

San José State University  
Department of Computer Science

CS/SE 157B

Section 3

# Database Management Systems II

Spring 2018

Instructor: Ron Mak

## Assignment #3

**Assigned:** Thursday, March 1

**Due:** Friday, March 9 at 11:59 pm

Team assignment, 100 points max

### Dimensional model and star schema

This assignment will give your team experience designing and creating a star schema for a dimensional data model.

### Requirements

Create a star schema for a dimensional model based on your team's relational schema. Your model should have at least 4 dimension tables and 2 fact tables. At least one fact table should be detailed, and at least one other fact table should be aggregated. Use ERDPlus to draw your star schema.

In a short report, include a diagram of your operational tables and describe how your dimension and fact tables are populated from your operational tables. For this assignment, your dimensional model can contain data that don't come from your operational tables (i.e., you can generate some artificial data).

Put some sample data into your dimension and fact tables. Create at least one query per fact table that joins with your dimension tables. Describe each query in words: What analysis does it accomplish? Write and execute the SQL, and include a screen shot or text file of the query results.

## What to turn in

Create a zip file named after your team (e.g., **Supercoders.zip**) that includes:

- A short report containing:
  - The relational schema of your operational database.
  - The star schema of your dimensional model.
  - Description of how your dimension and fact tables are populated from your operational tables.
  - Description in words of the analysis behind your queries of the fact tables.
  - The SQL of the queries of the fact tables and their results.
- A dump of your MySQL/MariaDB implementation of your dimensional model.

Submit into Canvas: **Assignment #3**

## Rubrics

Criteria	Max points
<b>Dimensional model</b> (star schema created with ERDPlus) <ul style="list-style-type: none"><li>• Two fact tables</li><li>• Four dimension tables</li><li>• Description of how your dimension and fact tables are populated</li><li>• Description of the analysis behind the queries of the fact tables</li><li>• SQL of the queries and their results</li><li>• Database dump</li></ul>	<b>95</b> <ul style="list-style-type: none"><li>• 20</li><li>• 40</li><li>• 10</li><li>• 10</li><li>• 10</li><li>• 5</li></ul>
<b>Relational model</b> (schema of your operational database)	<b>5</b>