COMPSCI 578 - PA 2.1 : Single-node data store wrapper

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Server Implementation:

The server handles client.send() and client.callbackSend() differently.

- Normal send() only contains the query that the server executed on the Cassandra DB and returns back the result once executed.
- callbackSend() messages contain a 2-tuple JSON containing a *counter* which is unique identified for the request, and *request* which is the query to be executed. The server executes the query and sends back a 2-tuple JSON containing the corresponding counter and response from the Cassandra DB.

Client Implementation:

Assumption: Normal sends are assumed to contain the correct CQL query

- callbackSend() generates a hashvalue using *java.lang.Object.hashCode()* for the callback object and stores it as a key for the callback object in concurrent hashmap *callbackMap*. Then it uses Client.send() to send a 2-tuple JSON containing the request code (the callback hashcode) and the actual request.
- handleResponse() handles 2 types of requests:
    - **JSON response** containing request code and the response: This response is correspondent to a callback. The callback is matched using the request code from the Concurrent Hash Map and corresponding callback is called. The result is also printed.
    - Query response: This is the response for the simple Client.send call. The response is just printed.