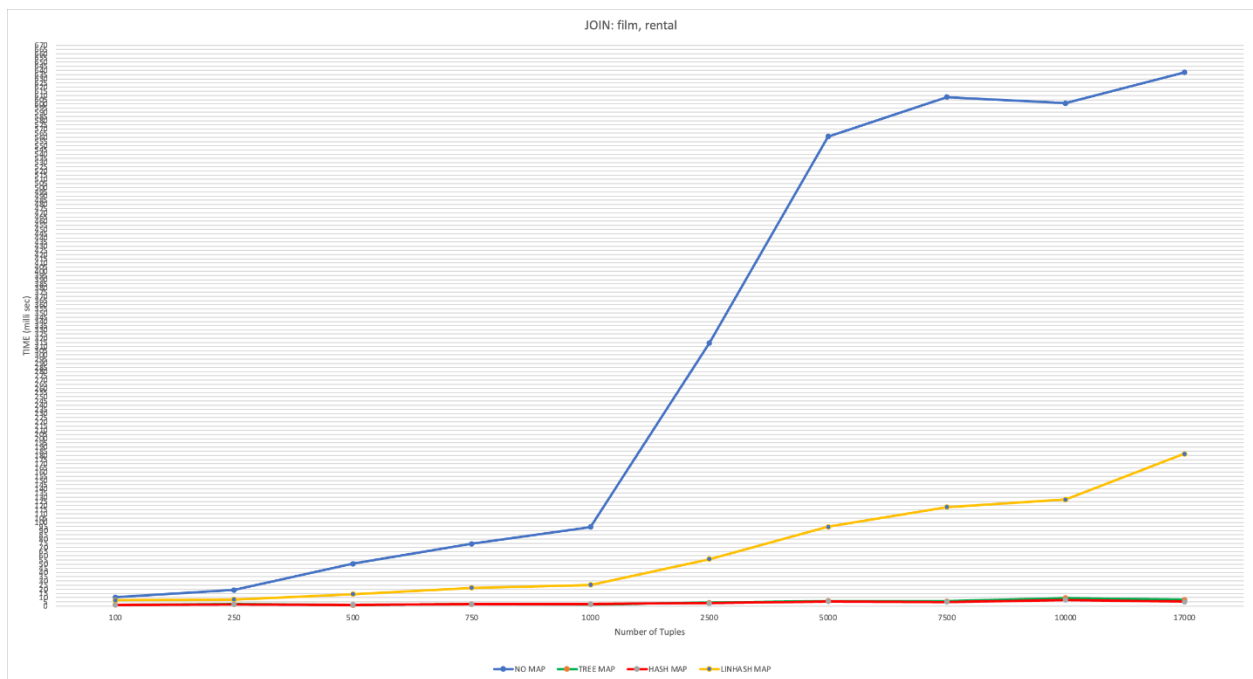
2. Join : film, film_actor

No. of rows	NO MAP	TREE MAP	HASH MAP	LINHASH MAP
100	8.7734	0.7197	1.2450	3.6701
250	16.6973	0.9757	0.6467	4.0852
500	41.9581	1.2226	0.8900	5.2006
750	64.8870	1.0420	1.4411	7.6527
1000	59.6069	1.8011	1.3568	9.1446
2500	88.5695	2.3037	1.7157	20.2833
5000	91.2051	2.8002	2.1864	36.1298
7500	102.8771	2.5668	2.0604	37.7239
10000	123.3437	2.9214	2.3636	38.3888
17000	81.2422	2.9958	2.9315	39.5926
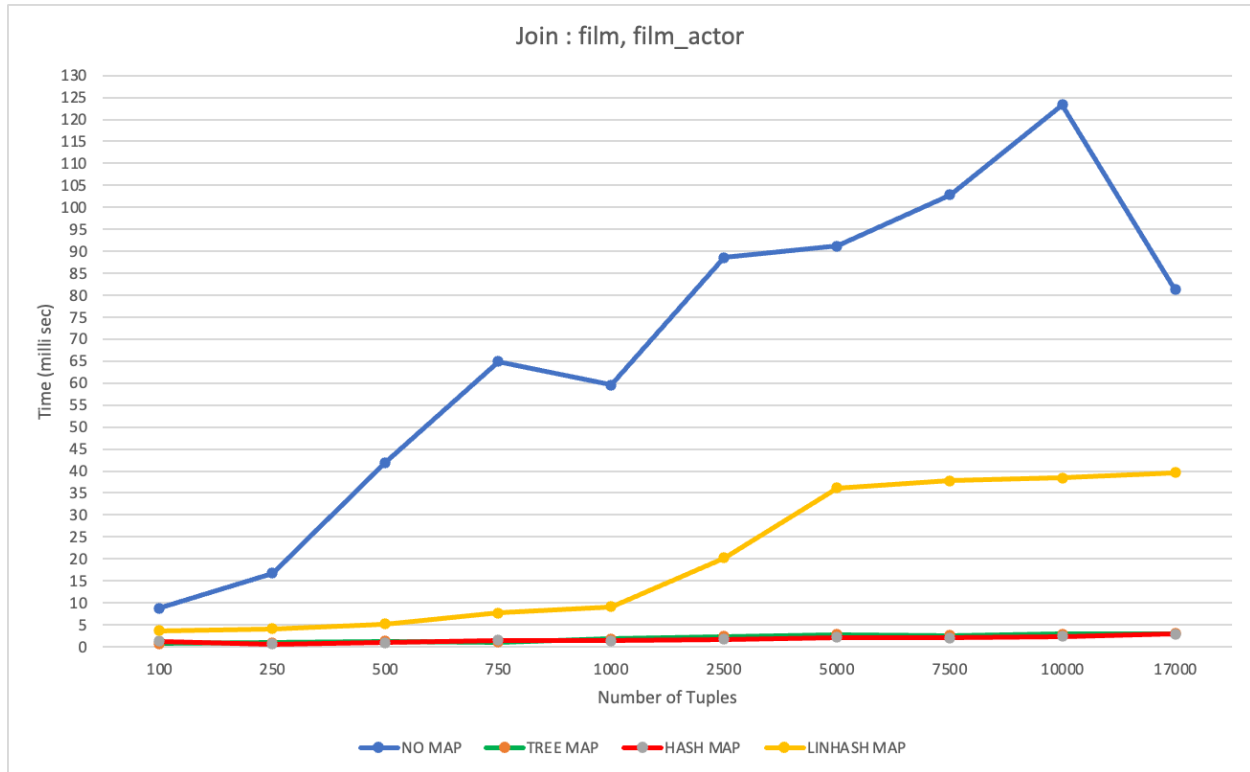
3. Join : film, film_actor, actor

