1st level cache

2nd level cache

Query level cache

Short lived data🡪in this case data will changes frequently. It seems this kind of data should not be cached other wise always we will get stale data. but in hibernate we will cached such data also.

Conversational scope(session scope)/short interval of time🡪

1st level cache

1st level cache is prototype

Moderate lived data

Long lived data

Read only data—it is fixed/static and will not change while application is running. this type of data is limited.

Non read only data/ writable data🡪 while application is running data will be modified. this kind of data can be classified into multiple type.

🡪long lived data

🡪very very rarely modified data

long lived data—infinite in nature –is modified rarely

Short lived data—infinite in nature—is modified frequently.

Read only data is potential candidate for caching.(permanent cache)

In case of Non read only data ,data management is required in cache.

1. For this we should allow users to modified the data only through application not directly through database(restriction).otherwise application don’t know underlying data has been modified and cannot reload the data into the cache.

2.application should monitor any change to such data that is there in cache and should remove the data from the cache.

3. As it is runtime data and infinite in nature we cannot dump entire database data into cache there must be some retention policy and some expiration intervals are required in order to remove the data from cache .

2nd level cache is singleton

2nd level cache is at Session factory level/global level---------------------------------------------------------------------------

loadbalancer

Node 2

NODE 1

sessionfactory

Sessionfactory

Payroll App

Payroll App

**Distributed caching library list**

Jcache(available in jdk itself)

Swarn cache(outdated /not used in market)

Ehcache(open cache)

Oscache(weak in transactional data)

Coherence cache(commercial )

**Parameter for distributed cache**

Max entry

Time to leave interval

Least recently used

**Swap on disk**

**Ehcache Cache manager**

**Cache region**

**Caching strategy:** read-write data/transactional/read only data

**Cache.xml**

**Caching service**

**Query Cache**