```
Microsoft Windows [Version 10.0.22631.3447]
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C:\Users\rendi>cassandra
Detected powershell execution permissions. Running with enhanced startup scripts.
*-----*
   WARNING! Automatic page file configuration detected.
   It is recommended that you disable swap when running Cassandra
    for performance and stability reasons.
C:\Users\rendi>CompilerOracle: dontinline org/apache/cassandra/db/Columns$Serializer.deserializeLargeSubset (Lorg/apache/cassandra/io/util/DataInputPlus;Lor
g/apache/cassandra/db/Columns; I)Lorg/apache/cassandra/db/Columns;
CompilerOracle: dontinline org/apache/cassandra/db/Columns$Serializer.serializeLargeSubset (Ljava/util/Collection:ILorg/apache/cassandra/db/Columns:ILorg/ap
ache/cassandra/io/util/DataOutputPlus:)V
CompilerOracle: dontinline org/apache/cassandra/db/Columns$Serializer.serializeLargeSubsetSize (Ljava/util/Collection;ILorg/apache/cassandra/db/Columns;I)I
CompilerOracle: dontinline org/apache/cassandra/db/commitlog/AbstractCommitLogSegmentManager.advanceAllocatingFrom (Lorg/apache/cassandra/db/commitlog/Commi
tLogSegment;)V
CompilerOracle: dontinline org/apache/cassandra/db/transform/BaseIterator.tryGetMoreContents ()Z
CompilerOracle: dontinline org/apache/cassandra/db/transform/StoppingTransformation.stop ()V
CompilerOracle: dontinline org/apache/cassandra/db/transform/StoppingTransformation.stopInPartition ()V
CompilerOracle: dontinline org/apache/cassandra/io/util/BufferedDataOutputStreamPlus.doFlush (I)V
CompilerOracle: dontinline org/apache/cassandra/io/util/BufferedDataOutputStreamPlus.writeExcessSlow ()V
CompilerOracle: dontinline org/apache/cassandra/io/util/BufferedDataOutputStreamPlus.writeSlow (JI)V
CompilerOracle: dontinline org/apache/cassandra/io/util/RebufferingInputStream.readPrimitiveSlowly (I)J
CompilerOracle: inline org/apache/cassandra/db/rows/UnfilteredSerializer.serializeRowBody (Lorg/apache/cassandra/db/rows/Row;ILorg/apache/cassandra/db/Seria
lizationHeader;Lorg/apache/cassandra/io/util/DataOutputPlus;)V
CompilerOracle: inline org/apache/cassandra/io/util/Memory.checkBounds (JJ)V
CompilerOracle: inline org/apache/cassandra/io/util/SafeMemory.checkBounds (JJ)V
CompilerOracle: inline org/apache/cassandra/utils/AsymmetricOrdering.selectBoundary (Lorg/apache/cassandra/utils/AsymmetricOrdering/Op;II)I
CompilerOracle: inline org/apache/cassandra/utils/AsymmetricOrdering.strictnessOfLessThan (Lorg/apache/cassandra/utils/AsymmetricOrdering/Op;)I
CompilerOracle: inline org/apache/cassandra/utils/BloomFilter.indexes (Lorg/apache/cassandra/utils/IFilter/FilterKey;)[J
CompilerOracle: inline org/apache/cassandra/utils/BloomFilter.setIndexes (JJIJ[J)V
CompilerOracle: inline org/apache/cassandra/utils/ByteBufferUtil.compare (Ljava/nio/ByteBuffer;[B)I
CompilerOracle: inline org/apache/cassandra/utils/ByteBufferUtil.compare ([BLjava/nio/ByteBuffer;)I
CompilerOracle: inline org/apache/cassandra/utils/ByteBufferUtil.compareUnsigned (Ljava/nio/ByteBuffer;Ljava/nio/ByteBuffer;)I
CompilerOracle: inline org/apache/cassandra/utils/FastByteOperations$UnsafeOperations.compareTo (Ljava/lang/Object;JILjava/lang/Object;JI)I
```

```
\blacksquare Command Prompt - cqlsh 	imes + 	imes
C:\Users\rendi>cqlsh
WARNING: console codepage must be set to cp65001 to support utf-8 encoding on Windows platforms.
If you experience encoding problems, change your console codepage with 'chcp 65001' before starting cglsh.
