

Assignment 8 -Database Design III (4% of total grade)

Format: Upload the provided .xlsx file to Blackboard (under ASSESSMENTS & TOOLS > Assignments > Database) to BlackBoard.

BE SURE TO PUT YOUR NAME IN THE FILENAME:

e.g. DB-Assign_6-DatabaseDesign-YOURNAME-23F.xlsx

Purpose: To practice database normalization concepts by applying first normal form 1NF, second normal form 2NF and third normal form 3NF.

Requirements: Submit the DB-Assign_8-DatabaseDesign-YOURNAME-23F.xlsx

Part 1: Normalize Data Set. (3%)

A . You are given 2 weeks of a library schedule for librarians. The data will start on Monday this week. A value of 1 in the **shift column** means the librarian will work in the morning. A value of 2 means afternoon. The shift times are variable.

In the excel sheet, normalize this data set by creating tables by applying 1NF, 2NF and 3NF. Show your work for each step. If required, you can add data, alter data, format and add columns to illustrate each normalization step.

Tables should have:

- Minimized duplicate data
- no one-to-one relationships
- no many-to-many relationship without a bridging table
- table for each entity (person, place, thing, event)
- 1 piece of data per cell
- Data integrity with constraints and referential actions
- Data types

B: Write SQL statements to create a new database and tables with filled data. Add your queries to the **second tab (queries)** of the xlsx file

Part 2: Query your database (1%)

Write 2 SQL queries in the **second tab (queries)** of the .xlsx file that answer the following questions:

- (1) What are the names and shifts of the librarians working on Mondays?
- (2) What is Beverly Cleary's assignment for the day?