SCS2109
Database Management II

Syllabus

Course Content

1) Use access control to secure relational databases
   1.1) Introduction to DB security issues (Pg 836)
   1.2) Discretionary Access control based on granting and revoking privileges (Pg 842)
   1.3) Role Based access control (pg 851)

2) Explain transaction processing and constraints
   2.1) Introduction to transaction processing (pg 744)
   2.2) Serializability (pg 759)
   2.3) Transaction support in SQL (pg 770)

Course Content

3) Write stored procedures, constraints and triggers in SQL
    - 3.1) Constraints & Triggers (pg 132, 933)
    - 3.2) Database Stored Procedures (473)

4) Describe indexing methods
    - 4.1)Types of single level ordered indexes (pg 632)
    - 4.2) Multilevel indexes (pg 643)

5) Explain object relational mapping
    - 5.1) Overview of object DB concepts (pg 355)
    - 5.2) object relational features (pg 369)

6) NoSQL Data Stores

Learning Objectives of the Course

- Use access control to secure relational databases
- Explain transaction processing and constraints
- Write stored procedures and triggers in SQL
- Describe indexing methods
- Explain object relational mapping

Rubrics

- **70% Final Examination**
- **30% Assignments**

- **Reference**
- Fundamentals of Database Systems (6th Edition) RamezElmasri , ShamkantNavathe
- NoSQL Distilled, by Martin Fowler and Pramod Sadalage (http://martinfowler.com/books/nosql.html)

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