**How to run the code**

**1a:**

* Open the code on Jupyter notebook and click run. The code will output the results to a text file called dataToIndex. It will also print the code out for easy view. The function variables can be tweaked to see changes in the results
* I also included the code in a txt file so that it can be copied to be run on any other python platform

**2:**

* Run the three servers on pycharm on new windows to enable the servers run in parallel.
* Run the KV\_Broker on Python IDLE and everything should work just fine. The KV Broker reads from the datToIndex and Serverfile and connects to all the servers with information in the server file. Therefore both files should be in the same folder for it to work. I have already tried to do this though.
* I also included the dataToIndex file however this isn’t necessary as the code in 1a will automatically generate it.
* The serverFile information can only contain three servers because the program was designed this way however, we can select k number of randomly selected servers to send inputs to for each of the input objects. The KV Broker will need to be tweaked to increase this number.
* My laptop was really slow with three servers running in parallel so I was careful not to increase this number beyond three to prevent my laptop from crashing.
* In case of any unusual error the entire code should be re-run. It works fine though and the mode of operation has been fully described in the report.
* I’m not so sure the maximum amount of data that can be safely sent from the broker to the server. So if any issues arise around this, we can just increase the HEADER variable in the KV Broker and three servers. They should all be the same number. Its currently size 120.