Database Management System

Lecture 5

DDL and DML

Today's Agenda

- DDL – Data Definition Language

- DML – Data Manipulation Language

Database Language Commands

Database Language Commands

- DDL – "Data Definition Language"

    - Schema-level commands

- DML – "Data Manipulation Language"

    - Row-level commands

DDL – Data Definition Language

- Create, edit, or delete database objects

    - Tables

    - Stored Procedures

    - Data Types

    - NOT ROWS!

- Drop Table

DROP TABLE table_name;

- Create Table

CREATE TABLE table_name (attributes...);

DDL – Data Definition Language

- Alter table:

ALTER TABLE table_name

* Plus any of the following:
[ADD COLUMN]
[ALTER COLUMN]
[DROP COLUMN]
[ADD CONSTRAINT]
[DROP CONSTRAINT]

DML – Data Manipulation Language

- Inserting, Updating, or deleting rows

- Deleting rows

DELETE FROM Students
WHERE FirstName LIKE 'B%';

- Note: This query potentially delete multiple Students

DML – Data Manipulation Language

- Inserting rows:

INSERT INTO Student (ID, FirstName, LastName)
VALUES (4,'Sue','Smith'),
        (6,'John','Jones');

INSERT INTO Patient (ID, FirstName, DateOfBirth)
SELECT ID, Fname, DOB
FROM Transfers
WHERE Status = 1;

DML – Data Manipulation Language

- Updating rows:

> UPDATE TABLE Student
> SET FirstName = 'Jane',
> DateOfBirth = AddDays(DateOfBirth, 1)
> WHERE ID = 555;

- This will change the FirstName and DateOfBirth for the Student with ID 555

Be Prepared for Exam

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    - Relational Algebra

    - ER Model

    - ER to Relation

    - Normalization

    - DDL and DML