

Overview of RDBM
overview of storage & indexing

ACID Properties

A Atomicity logging

C Consistence locking

I Isolation locking

D Durability logging

History:

Oracle

DB2

SQL Service

MySQL

Poztgres

Ted Codd 1970 How data should be stored Model? Table, graph, object
Operation

the effective way to model and query data in this world

- Ingres Stonebraker@UCB
 - System R IBM
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1. SQL gap between physical reality and logic level
 2. RSS(Relational Storage System)/RDS(Relational Data System) Architected Split
 3. Query Compilation + Optimization
 4. Table-based access methods(indexes)
 5. Log-based recovery
 6. Multi-granularity locking
 7. Views/trigger(ECA)/constrain

Rough Timeline:

- Pre-relational era 1960's - early 1970's
- CODD's paper 1970
- Basic RDBMS research 1970-1980
- RDBMS improvements: 1980 - 1985
- Relational became the mainstream 1985-1990
- Distributed DBMS research 1980's
- Parallel ... 1985-1995
- extensible DB research 1989-1990
- OLAP + Data warehousing 1990-2000
- Stream DB research 2000's
- Data-intensive Computing 2005-now