**<Last Name>, <First Name>**

<Date>

Harvard Extension - Big Data Principles e88

Homework 10: Data Modeling and Programming with Cassandra

Please identify which problems were completed:

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| Problem 1:  Problem 2:  Problem 3:  Problem 4:  Bonus Problem 5:  Bonus Problem 6: |

**Problem 1 [25 points] data modeling with Cassandra**

Using CQLSH and the DESCRIBE command, show your keyspace and table info [8 points]

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Explain the design of your table’s Primary Key [5 points]

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Show a screenshot / screen copy of Query 1 being run with its results [6 points]

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Show a screenshot / screen copy of Query 2 being run with its results [6 points]

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**Problem 2 [25 Points] range queries with Cassandra**

Using CQLSH and the DESCRIBE command, show your keyspace and table info [7 points]

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Explain the design of your table’s Primary Key [5 points]

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Show a screenshot / screen copy of Query 1 being run with its results [5 points]

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Show a screenshot / screen copy of Query 2 being run with its results [5 points]

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What is the main difference between your tables for problem 1 and problem 2? [3 points]

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**Problem 3 [30 Points] programming with Cassandra drivers**

Copy and paste yourcode here [10 points]

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Show execution of your application and a sample of the data inserted into your table [10] points

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Show execution and results of your queries [10] points

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**Problem 4 [20 Points] data consistency with Cassandra**

Enter your code - highlight changes you made to handle consistency [10 points]

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Show execution and results of your queries [10] points

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**Problem 5 [Bonus +20] Real-Time views with Spark and Cassandra**

Show your keyspace and table info; explain design of your table's primary keys [4 points]

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Enter your job's code [4 points]

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Demo your setup - input data, execution of your job, with a few batch outputs and a sample of the data inserted into your table [7] points

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Show execution and results of your queries [5] points

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**Problem 6 [Bonus +15] Cassandra cluster**

Explain how you created your Cassandra cluster [4 points]

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Show commands you used to create the keyspace and your table; show test data you inserted into the table [3 points]

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Demo using the 'nodetool' to inspect the status of your cluster [4 points]

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Demo using the 'nodetool' to inspect location of your data rows [4 points]

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