AVI Small Project Documentation

Components:

- **Json to Sqlite data loader**
  This component is used to load the json data into sqlite file to leverage indexing the data on a single file. Currently this runs only as 1 worker, even though the code can be used to launch more than 1 worker. This is because sqlite doesn't support multiple threads writing to the same file/database. If a database server is used, it can be scaled up much better. But for ease of use, I used sqlite3

- **TCP Server**
  This server handles tcp connections, launches goroutines on each request. Checks if the student's data exists in the cache. If yes, it will return the data from the cache. If no, it queries the data from the database, loads it into cache, and returns the data.

- **LRUCache**
  Cache implements least recently used eviction algorithm to maintain the cache. Its a single node cache with mutex lock/Unlocks and read/writes.

- **TCP client**

  Simple TCP client to display the average scores of student uids specified as input. If any of the specified uid is not found in the database, it will display as 'No Entry Found'