**GROUP NUMBER:** 01

**GROUP MEMBERS:** Faedo Giovanni 2149759, Francescato Daniele 2160563, Prioli Giacomo 2166293

**TEST 1:** The goal is to assess the accuracy of the CM and CS estimations for the top-K heavy hitters for varying K and **fixed D=9, W=100, T=100000, and port 8886.** You must fill in the following table (3 runs per configuration).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **k** | **Average Relative Error of frequency estimations for top-K heavy hitters with CM** | | | **Average Relative Error of frequency estimations for top-K heavy hitters with CS** | | |
| **RUN 1** | **RUN 2** | **RUN 3** | **RUN 1** | **RUN 2** | **RUN 3** |
| 10 | 0.022732572944630478 | 0.023143297949304493 | 0.02328382364938789 | 4.737699995390877E-4 | 5.347337654982903E-4 | 7.138870198264704E-4 |
| 20 | 188.35993437183853 | 249.2245986473748 | 186.0524734450777 | 5.54355685028361 | 6.140111883900295 | 5.280806584104136 |
| 50 | 262.0787340798177 | 228.85534877158275 | 232.7662182472341 | 6.510384122209567 | 5.638210959626315 | 5.878845378632946 |
| 100 | 191.00846796779496 | 226.30046456233157 | 278.6256338330389 | 5.337281709752941 | 5.483460468801026 | 7.026595193451487 |

**TEST 2:** The goal is to assess the accuracy of the CM and CS estimations for the top-K heavy hitters for varying columns W and **fixed D=9, K=10, T=100000, and port 8886.** You must fill in the following table (3 runs per configuration).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **W** | **Average Relative Error of frequency estimations for top-K heavy hitters with CM** | | | **Average Relative Error of frequency estimations for top-K heavy hitters with CS** | | |
| **RUN 1** | **RUN 2** | **RUN 3** | **RUN 1** | **RUN 2** | **RUN 3** |
| 5 | 0.8006137604093759 | 0.9010570163643798 | 0.6026503720046016 | 0.3007803217332495 | 0.4022096440760041 | 0.3039455869274452 |
| 10 | 0.24802613923404476 | 0.24898092854705173 | 0.24918576775385404 | 0.10423629593954434 | 0.10315111976603737 | 0.004969560514277198 |
| 20 | 0.1214276576515007 | 0.12171050192721053 | 0.12183358950638316 | 0.0012038044415248702 | 0.0024615737117594304 | 0.0036252580917655354 |
| 50 | 0.047079954336838994 | 0.04774135048426943 | 0.047298558074992884 | 8.586139729867663E-4 | 9.693394618342456E-4 | 0.0011956561470333365 |