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Group Members: 1**

**Final project reviews (order by dates)**

Nov 21

Title: Distributed Databases Overview and Benchmarcking

Student Name: Nicholas Torres, Wenbing Tang

Oral Presentation (0-5) 4

Visuals (0-5) 5

Overall (0-5) 5

Summary of Presentation:

HBase is a distributed, column-oriented, open source database based on Google's article "Bigtable: A Distributed Storage System for Structured Data" by Fay Chang. Just as Bigtable takes advantage of the distributed data storage provided by Google's File System, HBase provides Bigtable-like capabilities over Hadoop. HBase is a subproject of Apache's Hadoop project. HBase is different from the general relational database, which is a suitable database for unstructured data storage. Another difference is that HBase is based on a column rather than a row-based model.

Title: A vista of B-tree locking mechanisms

Student Name: Pedro Soto

Oral Presentation (0-5) 5

Visuals (0-5) 5

Overall (0-5) 5

Summary of Presentation:

B-trees are a ubiquitous data structure that are a generalization of a binary tree. Ramsey theory of SQL, NoSQL, and the compute R (5,5) algorithm.

Nov 28

Title: Storage & Management of 3D Geometric Models

Student Name: Adnan Maruf Liqun Yang

Oral Presentation (0-5) 5

Visuals (0-5) 5

Overall (0-5) 5

Summary of Presentation:

Geometric Models, model file viewer and 3D objects, encoder to decoder, SQL-GC theory, the various ways of modeling with SQL.

Title: A survey of semi-structured and unstructured data storage, maintenance and analysis

Student Name: Wentao Wang, Bingqian Li

Oral Presentation (0-5) 4

Visuals (0-5) 5

Overall (0-5) 5

Summary of Presentation:

Data category to structured, semi-structured, non- structure. Analyzing bug reports can help engineers quickly find the useful information, which will be helpful for maintaining the system.

Nov 30

Title: Cassandra- A decentralized distributed System

Student Name: A K M Iqtidar Newaz

Oral Presentation (0-5) 4

Visuals (0-5) 4

Overall (0-5) 4

Summary of Presentation: Cassandra is a hybrid non-relational database, similar to Google's BigTable. Its main function is richer than Dynamo (distributed Key-Value storage system), but the support is not as good as document storage MongoDB (open source products between the relational database and non-relational database, is the most feature-rich among the non-relational database, the most Like a relational database, the supported data structures are very loosely bounded by the json bjson format so that you can store more complex data types. Cassandra was originally developed by Facebook and later turned into an open source project. It is an ideal database for online social cloud computing. Based on Amazon's proprietary fully distributed Dynamo, Google BigTable's Column Family-based data model is combined. P2P decentralized storage. In many ways can be called Dynamo 2.0.

Title: The Status Quo and Trend Research of Database Security

Student Name: Ruizhang Zou

Oral Presentation (0-5) 5

Visuals (0-5) 5

Overall (0-5) 5

Summary of Presentation: Databases hold the majority of the world's relational data, and are attractive targets for attackers seeking high-value targets for data theft. This research may call more attention to protect the data in the database. Database security refers to the collective measures used to protect and secure a database or database management software from illegitimate use and malicious threats and attacks. It is a broad term that includes a multitude of processes, tools and methodologies that ensure security within a database environment. Database security covers and enforces security on all aspects and components of databases, includes: Data stored in database, Database server, Database management system (DBMS), other database workflow applications. In cloud computing time, we will face traditional threats and some new troubles from cloud database. We may need more and greater professional security measures providing organizations like CSA. These organization work on finding out problems on the cloud and coming up with measures, providing security service.

Title: A Framework for Distributed Transactions over RESTful Services

Student Name: Li Li

Oral Presentation (0-5) 4

Visuals (0-5) 5

Overall (0-5) 5

Summary of Presentation: A well test Java framework, and a technical document about it. REST (Representational State Transfer), Representational State Transfer, is a kind of software architectural style for network application development, which is to meet certain architectural constraints. REST includes the following guidelines: everything on the network is abstracted into resources; each resource corresponds to a unique URI; resources are operated through a common interface; operations are stateless RESTful Web Services, which is Web services based on REST and HTTP implementations define URIs, the operation of resources, and supported MIME types as they are implemented. JAX-RS, or JSR311, is a set of APIs that help implement RESTful Web Services, and Jersey is its reference implementation.

Dec 5

Title: A Survey of DBMS Performance Improvements: B-Trees vs. Skip-Lists

Student Name: Richard Rodriguez Qiulin Zhang Juan Wang

Oral Presentation (0-5) 5

Visuals (0-5) 5

Overall (0-5) 5

Summary of Presentation:

B-tree: most commonly used they do fewer disk I/O operations to run a lookup compared to other balanced trees. Skip-List: use probabilistic balancing rather than strictly enforced balancing easy to implement, extend and modify

Title: A Survey on IDS for DBMS

Student Name: Abbas Acar, Leonardo Babun, Amit Kumar Sikder

Oral Presentation (0-5) 5

Visuals (0-5) 5

Overall (0-5) 5

Summary of Presentation (at least 1 paragraph)

Comments: IDS methods on DBMS. Real-time intrusion detection in the process of network connection, the system based on the user's historical behavior model stored in the computer expert knowledge and neural network model to determine the current operation of the user, once found signs of invasion immediately disconnect the intruder and the host connection , And collect evidence and implement data recovery. The testing process is constantly cycling. The intrusion detection is carried out by the network administrator with network security expertise. It is performed by the administrator regularly or irregularly and has no real-time capability. Therefore, the capability of preventing intrusion is not as good as real-time intrusion detection system.

Dec 7

Title: Designing a Webpage to Query from a Database

Student Name: Sara Wilson

Oral Presentation (0-5) 5

Visuals (0-5) 5

Overall (0-5) 5

Summary of Presentation: Designing a Webpage to Query from a Database

Title: Encryption on the Cloud: Mapping Relational Algebra to Leakage Channels

Student Name: Mireya Jurado

Oral Presentation (0-5) 5

Visuals (0-5) 5

Overall (0-5) 5

Summary of Presentation: CryptDB: Equality Queries, Queries on Order Relations. Channel-Quantifying information Leakage: Plaintext values, use combinatorics. Bayes Capacity, maximum leakage over all priors π.Multiplicative g-leakage, upper bound for any prior and any gain function. Basic query, Frequency analysis attack.