# Coding Exercise

IMO’s Search Product Team would like to know how often people are making different requests to their search engine. They would like to know how many different searches are being requested. The catch to this ask is that autosuggest searching may be enabled for some users; this means that, for some users, a search is executed every time they make a keystroke. IMO’s product team does not want to count these “suggestions” separately and would like them to only represent 1 search.

Data Set details

* Every request has a user ID and a timestamp associated to it
* There are approximately 1,000,000 requests per day
* Not all users have auto-suggest enabled. Sadly, the product team forgot to log when this feature is turned on
* Data set lives in a flat file store and in a database (you may act as if this is an RDBMS or a NoSQL database)

The ask

* Create a process that identifies the total number of “searches”
  + Each set of autosuggest searches should be counted as one search
  + Each individual non-autosuggest search should be counted as one search
* Autosuggest searches should be identified based on similarity to the previous search
* The product team would like to see
  + Total overall count
  + Percentage of searches that use autosuggest, so that they can determine if the functionality is something to be supported.
* Include unit test coverage in your language and framework of choice
* The product team would like this process run every day for the next 60 days