No. of rows	NO MAP	TREE MAP	HASH MAP	LINHASH MAP
100	9.1241	1.8554	1.0232	5.7271
250	17.2573	2.5904	2.8692	7.0730
500	31.3279	1.3969	1.2391	9.1005
750	57.6397	2.1697	1.9146	11.5068
1000	72.3675	2.5070	2.1970	11.8001
2500	100.0373	2.9091	3.1821	26.7083
5000	102.7792	3.5458	2.9446	35.3871
7500	153.7328	5.2663	2.4289	39.1910
10000	108.2361	3.6796	2.9584	38.4385
17000	102.0793	3.2355	2.9837	41.6899
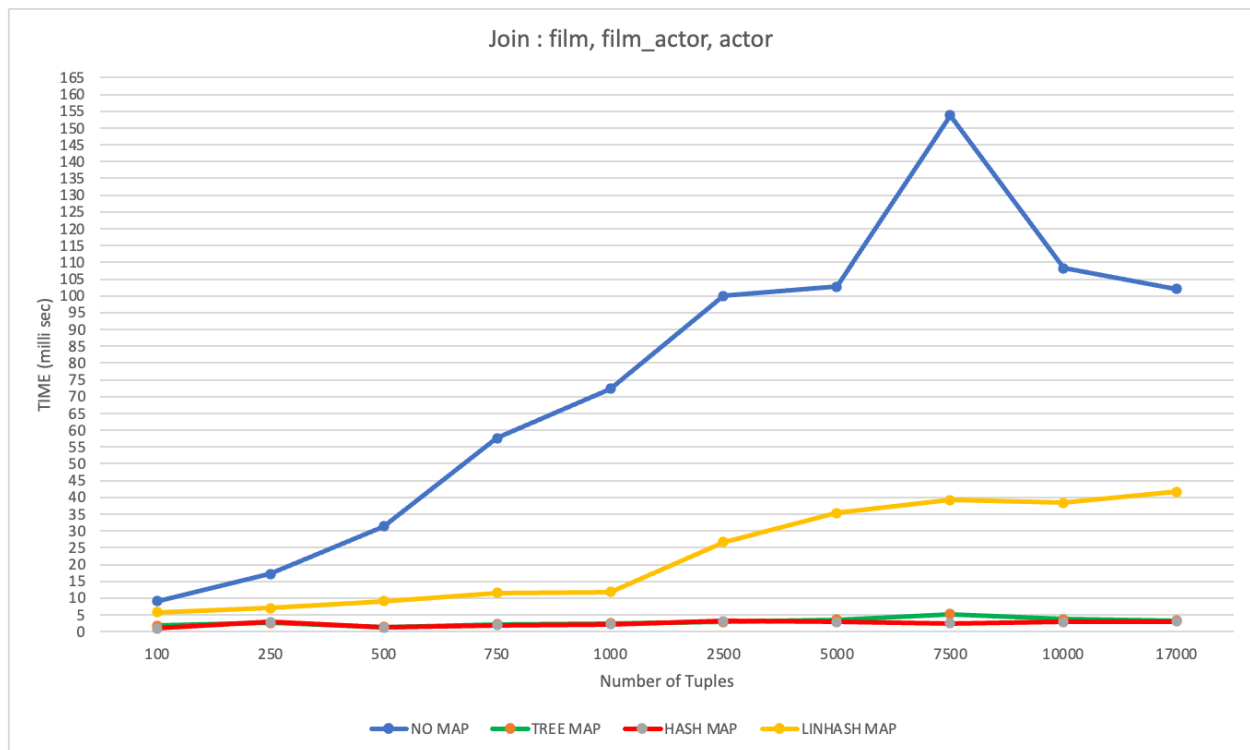
4. Join : film, rental, customer

