Lesson 02: Database Design

CS 393: Database Systems

# Lesson Overview

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| **Topic** | **Timing** | **Key Ideas** |
| Review | ~10 minutes | Entities, Attributes, Tables, DBMS |
| Design Diagrams I | ~20 minutes | Identifying table name, column name, data types, relationships, cardinality & participation |
| In Class Exercise | ~10 minutes | Diagram two related entities with three attributes each |
| Design Diagrams II | ~20 minutes | Basic database design principles, crow’s foot |
| In Class Exercise II | ~10 minutes | Diagram 4 related entities with three attributes each, follow design principles |
| Draw.io | Remainder | Use in-class scenario to diagram using draw.io |

## Required Readings

* DS 12.1 – 12.3, 12.5, 12.6
* [Chapter 8 The Entity Relationship Data Model – Database Design – 2nd Edition (opentextbc.ca)](https://opentextbc.ca/dbdesign01/chapter/chapter-8-entity-relationship-model/)

## Supplementary Reading

* [How To Design ER Diagrams Online For Rails and Relational SQL Database Tables - YouTube](https://www.youtube.com/watch?v=chrwT-qe_M8)
* [Appendix B Sample ERD Exercises – Database Design – 2nd Edition (opentextbc.ca)](https://opentextbc.ca/dbdesign01/back-matter/appendix-b-erd-exercises/)

# Lesson Objectives & Assessment

* Interpret a design diagram
* Convert a design diagram into a sentence
* Convert a sentence into a design diagram
* Apply best practices to design diagrams

# Lesson Plan

## Timeline

## Comments