DATASTAX ACADEMY

# Exercise 2.1 – Instantiating a DseSession Object

This exercise is designed to familiarize you with the code required at a minimum to instantiate a DseSession Object. Instantiating a DseSession Object involves:

1. Referencing the appropriate library: `com.datastax.driver.dse.DseCluster`
2. Instantiating a cluster object
3. Instantiating a session object by passing the keyspace name as a parameter value to the cluster object's `connect()` method

All steps will have most of the required code already written out. Your task is to place the additional code where it is needed and understand how to create and test the session. Here's what you'll do:

**Step 1**: Check that all configuration files are ready to go
**Step 2**: Confirm the CassandraSessionTest.java file fails
**Step 3**: Complete the code that will initialize a new DseSession object
**Step 4**: Compile and run the code to instantiate a new DseSession Object

**NOTE**:

1. You will work with two java files:
    a. *CassandraSessionTest.java:* This is the file that will initialize an instance of the session class.

        i. *Available here: session1/src/test/java/com/datastax/training/killrvideo/util/*
        ii.
    b. *CassandraSession.java:* This is the file that defines the session class. You will have to fix it so the previous file will work.

        *Available here: session1/src/main/java/com/datastax/training/killrvideo/util/*

## Step 1: Check that all configuration files are ready to go

The purpose of this step is to make sure the configuration files won't cause any unexpected errors that could keep you from doing the exercises in this course.

1. Connect to your node
2. Open *cassandra-rackdc.properties* (located in */etc/dse/cassandra*).
3. Confirm the datacenter variable is set to the following (case sensitive):

```
dc=DC1
rack=rack1
```

4. Find and open the *cassandra.yaml* file. Confirm the *endpoint_snitch* setting is as shown below:

```
endpoint_snitch: "GossipingPropertyFileSnitch"
```

The configuration files are now ready to go.

## Step 2: Confirm the CassandraSessionTest.java file fails

The purpose of this step is to verify that the file will indeed fail as expected and that you get the errors shown at the end of this step. If so, you will be ready for step 3.

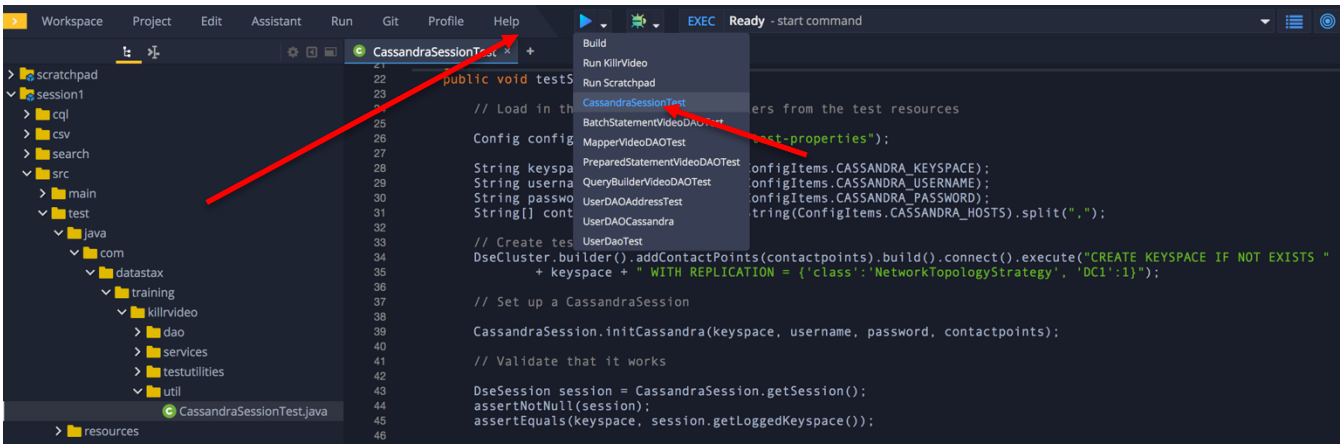
1. Return to Theia or Katacoda and launch Session 1.

