# Seminar and Progress Report

A comparison between **SQL** (Conventional) & **NOSQL** (WebScale) Databases using various scenarios

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# What is NoSQL

This does NOT mean “No SQL”

# What is NoSQL

This does mean “Not ONLY SQL”

# Why is Not only SQL

Google once ran off of 40,000 MySQL installations

# Why is Not only SQL

Facebook was at one point spending $1M per month for specialized database hardware to serve their pictures.

# Why is Not only SQL

These unviable solutions led to a re-evaluation of existing database technologies and led to the Not-Only-SQL (NoSQL)  movement.

# The rise of Not only SQL - 1

Google's Way

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3. It is not a relational database and can be better defined as a sparse, distributed multi-dimensional sorted map.

4. BigTable is designed to scale into the petabyte range across "hundreds or thousands of machines, and to make it easy to add more machines to the system and automatically start taking advantage of those resources without any reconfiguration".

# The rise of Not only SQL - 2

Facebook's Way

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3. Cassandra is an open source distributed database management system.

4. It is an Apache Software Foundation top-level project designed to handle very large amounts of data spread out across many commodity servers while providing a highly available service with no single point of failure.

# The rise of Not only SQL - Others

Hadoop / HBase
Hypertable
Amazon SimpleDB
MongoDB
Terrastore
CouchDB
MemcacheDB

And Many others {{The list is Endless}}.

# Benefits of NoSQL Databases

1. Elastic scaling

# Benefits of NoSQL Databases

2. Big data

# Benefits of NoSQL Databases

3. Goodbye DBAs

# Benefits of NoSQL Databases

4. Economics

# Benefits of NoSQL Databases

5. Flexible data models

# NoSQL comparison with SQL

1. ACID

# NoSQL comparison with SQL

2. CAP

# NoSQL comparison with SQL

3. Maturity

# NoSQL comparison with SQL

4. Support

# NoSQL comparison with SQL

5. Analytics and business intelligence

# NoSQL comparison with SQL

6. Administration

# NoSQL comparison with SQL

7. Expertise

# NoSQL comparison with SQL

Practical

“Head On”

# NoSQL comparison with SQL

Questions