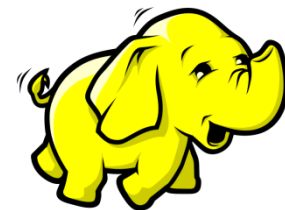# Key-Value Databases

Michael Enudi

Journey through the world of databases and data engineering

Redis

- ❖ `redis-server`
- ❖ `redis-benchmark`
- ❖ `redis-cli`

About

- ➢ in-memory persistent key-value NoSQL database

- ➢ Written in C

- ➢ Can run in persistent and non-persistent mode

- ➢ Very extensible

- ➢ Keeps all Keys in memory

- ➢ Uses the master-slave topology in distributed mode.

- ➢ Developed by Redis Lab

- ➢ Current version – v. 5

- ➢ Application driver available in over 2 dozen languages

- ➢ High profile users of the database include Twitter, Weibo, Pinterest and GitHub.

Data Structures

- ❑ Key
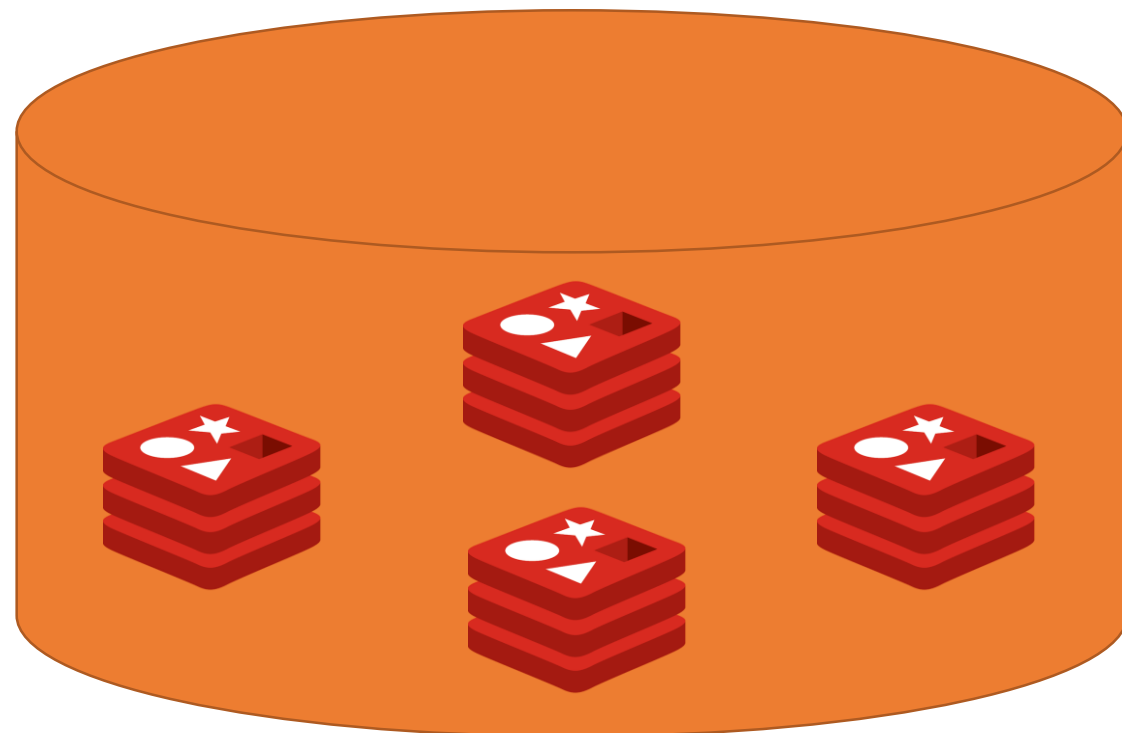
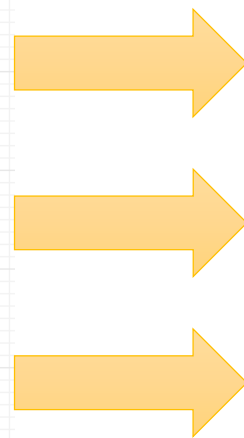- ❑ Strings

