**CS342 – PROJECT 2**

*Report*

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| **Number of lines found for different keywords** | **Time Taken(s)** |
| 263 ‘c’ key word | 0.053 |
| 81 ‘can’ key word | 0.022 |
| 236 ‘is’ key word | 0.054 |
| 128 ‘to’ keyword | 0.032 |
| 54 ‘and’ keyword | 0.010 |
| 81 ‘are’ keyword | 0.028 |
| 0 ‘happy’ keyword | 0.009 |
| 27 ‘introduced’ keyword | 0.011 |
| 27 ‘terminated’ keyword | 0.010 |
| 27 ‘happen’ keyword | 0.008 |

The program was executed in a oracle VM running on a CPU with 3 cores.

We used the input file found in our zip file submission to test the timing results. We ran the clients with different keywords and timed the execution to obtain our results. The graph can be seen to behave in an exponential manner which was expected because as the number of lines found increases, the server has more line numbers to send to the result queues. We can see some inconsistencies in the graph which may be caused by different processes running in our machine in the background, however we can observe that the inconsistencies amount to a minimal time difference thus they can be ignored as the graph still follows a general exponential trend.

The input file size is 110KB. We only used one input file because the time taken is mainly dependent on the number of lines that the server finds. These are written to the respective queues, and most of the time taken is here.