

## Cloud Data Bases

### Milestone 2: Persistent Storage Server

#### PeristenceTest:

- **testCreateFile()**: Test create a file named "SomeKey=09" on the file system and assert that it is existed
- **testReadFile()**: test reading a file named "SomeKey=09" and assert that its value is "=="Abc09\$8".
- **testUpdateFile()**: try to update a file named "SomeKey=09" with a new value "New\"Val=10" and assert that the update is success file. Then reading that file again and assert that the file content has been updated.
- **testDeleteFile()**: try to delete a file named "SomeKey=09" and assert that the deletion was successful.

#### CacheTest:

**getUpdateCacheMethod()**:Get private method for updating the cache from the CacheManager

\* @param cm CacheManager

\* @return CacheManager#updateCache(K, V)

\* @throws NoSuchMethodException something was changed in the implementation and method doesn't exist anymore

**testCacheStrategySimplePut()**: Test simple put operation on cache without exceeding the capacity

\* @param capacity capacity of the cache to test

\* @param strategy displacemetn strategy to test

\* @throws NoSuchMethodException for some reason updateCache(K, V) was not found

\* @throws InterruptedException if TestClient thread was interrupted

**testFIFOsimplePut()**: Test simple put for FIFO strategy

#testCacheStrategySimplePut(int, CacheDisplacementStrategy)

**testLRUsimplePut()**: Test simple put for LRU strategy

#testCacheStrategySimplePut(int, CacheDisplacementStrategy)

**testLFUSimplePut():** Test simple put for LFU strategy  
#testCacheStrategySimplePut(int, CacheDisplacementStrategy)

**testCacheOneItemEvict():** Test one of the edge cases when there is a cache of size one, check if eviction works

\* @param strategy CacheDisplacementStrategy

**testFIFOOneItemEvict():** Eviction test  
#testCacheOneItemEvict(CacheDisplacementStrategy) for FIFO strategy

**testLRUOneItemEvict():** Eviction test  
#testCacheOneItemEvict(CacheDisplacementStrategy) for LRU strategy

**testLFUOneItemEvict():** Eviction test  
#testCacheOneItemEvict(CacheDisplacementStrategy) for LFU strategy

**testDelete():** Test removing an item from the cache when value of put operations is null

\* @param cm CacheManager to test

**testFIFODelete():** Cache item remove operation for cache  
#testDelete(CacheManager) with FIFO strategy

**testLRUDelete():** Cache item remove operation for cache  
#testDelete(CacheManager) with LRU strategy

**testLFUDelete():** Cache item remove operation for cache  
#testDelete(CacheManager) with LFU strategy