Data Files Used:

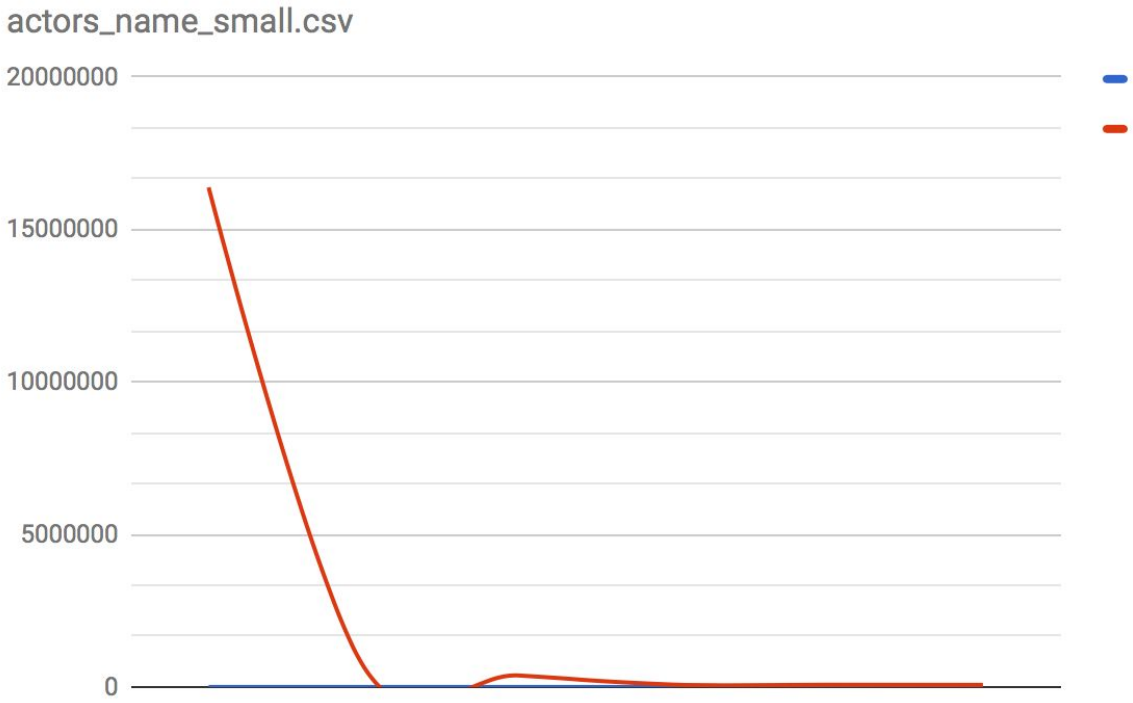
actor_names_full.csv
actor_names_small.csv
cities.csv
directors_names_full.csv
wiktionary.csv

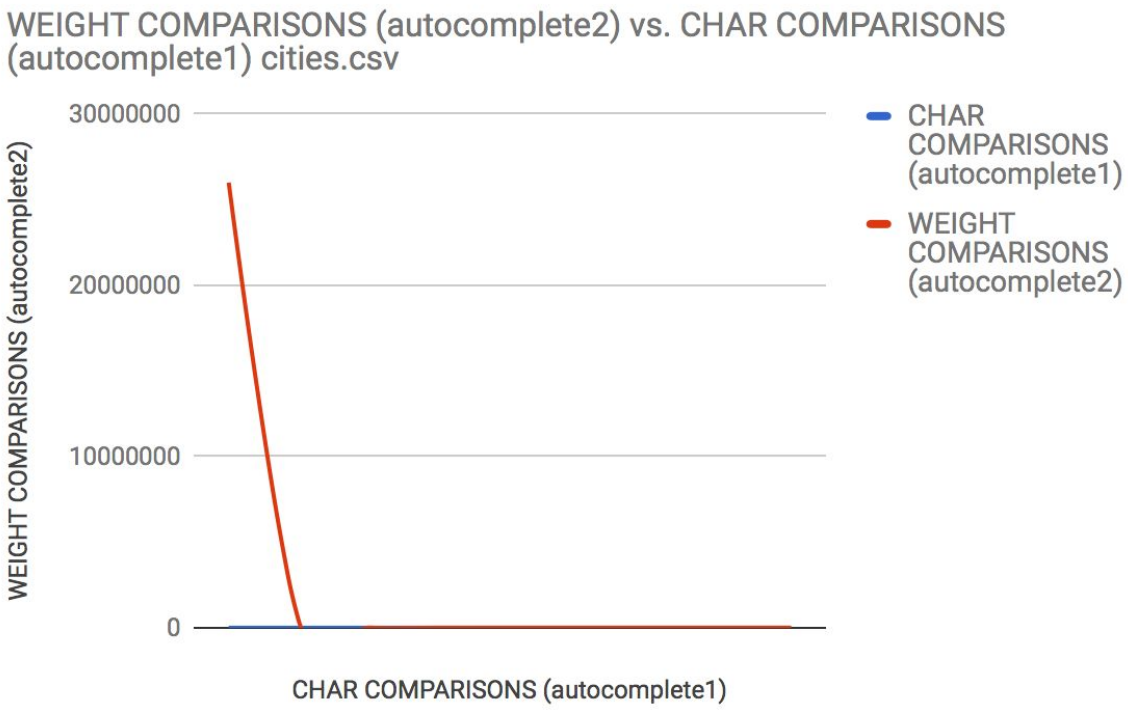
As a sorting algorithm, selection sort is being used. Selection sort has O(n^2) time complexity as a result it performs inefficiently on very large lists as is being seen in the data table below. Moreover selection sort is very easy to implement and quite memory efficient when compared to other sorting algorithms.