- ❑ Hashes

- ❑ List

- ❑ Sets

- ❑ Sorted set

Data Structure in Redis

More Data Structures

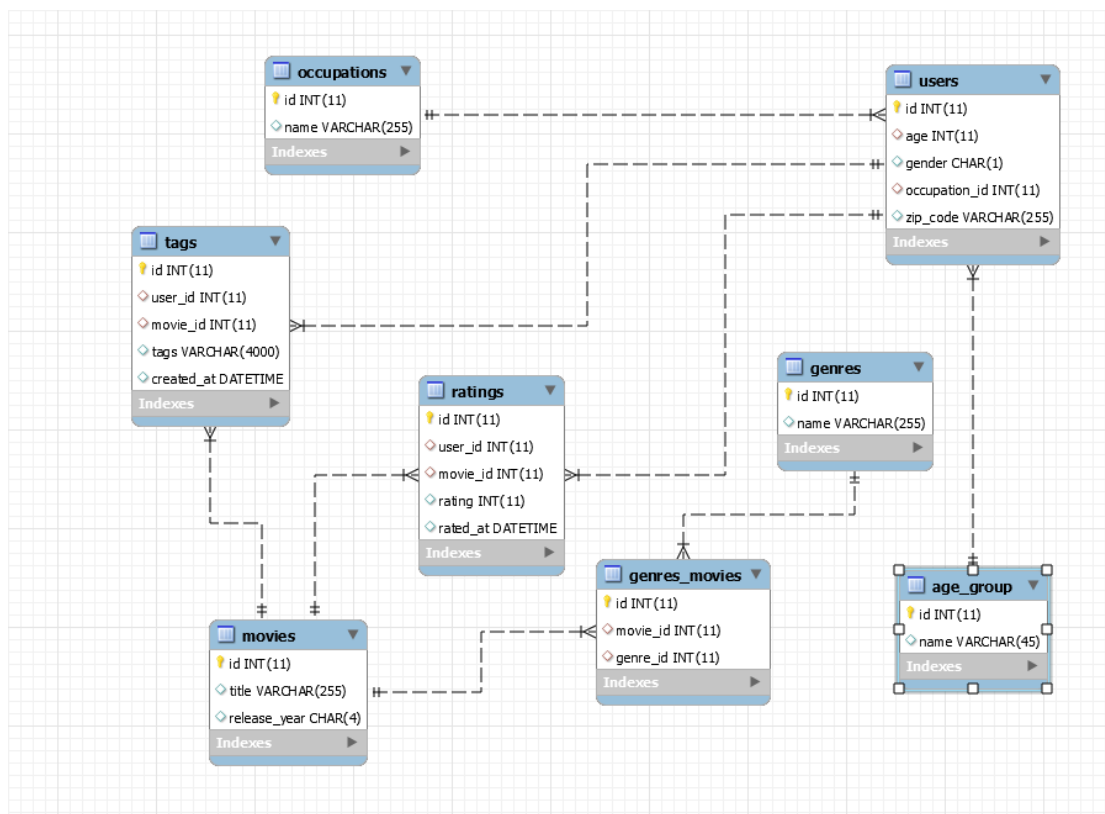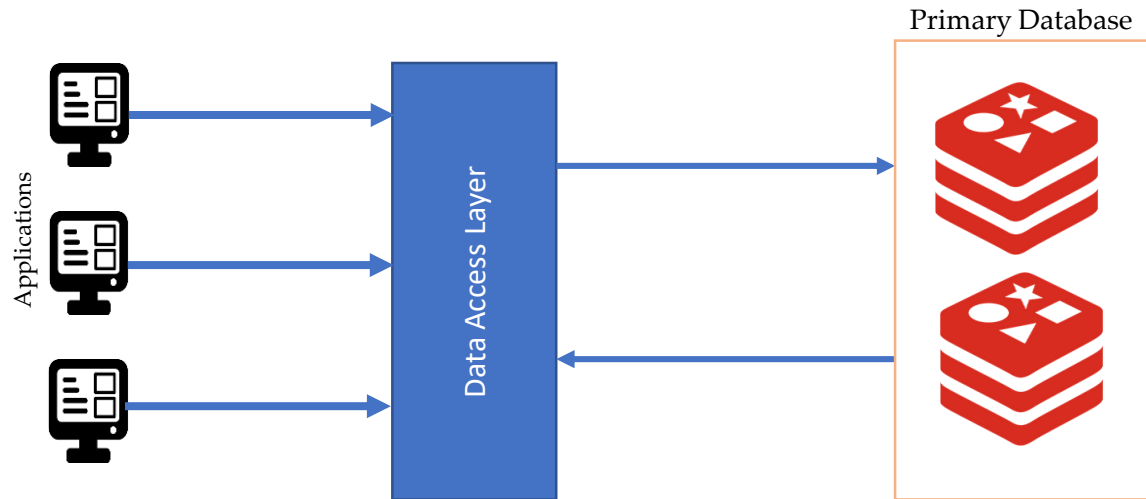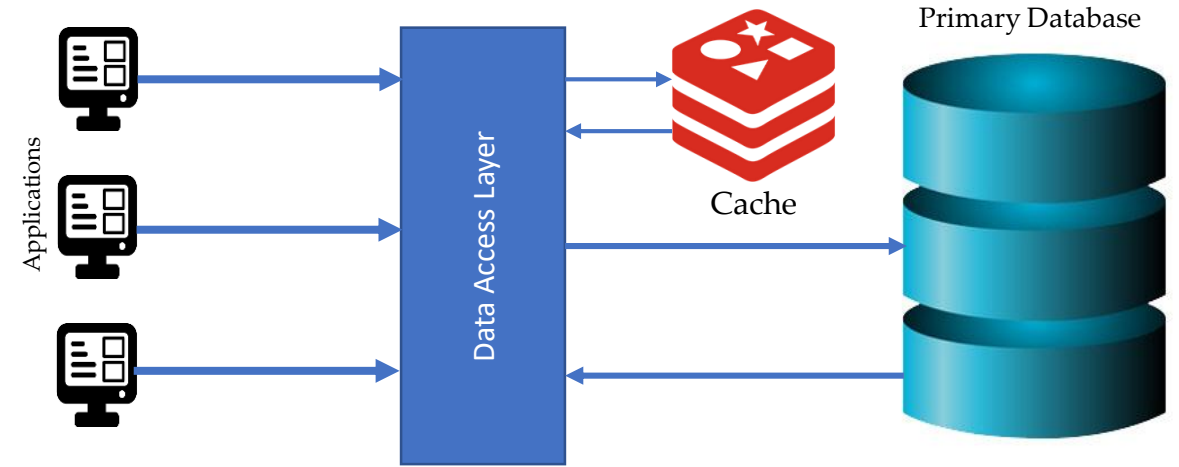**Data Structure in Redis**

- ❑ Hyperloglog

- ❑ Geo

- ❑ Pub sub

- ❑ Transactions

Modelling in Key-Value Databases

REDIS FOR APPLICATIONS

Redis as cache between the primary database and the application

Redis as the primary database

Key-Value Database Wrap-Up