

## Homework 7

### 7.1

What is Memcache?

Memcached is an open source, high-performance, and distributed memory caching system. It is used for speeding up dynamic web applications by reducing database load.

What is different between redis and memcache?

redis	memcache
Persistence by RDB and AOF	Not persistence
Multiple data type: String, List...	Only String
Single thread	Muti-threads
Support Master-Slave replication	Not support any replication
Persistent data	Not use persistent data

Redis feature:

1. easy to implement, because writing a multi-threaded program can be harder than single thread. That needs to be added locks and sync mechanism.
2. easy to deploy. It can be deployed on any machine having at least a single CPU core.

### 7.2

What is view?

View is a virtual table created by “select query”. Since as a table it has rows and columns, view can be used to speed up query performance via pre-collection of high frequent data.

What is stored procedure?

A stored procedure is a prepared SQL code. It's saved to be able to be reused. It uses parameters to do a function to perform.

What is materialized view?

Materialized views are also the logical view of our data-driven by the select query but the result of the query will get stored in the table or disk, also the definition of the query will also store in the database.

## View vs. Materialized View

1. The result of views query is not stored in the disk, and the result of materialized view is stored.
2. The Row ID of view table is same as the original table, but the materialized view is different.
3. view always gets the latest data, but materialized view needs to refresh for latest data
4. Performance of View is less than Materialized view
5. In the case of view it's only the logical view of the table no separate copy of the table but in the case of Materialized view we get a physically separate copy of the table