CSCI UA.0060 Spring 2024

Assignment 3 – Normalization

Deliverables

Upload a document with the answers to the questions below (can be Word, Excel, Powerpoint or PDF) to the Github repository for this assignment.

Filenames should be FirstInitialLastName-Ass3.pdf or xlsx. For example, John Smith’s file could be JSmith-Ass3.pdf

Overall Requirements

This assignment will give you more practice on Normalization. There are three exercises. In each one, you must first show all the data in one table. This table might be in 1NF, 2NF or 3NF (unlikely!!) or might not be in a Normal Form at all.

For each exercise, make sure you show each step of the process. Don’t just show what the table(s) look like at the end of the process.

In each iteration, make sure that fields that are part of a PK are shown in a bold underlined font. For the 3NF version, make sure that FKs are italicized (including FKs that are also part of a PK).

Specific Requirements

1. The following is a handwritten Parts Order Form for a local Supply company. The plan is to replace the manual processes at the company with an application and database. Answer the questions shown below:



* 1. State any assumptions that you make about the data and the attributes shown.
  2. Describe and illustrate the process of normalizing the attributes shown in this form.
  3. Identify the primary keys at each step of the normalization process and both the primary and foreign keys in your 3NF relations.
  4. Ensure that the 3NF relations are named.

Please note that you should not add any additional fields when performing the normalization process, including surrogate keys.

The names of all the relations and attributes must conform to the class naming convention, including use of case and singularity.

1. The table shown below lists sample therapist/appointment data for the Panacea Mental Health Corporation. A patient is given an appointment at a specific time and date at a particular branch with one therapist. Therapists only see patients at one specific branch on any given day.



* 1. State any assumptions you make about the data and the attributes shown in this table.
  2. Describe and illustrate the process of normalizing the table to 3NF relations.
  3. Identify the primary keys at each step of the normalization process and both the primary and foreign keys in your 3NF relations.
  4. Ensure that the 3NF relations are named.

1. The Maid Better temp agency supplies help to Event Management companies within the New York area . Below is a table with representative data for staff working at different events. The Employee Number (eNo) is unique for each member of staff.



* 1. State any assumptions you make about the data and the attributes shown in this table.
  2. Describe and illustrate the process of normalizing the table to 3NF relations.
  3. Identify the primary keys at each step of the normalization process and both the primary and foreign keys in your 3NF relations.
  4. Ensure that the 3NF relations are named.

Grading Rubric

See Brightspace for Grading Rubric