

```
wsr123@ubuntu: ~/Desktop/scudb_initial/build
File Edit View Search Terminal Help
wsr123@ubuntu:~/Desktop/scudb_initial$ mkdir build
wsr123@ubuntu:~/Desktop/scudb_initial$ cd build
wsr123@ubuntu:~/Desktop/scudb_initial/build$ cmake ..
-- The CXX compiler identification is GNU 7.5.0
-- The C compiler identification is GNU 7.5.0
-- Check for working CXX compiler: /usr/bin/c++
-- Check for working CXX compiler: /usr/bin/c++ -- works
-- Detecting CXX compiler ABI info
-- Detecting CXX compiler ABI info - done
-- Detecting CXX compile features
-- Detecting CXX compile features - done
-- Check for working C compiler: /usr/bin/cc
-- Check for working C compiler: /usr/bin/cc -- works
-- Detecting C compiler ABI info
-- Detecting C compiler ABI info - done
-- Detecting C compile features
-- Detecting C compile features - done
-- Looking for pthread.h
-- Looking for pthread.h - found
-- Looking for pthread_create
-- Looking for pthread_create - not found
-- Looking for pthread_create in pthreads
-- Looking for pthread_create in pthreads - not found
-- Looking for pthread_create in pthread
-- Looking for pthread_create in pthread - found
-- Found Threads: TRUE
-- Performing Test COMPILER_SUPPORTS_CXX11
-- Performing Test COMPILER_SUPPORTS_CXX11 - Success
-- Configuring done
-- Generating done
-- Build files have been written to: /home/wsr123/Desktop/scudb_initial/build
```

## TASK #1 - EXTENDIBLE HASH TABLE

```
wsr123@ubuntu:~/Desktop/scudb_initial/build$ make extendible_hash_test
Scanning dependencies of target gtest
[ 2%] Building CXX object test/CMakeFiles/gtest.dir/__/third_party/gmock/gmock-gtest-all.cc.o
[ 4%] Building CXX object test/CMakeFiles/gtest.dir/__/third_party/gmock/gmock_main.cc.o
[ 7%] Linking CXX shared library ../lib/libgtest.so
[ 7%] Built target gtest
Scanning dependencies of target vtable
[ 9%] Building CXX object src/CMakeFiles/vtable.dir/buffer/buffer_pool_manager.cpp.o
[ 12%] Building CXX object src/CMakeFiles/vtable.dir/buffer/lru_replacer.cpp.o
[ 14%] Building CXX object src/CMakeFiles/vtable.dir/catalog/column.cpp.o
[ 17%] Building CXX object src/CMakeFiles/vtable.dir/catalog/schema.cpp.o
[ 19%] Building CXX object src/CMakeFiles/vtable.dir/common/config.cpp.o
[ 21%] Building CXX object src/CMakeFiles/vtable.dir/concurrency/lock_manager.cpp.o
[ 24%] Building CXX object src/CMakeFiles/vtable.dir/concurrency/transaction_manager.cpp.o
[ 26%] Building CXX object src/CMakeFiles/vtable.dir/disk/disk_manager.cpp.o
[ 29%] Building CXX object src/CMakeFiles/vtable.dir/hash/extendible_hash.cpp.o
[ 31%] Building CXX object src/CMakeFiles/vtable.dir/index/b_plus_tree.cpp.o
[ 34%] Building CXX object src/CMakeFiles/vtable.dir/index/b_plus_tree_index.cpp.o
[ 36%] Building CXX object src/CMakeFiles/vtable.dir/index/index_iterator.cpp.o
[ 39%] Building CXX object src/CMakeFiles/vtable.dir/logging/log_manager.cpp.o
[ 41%] Building CXX object src/CMakeFiles/vtable.dir/logging/log_recovery.cpp.o
[ 43%] Building CXX object src/CMakeFiles/vtable.dir/page/b_plus_tree_internal_page.cpp.o
[ 46%] Building CXX object src/CMakeFiles/vtable.dir/page/b_plus_tree_leaf_page.cpp.o
[ 48%] Building CXX object src/CMakeFiles/vtable.dir/page/b_plus_tree_page.cpp.o
[ 51%] Building CXX object src/CMakeFiles/vtable.dir/page/header_page.cpp.o
[ 53%] Building CXX object src/CMakeFiles/vtable.dir/page/table_page.cpp.o
[ 56%] Building CXX object src/CMakeFiles/vtable.dir/table/table_heap.cpp.o
[ 58%] Building CXX object src/CMakeFiles/vtable.dir/table/table_iterator.cpp.o
[ 60%] Building CXX object src/CMakeFiles/vtable.dir/table/tuple.cpp.o
[ 63%] Building CXX object src/CMakeFiles/vtable.dir/type/bigint_type.cpp.o
[ 65%] Building CXX object src/CMakeFiles/vtable.dir/type/boolean_type.cpp.o
[ 68%] Building CXX object src/CMakeFiles/vtable.dir/type/decimal_type.cpp.o
[ 70%] Building CXX object src/CMakeFiles/vtable.dir/type/integer_parent_type.cpp.o
[ 73%] Building CXX object src/CMakeFiles/vtable.dir/type/integer_type.cpp.o
[ 75%] Building CXX object src/CMakeFiles/vtable.dir/type/smallint_type.cpp.o
[ 78%] Building CXX object src/CMakeFiles/vtable.dir/type/tinyint_type.cpp.o
[ 80%] Building CXX object src/CMakeFiles/vtable.dir/type/type.cpp.o
[ 82%] Building CXX object src/CMakeFiles/vtable.dir/type/value.cpp.o
[ 85%] Building CXX object src/CMakeFiles/vtable.dir/type/varlen_type.cpp.o
[ 87%] Building CXX object src/CMakeFiles/vtable.dir/vtable/virtual_table.cpp.o
[ 90%] Linking CXX shared library ../lib/libvtable.so
[ 90%] Built target vtable
Scanning dependencies of target sqlite3
[ 92%] Building C object src/CMakeFiles/sqlite3.dir/sqlite/sqlite3.c.o
[ 95%] Linking C shared library ../lib/libsqlite3.so
[ 95%] Built target sqlite3
Scanning dependencies of target extendible_hash_test
[ 97%] Building CXX object test/CMakeFiles/extendible_hash_test.dir/hash/extendible_hash_test.cpp.o
[100%] Linking CXX executable extendible_hash_test
[100%] Built target extendible_hash_test
```



```

wsr123@ubuntu:~/Desktop/scudb_initial/build$ ./test/extendible_hash_test
Running main() from gmock_main.cc
[=====] Running 3 tests from 1 test case.
[-----] Global test environment set-up.
[-----] 3 tests from ExtendibleHashTest
[ RUN    ] ExtendibleHashTest.SampleTest
[       OK ] ExtendibleHashTest.SampleTest (0 ms)
[ RUN    ] ExtendibleHashTest.ConcurrentInsertTest
[       OK ] ExtendibleHashTest.ConcurrentInsertTest (25 ms)
[ RUN    ] ExtendibleHashTest.ConcurrentRemoveTest
[       OK ] ExtendibleHashTest.ConcurrentRemoveTest (51 ms)
[-----] 3 tests from ExtendibleHashTest (77 ms total)

[-----] Global test environment tear-down
[=====] 3 tests from 1 test case ran. (77 ms total)
[ PASSED ] 3 tests.

