CMPE 281 questions recall

1. salesforce master detail.--can you convert from lookup to master or master to lookup
2. NoSQL table: What was this question?
3. hadoop mapreduce key value pair - 2 questions
4. tell the page number of that topics..?...Mayur

Ans: separate db,shared dOne question from microsoft paper about separate schema,db,shared db.-- @rucha casn't remember...can ub with shared schema and shared db with separate schema

5. CA,CP databases.
6. dynamo based.
7. columnar db
8. MySQL Database is an example of? CA
9. Mongo DB type. CP
10. Essential characeristics of cloud. 5
11. openshift is a Paas.
12. Most famous column based db:big table i guess it is cassandra (page 60 of No sql slide)
13. NoSQL definition:polyglot,horizontally scalable
14. Feature model - AND and OR based question
15. which was the first nosql implementation: CouchDB
16. Question about parent child relationship in force.com
17. Poor man multitenancy:VM on top of shared hw and OS
18. Key attributes of SaaS:Configurability,multitenant effciiency and scalability
19. Architecture strategies for catching long tail: data model approaches: dedicated tenant db,shared db with fixed extensions and shared db with custom extensions.
20. Scale up vs Scale Out.

21 question from slide number 29 of introduction to cloud computing (regaridng type of tenant isloation or something)

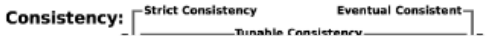
There were 4 questions on locking... Don't remember questions... But they had options like strict locking, loose locking, 2 phase locking, etc.

Optimistic locking and Pessimistic locking
He had given four options power, servers, databases and asked which one of these is scalable something like this.. ## it is about what all can be vitualized
ans: server ,storage, network, power

	Column-Oriented	Document-Oriented	Schemaless
Ring	Cassandra		Riak, Project Voldemort
Master-Slave	HBase	MongoDB	Membase
Replication based		CouchDB	Redis

Table 5.1: Systems compared in regard to data models and distribution categories

	Ring	Master-Slave	Replication Based
Single Point Of Failure	none	master and slaves	unidirectional: the master otherwise: none
Consistency Model	tunable consistency	strict consistency	eventual consistency



uh
master and lookup dependency in sales force...can you convert from lookup to master or master to lookup something like that

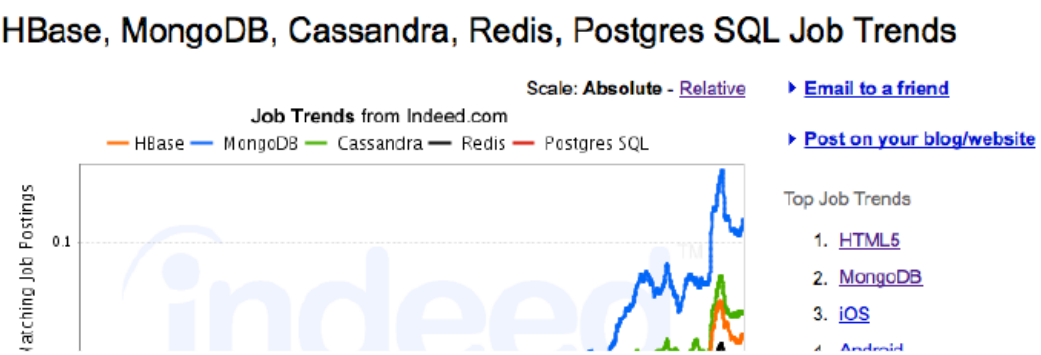
Poor Man's Multi-tenancy" on that diagram some question was there…

```
map(String key, String value):
  // key: document name
  // value: document contents
  for each word w in value:
    EmitIntermediate(w, "1");

reduce(String key, Iterator values):
```

Distributed Grep: The map function emits a line if it matches a supplied pattern. The reduce function is an identity function that just copies the supplied intermediate data to the output.

Count of URL Access Frequency: The map function processes logs of web page requests and outputs



Which is most trending out of these databases. Some thing like that.:MongoDB

Dynamo DB has which of the following replication model: Peer to peer
Dynamo DB - tunable consistency , high availability, vector locks

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Big Table

Optimized for Consistency

Key/Record (Column-Oriented)

