ACID

A(Atomicity): All or nothing transactions.

Ex: all the instructions within successfully execute or none of them will execute. A transfer to B 20 bucks, in the case any of the instructions fail then the entire transactions abort and roll back.

C(Consistency): Guarantees committed data is never lost.

Ex: remain consistent after every transactions

I(Isolation): transaction are independent

Ex: should not be affected by each others if multiple transactions are running concurrently.

B take from A also C take from A means concurrent happens.

D(Durability): Committed data is never lost.

Changes that have been committed to the databases should remain even in the case of software or hardware failure.

CAP

C(Consistency): All see same data, same time, updating.

A(Availability): Replicating data for smooth request.

P(Partition tolerance): continuing if fails.

DB have CAP not exits

RDMS has CA

NoSQL has CP

Casandra has AP.

Hadoop vs RDBMS