Connected to Test Cluster at 127.0.0.1:9042.
[cglsh 5.0.1 | Cassandra 3.11.4 | CQL spec 3.4.4 | Native protocol v4]
Use HELP for help.
calsh>
```

```
cglsh> CREATE KEYSPACE IF NOT EXISTS university
   ... WITH replication = {'class': 'SimpleStrategy', 'replication_factor': 1};
```

```
<u>calsh> CREATE</u> TABLE IF NOT EXISTS university.students (
           student_id INT PRIMARY KEY,
           name TEXT.
           age INT.
            major TEXT
```

```
cqlsh> CREATE TABLE IF NOT EXISTS university.professors (
          professor_id INT PRIMARY KEY,
  ... name TEXT,
         department TEXT
  ...);
cqlsh>
cglsh> CREATE TABLE IF NOT EXISTS university.courses (
   ... course_id INT PRIMARY KEY,
  ... name TEXT,
  ... professor_id INT,
  ... department TEXT
   ...);
cqlsh>
cglsh> CREATE TABLE IF NOT EXISTS university.departments (
          department_id INT PRIMARY KEY,
          name TEXT,
  . . .
          head_professor_id INT
   ...);
calsh>
cqlsh> CREATE TABLE IF NOT EXISTS university.grades (
  ... student_id INT,
   ... course_id INT,
  ... grade TEXT,
  ... PRIMARY KEY (student_id, course_id)
  ...);
```

```
cqlsh> DESCRIBE KEYSPACES;
university
            system
                                system_traces
system_auth system_distributed system_schema
cglsh> USE university:
cglsh:university> DESCRIBE TABLES;
students professors grades departments courses
```

```
calsh:university> DESCRIBE TABLE students:
CREATE TABLE university.students (
   student_id int PRIMARY KEY,
   age int,
   major text,
   name text
) WITH bloom_filter_fp_chance = 0.01
   AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
   AND comment = ''
   AND compaction = {'class': 'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy', 'max_threshold': '32', 'min_threshold': '4'}
   AND compression = {'chunk_length_in_kb': '64', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
   AND crc_check_chance = 1.0
   AND dclocal_read_repair_chance = 0.1
   AND default_time_to_live = 0
   AND gc_grace_seconds = 864000
   AND max_index_interval = 2048
   AND memtable_flush_period_in_ms = 0
   AND min_index_interval = 128
   AND read_repair_chance = 0.0
   AND speculative_retry = '99PERCENTILE';
```

```
cqlsh:university> INSERT INTO university.students (student_id, name, age, major) VALUES (1, 'John Doe', 22, 'Computer Science');
cqlsh:university> INSERT INTO university.students (student_id, name, age, major) VALUES (2, 'Jane Smith', 21, 'Engineering');
cqlsh:university> INSERT INTO university.students (student_id, name, age, major) VALUES (3, 'Alice Johnson', 23, 'Mathematics');
```

```
cglsh:university> cglsh:university> SELECT * FROM university.students WHERE student_id = 1;
student_id | age | major
                                  l name
        1 | 22 | Computer Science | John Doe
(1 rows)
```

```
calsh:university> CREATE TABLE IF NOT EXISTS university.sessions (
                      session_id UUID PRIMARY KEY.
                      start_time TIMEUUID,
               . . .
                      end_time TIMEUUID,
                      description TEXT
```

```
cqlsh:university> SELECT * FROM university.students;
student_id | age | major
        1 | 22 | Computer Science | John Doe
        2 | 21 | Engineering | Jane Smith
        3 | 23 | Mathematics | Alice Johnson
```

(3 rows)

```
cglsh:university> UPDATE university.students SET age = 25 WHERE student_id = 1;
cglsh:university> UPDATE university.students SET major = 'Computer Engineering' WHERE student_id = 2;
cglsh:university> UPDATE university.students SET name = 'Rendika Nurhartanto Suharto' WHERE student_id = 3;
calsh:university> SELECT * FROM university.students:
student_id | age | major
                                         name
         1 | 25 | Computer Science |
                                                            John Doe
         2 | 21 | Computer Engineering |
                                                          Jane Smith
                   Mathematics | Rendika Nurhartanto Suharto
(3 rows)
```