Master-Slave Replication

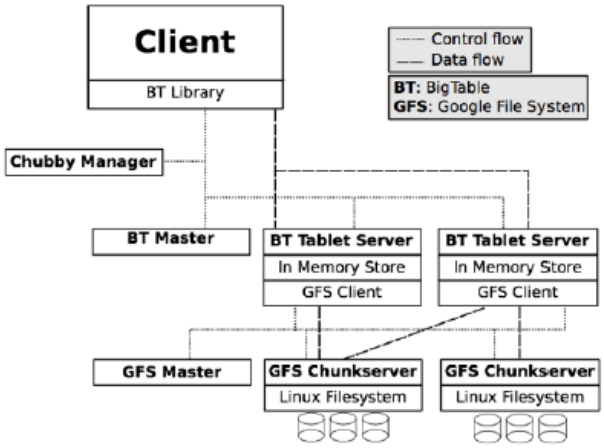
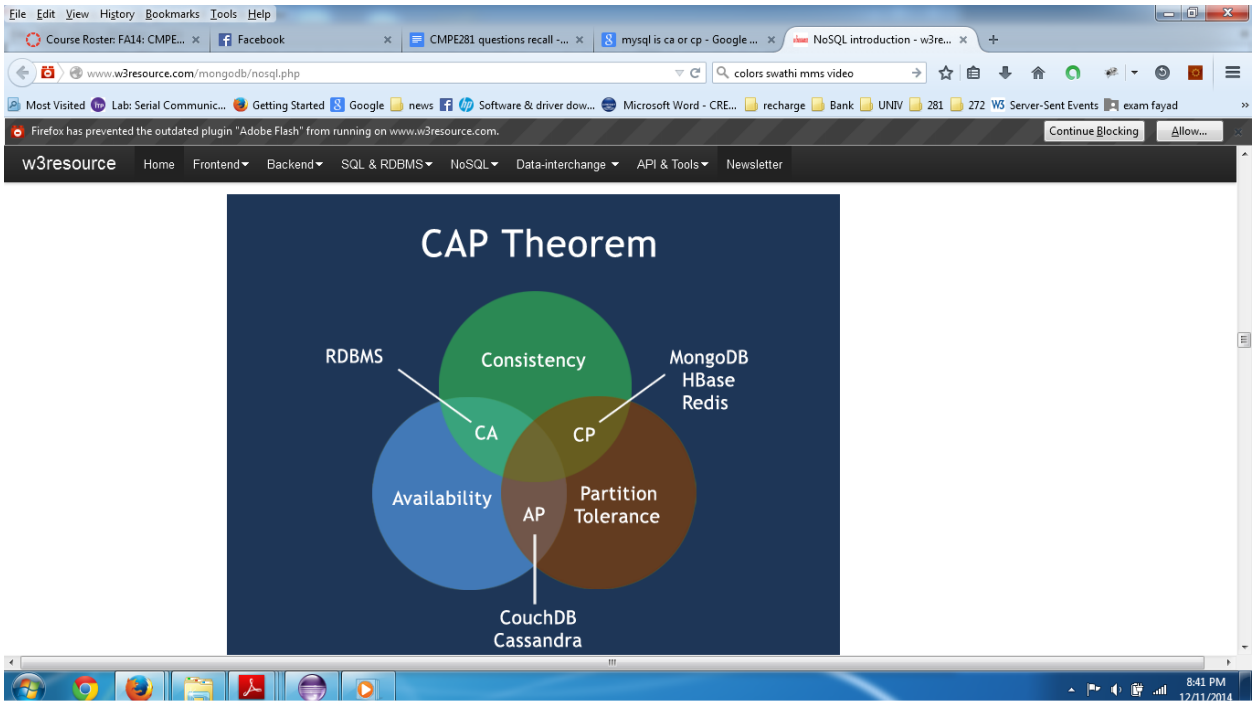


Figure 2.3: Architecture of Google BigTable: BigTable (BT) is created on top of two existing components: Google File System (GFS) and the Chubby lock service. While the control flow (dotted lines) is mainly between clients and the managers, the data (dashed lines) is transferred between the clients and the providers without the master



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Availability	write: always available read: maybe unavailable	maybe unavailable	unidirectional: Maybe unavailble bidirectional: always available
Data Access	range scans make no sense (if randomly placed)	range scans fast (same slave)	range scans fast (all data available)

Table 4.3: Differences of the categories which have been discussed above

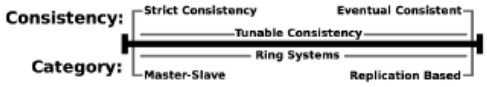

Figure 4.1: The categories introduced directly correlate with the consistency models they implement if put on a scale between strict consistency on the one side and eventual consistency on the other.

Distributions Models

- Single-Server — *-- Using NoSQL for Data Model*
- Master-Slave Replication — *-- Same Data is replicated from Master to Slaves. Master services all Writes. Reads services from Masters or Slaves.*
- Sharding — *-- Different Data is on separate nodes, each of which does its own Reads and Writes.*
- Peer-To-Peer Replication — *-- All Nodes services Reads and*

Tenant isolation:
Functional:data,views,behavior
Operational:security,performance,availability