Include a read cache for SQL

Purpose:

The idea of having a read cache is to increase the efficient of READ operation (Http GET). This is good for microservices that are bias towards HTTP GET operations, which is a tendency for most microservice for getting information.

Read cache:

Read cache is a buffer containing the specific data stored in SQL which allows for read to be performed at high speed because read operation can be done directly via the cache instead of read via SQL query.

To get this done, several conditions must be fulfilled.

1. Initialisation: Cache must be initialised with the read data on startup, so ensure the read cache is ready for the next read operation.

Initialisation SQL Data → Cache

2. Read operation on SQL: All read operation does not need to perform SQL query since this can be done via read cache. This applies to Http GET

Read Cache → data

3. Write operation on SQL: All write operation is done on SQL write first, and once the SQL write is successful, the write is then done on the cache. Write on the cache is expected to work all the time (Is it?). This applies for both Http POST, PUT, PATCH and Delete

Write data → SQL write → Cache write

How to implement the read cache in GO for food data

Using a Map with Food ID as the key

key → Food information in struct