

SQL is English for Relational Database
SQL Invented by Don Chamberlin & Raymond Boyce at IBM

N1QL, based on SQL, is English for JSON
N1QL was invented by Gerald Sangudi at Couchbase

SQL
Instance
Database
Table
Row
Column
Index
Datatypes

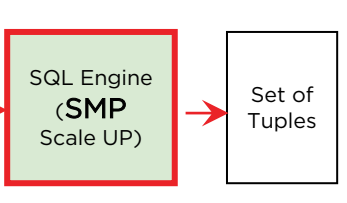
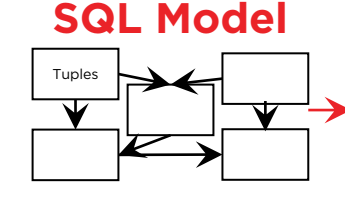
N1QL
Cluster
Bucket
Bucket, Keyspace
Document
Attribute
Index
JSON Datatypes

SQL
Input and Output:
Set(s) of Tuples

N1QL
Input and Output:
Set(s) of JSON

SQL STMT
CREATE TABLE
CREATE INDEX
ALTER TABLE
SELECT
INSERT
UPDATE
DELETE
MERGE
Subqueries
JOIN
GROUP BY
ORDER BY
OFFSET, LIMIT
EXPLAIN PLAN
PREPARE
EXECUTE
GRANT
REVOKE
DESCRIBE
PREPARE
EXECUTE
TRUNCATE

N1QL STMT
CREATE BUCKET
CREATE INDEX
None
SELECT
INSERT
UPDATE
DELETE
MERGE
Subqueries
JOIN
GROUP BY
ORDER BY
OFFSET, LIMIT
EXPLAIN
PREPARE
EXECUTE
GRANT ROLE
REVOKE ROLE
INFER
PREPARE
EXECUTE
FLUSH



SQL Optimizer
Rule Based
Cost Based
Index Selection
Query Rewrites
NL, Hash, Merge join

N1QL Optimizer
Rule based
Index Selection
NL Join

SQL Datatypes
Numeric
Boolean
Decimal
Character
Date Time
Timezone
BLOB
Spatial
JSON

N1QL Datatype
Numeric
Boolean
Array
Character
Object
Null
JSON
Conversion Functions

Additional SQL Features
Triggers
Stored Procedures
XML
Constraints
RAC

SQL Logic
3 valued logic
TRUE, FALSE, NULL/UNKNOWN

N1QL Logic
4 valued logic
TRUE, FALSE, NULL/UNKNOWN, MISSING

SQL ACID
ATOMIC
Consistent
Isolated
Durable

N1QL BASE
Single doc Atomic
Consistent Data*
Optimistic
Concurrency

N1QL Index Scan Consistency*
Unbounded
AT_PLUS
REQUEST_PLUS

SQL Indexes
Primary Key
Secondary Key
Composite
Range Partitioned
Expression (Functional)
Spatial
Search

N1QL Indexes
Primary
Secondary
Composite
Partial
Expression (Functional)
Spatial
Array Index
Replica(HA)
Adaptive

SQL Transactions
ACID
Multi-Statement
Savepoints
Commit/Rollback
Redo, Undo

N1QL Transactions
Single Document
atomicity

SQL Tooling
ODBC, JDBC, .NET
Hibernate
BI Tools
erwin
TOAD

N1QL Tooling
Web Console
Monitoring
Profiling
Dev workbench
SDK
Simba, Cdata
BI
Slamdata

N1QL Resources
query.couchbase.com