**Name**: \_\_\_\_\_\_\_\_\_\_Whitney Kenner\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| **Q1** | **Lab01 & lab02 took 3.00 ms.. the main function weight is only 16.6%** |
| **Q2** | **Lab1 and lab2 took 2.93 ms. The mian function weight it 99.8%** |
| **Q3** | **In lab01 & lab02, the search function took up 33.3% of the program execution time. In lab1 and lab2 search takes up the most program execution time at 41.6%** |
| **Q4** | **Search is the bottleneck** |
| **Q5** | **Search 1 self seconds of the function are 0s, the total is 1.23 which per call is 1.00 ms~** |
| **Q6** | **Find\_Print\_Add records: self weight 0ms, 1.23 s total** |
| **Q7** | **Search1 is using the most time** |
|  |  |
| **Q9** | **They improved until O2 to O3 where there was no improvement, O2 is probably the highest level of necessary optimization** |
| **Q10** | **O2 or O3** |
| **Q11** |  |
| **Q12** | **Search 2 sort 3** |
| **Q13** | **97% enhancement** |

**Q8:**

|  |  |
| --- | --- |
| **Optimization Level** | **Total execution time** |
| **O0 (default)** | 25.41s |
| **O1** | 19.483s |
| **O2** | 2.65s |
| **O3** | 2.65s |

**Q11:**

|  |  |  |
| --- | --- | --- |
| **Sort function** | **Search function** | **Total execution time** |
| **Sort1** | Search1 | 2.87s |
| **Sort2** | Search1 | 8.2s |
| **Sort3** | Search1 | 1.31s |
| **Sort1** | Search2 | 1.67s |
| **Sort2** | Search2 | 6.89s |
| **Sort3** | Search2 | 83ms |

Add necessary rows.