```

## TASK #2 - LRU PAGE REPLACEMENT POLICY

```

wsr123@ubuntu:~/Desktop/scudb_initial/build$ make lru_replacer_test
[ 7%] Built target gtest
[ 90%] Built target vtable
[ 95%] Built target sqlite3
Scanning dependencies of target lru_replacer_test
[ 97%] Building CXX object test/CMakeFiles/lru_replacer_test.dir/buffer/lru_repl
acer_test.cpp.o
[100%] Linking CXX executable lru_replacer_test
[100%] Built target lru_replacer_test
wsr123@ubuntu:~/Desktop/scudb_initial/build$ ./test/lru_replacer_test
Running main() from gmock_main.cc
[=====] Running 1 test from 1 test case.
[-----] Global test environment set-up.
[-----] 1 test from LRUReplacerTest
[ RUN    ] LRUReplacerTest.SampleTest
[       OK ] LRUReplacerTest.SampleTest (0 ms)
[-----] 1 test from LRUReplacerTest (0 ms total)

[-----] Global test environment tear-down
[=====] 1 test from 1 test case ran. (0 ms total)
[ PASSED ] 1 test.

```

## TASK #3 - BUFFER POOL MANAGER

```

wsr123@ubuntu:~/Desktop/scudb_initial/build$ make buffer_pool_manager_test
[ 7%] Built target gtest
[ 90%] Built target vtable
[ 95%] Built target sqlite3
Scanning dependencies of target buffer_pool_manager_test
[ 97%] Building CXX object test/CMakeFiles/buffer_pool_manager_test.dir/buffer/b
uffer_pool_manager_test.cpp.o
[100%] Linking CXX executable buffer_pool_manager_test
[100%] Built target buffer_pool_manager_test
wsr123@ubuntu:~/Desktop/scudb_initial/build$ ./test/buffer_pool_manager_test
Running main() from gmock_main.cc
[=====] Running 1 test from 1 test case.
[-----] Global test environment set-up.
[-----] 1 test from BufferPoolManagerTest
[ RUN    ] BufferPoolManagerTest.SampleTest
[       OK ] BufferPoolManagerTest.SampleTest (0 ms)
[-----] 1 test from BufferPoolManagerTest (0 ms total)

[-----] Global test environment tear-down
[=====] 1 test from 1 test case ran. (2 ms total)
[ PASSED ] 1 test.

```