SIMON FRASER UNIVERSITY
THINKING OF THE WORLD

BUS 464 - Business Data Management

Nilesh Saraf
Beedie School of Business

Data Models

Entity Relationship Diagram: This modelling is used for capturing normalized data, typically by Transaction Processing Systems
Dimensional Model: These models are used to represent how raw data is aggregated at a higher level of abstraction for understanding patterns and for decision-making

Entity Relationship Diagram

Single Entity
Two entities with 1:M relationship
Two entities with M:M relationship
Recursive relationships
Modelling history
Temporal data
Spatial data

In continuation with BUS 362

Structured Query Language on MySQL

Creating a single table
Importing data into a single table
Creating two tables linked wit a FK
Importing data into two tables
Adding a PK to an existing table

Visualization Software

OLAP using Microstrategy
Graphs using R
Social network data using Pajek

SQL Constructs

Data Definition Language - CREATE, DROP, ALTER
Data Manipulation Language - SELECT, INSERT, UPDATE, DELETE
Data Control Language - GRANT, REVOKE

Dimensional Models

In continuation with BUS 462

Star schema
Snowflake schema

Extract, Transform and Load using SQL

Populating a data mart using transactional data
Querying a data-mart with ROLLUP

Database Client/Server

MySQL Workbench
MySQL Server
Teradata

Queries

Subqueries and joins

Database

Sakila
Pine Valley Furniture
Employees
Adventureworks

Queries

Correlated sub-queries

Queries

Aggregate functions

Queries

Universal quantifiers

New Data Processing Paradigm

Hadoop/MapReduce

Term Project

Transactional Databases ➔ Analytical Database

LaTeX TikZposter