Quiz 1 will cover general high-level NoSQL concepts, data models, scalability issues. There will be some true/false, multiple choice, and short answer.  Read Harrison chapter 1 and the assigned paper Vogel2008 (on blackboard.)

- Why NoSQL emerged as an alternative to Relational?

- How does NoSQL differ from Relational approaches (keep in mind - there are always exceptions)

- Partitioning vs. Replication - main ideas, what is the difference?

- What's the difference between a Key Value Store and a Document Store?

- What is a graph database?

- NoSQL: What is it good for? What are its limitations? What are some applications?

- What is "Polyglot persistence?"  What is "Data Engineering"

- What is Big Data all about?

- Approaches / Strategies to Scaling Relational Databases

- When is caching useful in theory?  (Hit rates, memory vs disk I/O performance)

- Client-side vs. Server side consistency (See the assigned paper - Vogels2008 - in Course Materials >> Papers)

- What is an "Inconsistency Window?" (also in Vogels2008).

- I give you a SQL query and some processing elements (FILTER, JOIN, PARTITION\_BY\_KEY, etc). Show me conceptually how you would parallelize the query across a compute cluster.