**GROUP NUMBER:** 97

**GROUP MEMBERS:** Umberto Bianchin, Massimo Vettorello

**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 | 0.0235537531605625 | 0.023001897164029023 | 0.023483617108303257 | 0.0004395711982521466 | 0.0007194990738301638 | 0.0006307434191416886 |
| 20 | 120.97162793259606 | 96.38475507457706 | 149.04117032748175 | 2.6853789164697086 | 2.562752215213013 | 2.766832401489613 |
| 50 | 402.8172961962746 | 379.27303419269657 | 341.32676624891235 | 31.70405242287046 | 29.239157668216144 | 27.558587965018514 |
| 100 | 535.498236479251 | 330.0977764506527 | 265.4601875047559 | 40.11988024672615 | 26.570275279937437 | 21.545998025514397 |

**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 | 0.7975076983962988 | 0.7974462741285437 | 0.7990079528867351 | 0.3565056746717251 | 0.3574219571000491 | 0.3557723840828057 |
| 10 | 0.24816599043240722 | 0.24841509280177107 | 0.24803245590222303 | 0.0049433955499831265 | 0.004108424368472918 | 0.004094797379264386 |
| 20 | 0.1225157445732491 | 0.12219021836517081 | 0.12229487280014886 | 0.0008756976218716342 | 0.0009479298601372744 | 0.0010345520550146473 |
| 50 | 0.04651812881084711 | 0.04783092138333104 | 0.047992946031904626 | 0.0010903405486448368 | 0.000828167708615728 | 0.0009059375899281372 |