| FILE NAME | KEYS ENTERED | CHAR COMPARISONS (autocomplete1) | WEIGHT COMPARISONS (autocomplete2) | TIME(selection sort) |
|---|---|---|---|---|
| cities.csv | M | 3 | 25995655 | - |
| cities.csv | Me | 5 | 353220 | - |
| cities.csv | Mel | 7 | 7875 | - |
| cities.csv | Melb | 8 | 28 | - |
| cities.csv | Melbo | 9 | 15 | - |
| cities.csv | Melbou | 10 | 15 | - |
| cities.csv | Melbour | 11 | 15 | - |
| cities.csv | Melbourn | 12 | 12 | - |
| cities.csv | Melbourne | 13 | 10 | - |
| | | | | - |
| wiktionary.csv | w | 2 | 65341 | - |
| wiktionary.csv | wh | 5 | 1431 | - |
| wiktionary.csv | whi | 6 | 231 | - |
| wiktionary.csv | whic | 7 | 0 | - |
| wiktionary.csv | which | 8 | 0 | - |
| | | | | - |
| | | | | - |
| actor_names_small.csv | Ab | 28 | 16379226 | - |
| actor_names_small.csv | Abr | 48 | 679195 | - |
| actor_names_small.csv | Abra | 49 | 378015 | - |

| | | | | |
|---|---|---|---|---|
| actor_names_small.csv | Abrah | 54 | 77028 | - |
| actor_names_small.csv | Abraha | 55 | 72010 | - |
| actor_names_small.csv | Abraham | 58 | 68265 | - |
| | | | | - |
| directors_names_full.csv | F | 1 | 97238485 | - |
| directors_names_full.csv | Fe | 5 | 2924571 | - |
| directors_names_full.csv | Fer | 6 | 885115 | - |
| directors_names_full.csv | Ferg | 7 | 10440 | - |
| directors_names_full.csv | Fergu | 8 | 9730 | - |
| directors_names_full.csv | Fergus | 9 | 9453 | - |
| | | | | - |
| actor_names_full.csv | Dic | 10 | 817281 | 4.135s |
| actor_names_full.csv | Dica | 12 | 435 | 4.216s |
| actor_names_full.csv | Dicap | 13 | 6 | 4.077s |
| actor_names_full.csv | Dicapr | 16 | 0 | 4.617s |
| actor_names_full.csv | Dicapri | 17 | 0 | 4.094s |
| actor_names_full.csv | Dicaprio | 18 | 0 | 4.084s |

Below are some graph on Weight Comparisons Vs Char Comparisons:


actors_name_small.csv
20000000
15000000
10000000
5000000
0


WEIGHT COMPARISONS (autocomplete2) vs. CHAR COMPARISONS (autocomplete1) cities.csv
30000000
20000000
10000000
0
WEIGHT COMPARISONS (autocomplete2)
CHAR COMPARISONS (autocomplete1)
CHAR COMPARISONS (autocomplete1)
WEIGHT COMPARISONS (autocomplete2)