2. Navigate to and open the following file:

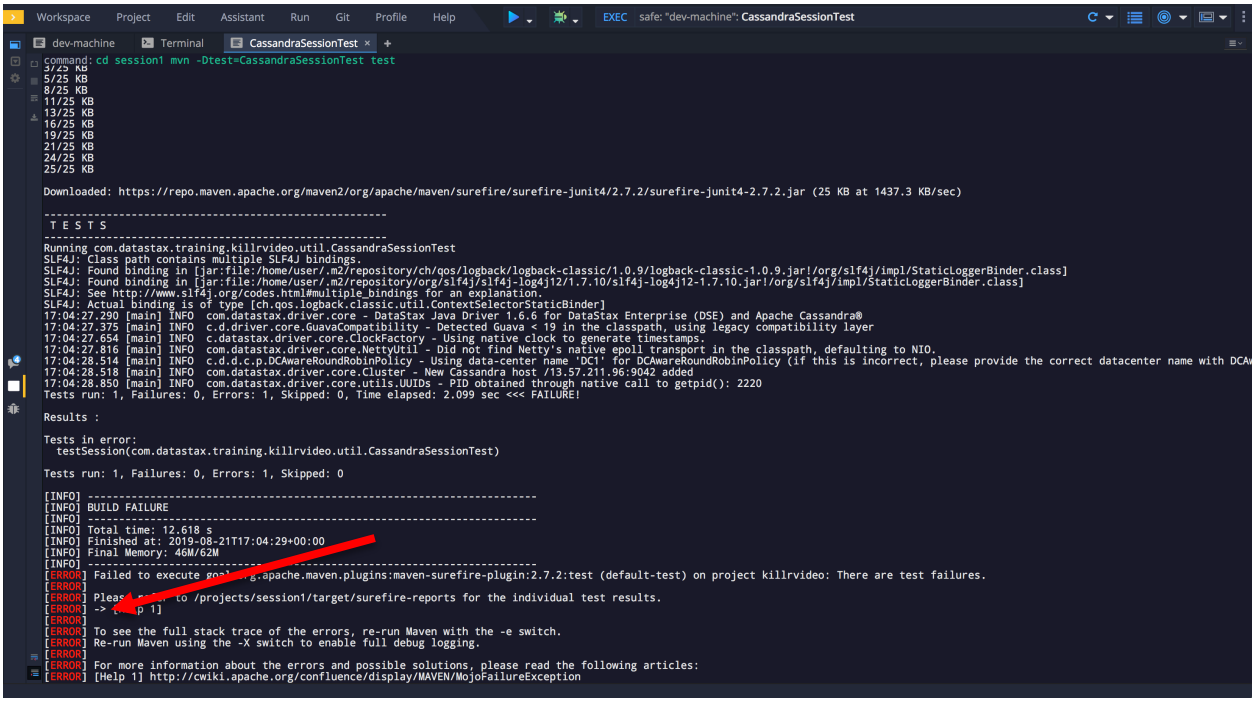
   *session1/src/test/java/com/datastax/training/killrvideo/util/CassandraSessionTest.java*

3. Examine the file. Note that it creates a keyspace using the settings found in *"test-properties"*

4. Run the file *CassandraSessionTest.java* using Theia or Katacoda.




5. Confirm the test fails and that you get the same errors shown below. The next few steps will fix this issue.



## Step 3: Complete the code that initializes a new DseSession

Complete the code required to initialize a DseSession object. The session class is mostly complete, but it requires six additional lines to successfully compile and run.

**NOTE:** Before making any changes to existing files, create a backup. Should you mess up (and at some point, you will) just copy the backup file and overwrite the modified file, replacing the name. Open a terminal window and run the following commands:

```
cd
/projects/session1/src/main/java/com/datastax/training/killrvideo/util/
cp CassandraSession.java CassandraSession.java.dist

cd
/projects/session1/src/test/java/com/datastax/training/killrvideo/util/
cp CassandraSessionTest.java CassandraSessionTest.java.dist
```

1. Return to the IDE (Theia), navigate to *CassandraSession.java*, and open it:

   *~/session1/src/main/java/com/datastax/training/killrvideo/util/CassandraSession.java*

2. Add additional code to instantiate a cluster object. Add the following line, which references the library needed to instantiate a cluster object:

```
import com.datastax.driver.dse.DseCluster;
```

3. Next, add code to the function that will create the DseSession object. Locate the `initCassandra()` function and the line "`//TODO: Your code goes here`".

4. Add the following five lines of code to the `initCassandra()` function below the TODO line. This new code provides the syntax and the necessary parameter values to initialize a DseSession object. Remove any extra lines between the newly copied and pasted code. However, do not remove or modify any other code.

```
// TODO: Your code goes here

DseCluster cluster = DseCluster.builder()
    .withCredentials(username, password)
    .addContactPoints(contactpoints)
    .build();
session = cluster.connect(keyspace);

// TODO: Your code ends here
```

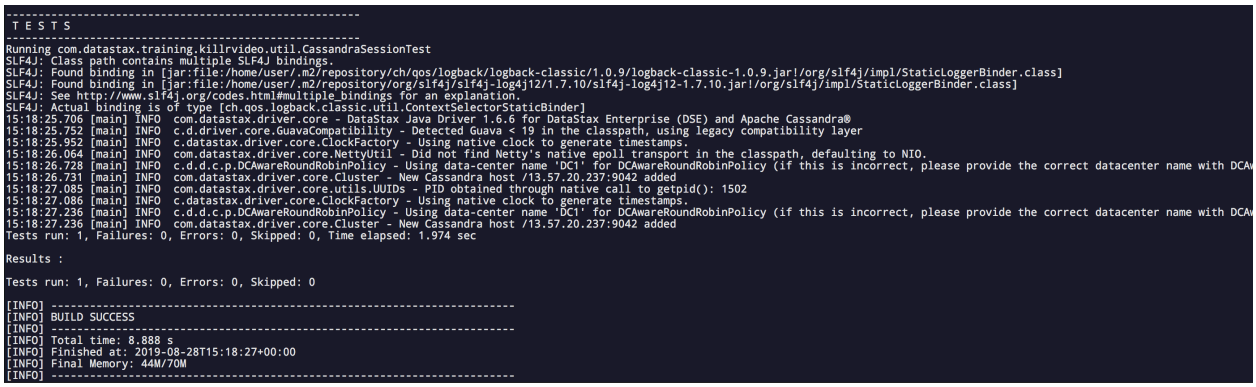
5. The file will be auto saved or use *command+s* to force a save.

## Step 4: Compile and run the code that will instantiate a new DseSession Object

1. Run the test code again within Theia by right-clicking on the previous file; *CassandraSessionTest.java* file and selecting the *Run* command:

*~/session1/src/test/java/com/datastax/training/killrvideo/util/CassandraSessionTest.java*

2. When done, the results from the Run command should appear as shown below:




3. If you get an error message, re-check and revise your code. Then, run the code again. If all else fails, copy the original backup files to overwrite the modified files and try again.