No. of rows	NO MAP	TREE MAP	HASH MAP	LINHASH MAP
100	11.4108	1.7965	1.5740	7.4997
250	19.1827	2.0698	1.7284	10.6421
500	58.7046	3.5815	2.1280	13.2925
750	89.8324	2.9891	2.4346	18.2535
1000	121.4793	5.0582	2.6128	21.0398
2500	298.1972	4.8534	3.8697	41.9917
5000	611.9204	26.6528	5.4137	63.2203
7500	654.6320	12.3160	14.7703	89.2778
10000	650.3540	12.5919	7.2976	100.6949
17000	668.7964	12.9872	4.4432	147.6090

Join : film, film_actor, actor
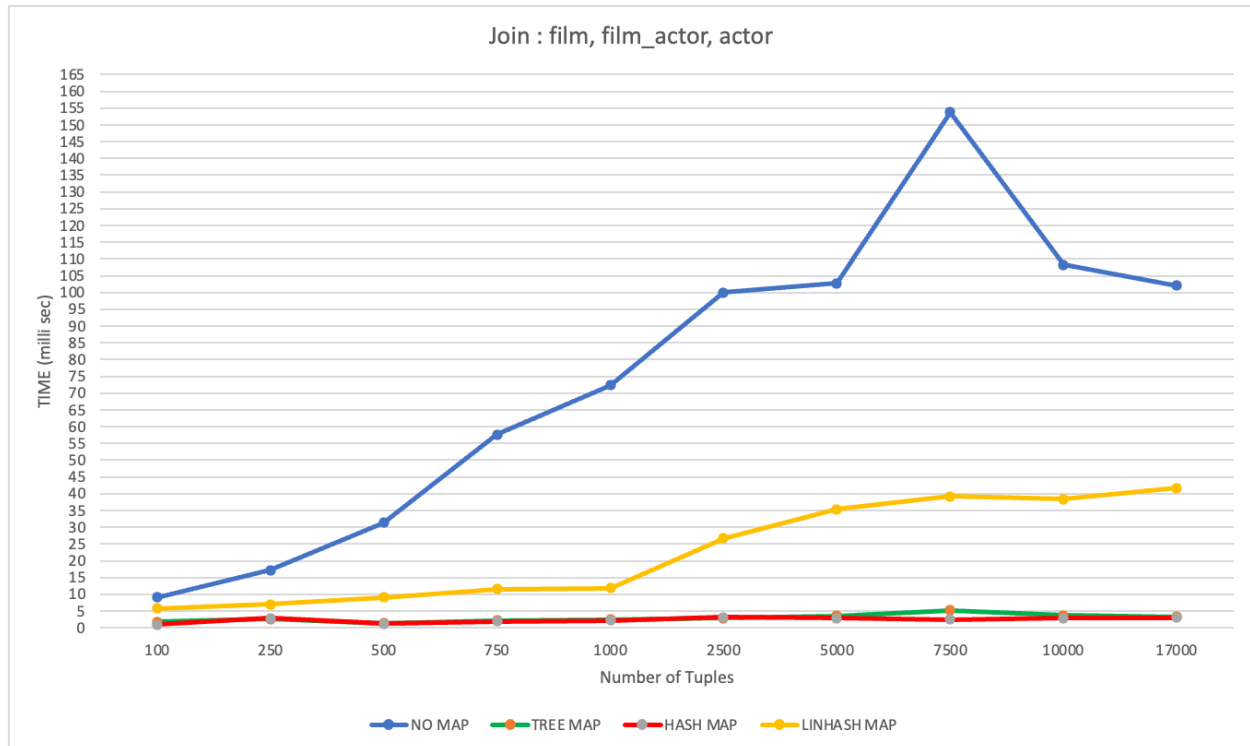
Select:

No. of rows	NO MAP	TREE MAP	HASH MAP	LINHASH MAP
100	6.0187	1.8713	1.5797	0.6661
250	2.5708	1.7571	2.2065	0.8142
500	1.9486	1.4184	1.3934	0.7564
750	1.6801	1.3276	1.3063	0.7757
1000	1.2148	0.9710	1.4904	0.6679
2500	1.3660	0.9766	1.1558	0.4222
5000	1.7432	0.7524	1.2918	0.5220
7500	1.1626	1.1380	0.7776	0.5234
10000	1.0594	1.0819	0.9940	0.4835
17000	1.2578	3.8713	3.5797	2.6661