Twitter Followers Project

Pseudocode

1. Loading the excel file into python
2. Reading a CSV file into a Python Dictionary
3. The dictionary key is the person ID and its value is a list of his followers
4. Creating a new dictionary; its key is the person's ID and his value is the length of the list that contains his followers
5. Initializing a list that includes the lengths of lists only
6. Applying radix sort that is based on count sort on the list
7. Accessing each person's ID (the key) from the original dictionary (by its value which is the length of the list) in order from least influencer to the top one
8. Finally, there was a function that recommend a person for another if both of them have at least 1000 common followers

Complexity

The time complexity of loading the CSV file into the dictionary, copying it to the new dictionary, and copying the lengths to the new list is O(N) times. Then, the time complexity of radix sort is known as O(nd), where n is the size of the list and d is the number of digits in the largest number which is a constant. Therefore, the total time complexity is O(2N) which is finally O(N) times. The time complexity of followers' suggestions is O(n^2).