

INST 327 – Database Design and Modeling

Assignment 3b - Due: Wednesday, April 8, 2019, 11:59 PM

Question

Q.1) (50 points)

Normalize the un-normalized table given below through 1NF, 2NF and 3NF. Show the normalization process in a file (e.g., creating tables and drawing lines in Microsoft Word), save as a .pdf file, and submit it through the link available on Canvas. Name your file according to this scheme: *yourlastname_a3_movies.pdf*. The presentation of your normalization process should follow the work done during the normalization class exercise. The diagram of your normalization process must follow the layout of the solution to the extra exercise that has been provided in Canvas.

In order to complete this assignment successfully, please keep in mind the following points as you work on the normalization case:

- Normalize the flat table through each of the 1NF, 2NF and 3NF separately and in sequence.
- Make sure that you cover each normalization step (1NF, 2NF, 3NF) **separately, explicitly, and in sequence.**
- Do not skip any normalization steps.
- In each normalization step, you should only resolve the issue(s) that pertain to the given step. (For example, do not resolve transitive dependencies in 1NF or 2NF, as transitive dependencies are 3NF business.)
- In each step, list all of the tables, including those do not change in the given step.
- Identify and show primary keys and foreign keys in each step.
- Show the relationships between the tables in each form (by drawing lines/arrows between corresponding PKs and FKs).
- The sample records are for your reference only to help you understand the nature of each field. You do not need to include them in your work.
- Hint: Note that there are **two** groups of repeating fields in this un-normalized table.

Movies Table

Field	Sample Record
Movie ID Number	143
Movie Title	Godfather
Movie Genre	Drama
Movie Length	175
Production Company Name	Paramount
Production Company Address	5555 Melrose Ave., Hollywood, CA 90038
Production Company Phone No.	(323) 956 5000
Production Company Website	http://www.paramount.com
Actor/Actress 1 First Name	Marlon
Actor/Actress 1 Last Name	Brando
Actor/Actress 1 Role	Don Vito Corleone
Actor/Actress 2 First Name	Al
Actor/Actress 2 Last Name	Pacino
Actor/Actress 2 Role	Michael Corleone
Actor/Actress 3 First Name	Diane

Actor/Actress 3 Last Name	Keaton
Actor/Actress 3 Role	Kay Adams Corleone
Showing at Theater 1 Name	Bethesda 10
Theater 1 Address	7272 Wisconsin Ave., Bethesda, MD 20814
Theater 1 Phone Number	(301) 718 9449
Showing at Theater 2 Name	Rockville Stadium 13
Theater 2 Address	199 East Montgomery Ave., Rockville, MD 20850
Theater 2 Phone Number	(301) 340 9390
Showing at Theater 3 Name	Germantown Stadium 14
Theater 3 Address	20000 Century Blvd., Germantown, MD 20874
Theater 3 Phone Number	(301) 916 4435