

# README - Alexandros Kalimeris - ds1200003

## Instructions for execution:

**Important: python 3.6 or higher is needed !**

In the instructions below all command line arguments are examples. You can use appropriate alternatives as you see fit.

1. Use createData.py to create data that will be used in the following steps. If you already have a file with data this step can be skipped. To run createData.py and generate data run:

```
python3 createData.py -k keyFile.txt -n 1000 -d 3 -l 4 -m 5
```

2. Start up the KV Servers by running the following commands in different terminals each:

```
python3 kvServer.py -a 127.0.0.1 -p 65432
python3 kvServer.py -a 127.0.0.1 -p 65431
python3 kvServer.py -a 127.0.0.1 -p 65430
```

Make sure that the ip's and ports used are included in the serverFile.

3. Start up the KV broker by running in a separate terminal:

```
python3 kvBroker.py -s serverFile.txt -i dataToIndex.txt -k 2
```

4. Execute any request using the command line, some examples: .

A GET request:

```
kv_broker->: GET "key1"
"key1" : { "weight" : 302.02 ; "surname" : "free" ; "city" : "psrnt" }
kv_broker->:
```

A GET request for a non-existing key:

```
kv_broker->: GET "asdf"
NOT FOUND
kv_broker->:
```

A QUERY request:

```
kv_broker->: QUERY "key1"."weight"
"key1"."weight" : 302.02
kv_broker->:
```

An unknown command:

```
kv_broker->: sadf
ERROR: Unknown command
kv_broker->:
```

A request with an empty body:

```
kv_broker->: GET
ERROR: Syntax error in request
kv_broker->:
```

5. Exit the KV broker either by typing 'exit' or ctrl-C:

```
kv_broker->: exit
```

6. Close the KV servers by using ctrl-C.