



MILESTONE 5 – DATA MODEL NORMALIZATION

Synopsis

n this milestone you will normalize the data model created in Milestone 4, along with additional data requirements, to be in third normal form.

Objectives

After completing this milestone, you should be able to:

⇒ Normalize a logical data model to remove impurities that can make a database unstable, inflexible, and non-scalable.

Prerequisites

- 1. Data analysis Chapter 8
- 2. Milestone 4 Solution

Assignment

The goal of this project is to normalize our logical data model to remove impurities that can make a database unstable, inflexible, and non-scalable.

Activities

- 1. To construct an Entity Relationship Diagram to be in 3rd Normal form, follow the normalization procedure outlined in Chapter 8 of the SADM 7th ed. textbook. Use feedback from your the ERD solution of Milestone 4 as well as the data dictionary provided at the end of this milestone to prepare the new data model.
- 2. Specify all data types (your instructor will specify the target database or allowable set of data types).
- 3. Specify all primary and foreign keys.
- 4. Specify which attributes are required (not nullable).
- 5. Add and normalize additional entities and attributes as directed by your instructor. Make assumptions where necessary.

Deliverable format and software to be used are according to your instructor's specifications. Deliverables should be neatly packaged in a binder, separated with a tab divider labeled "Milestone 5".

References:

Previous Milestone Solutions

Provided by your instructor

Data Attribute Dictionary

Provided at the end of this milestone

Refer to a Copy of Your Fully Attributed Data Model Created for Milestone 4.

Deliverables:

Logical Data Model in 3 ¹⁴ Normal Form:	Due://_ Time:
Milestone's Point Value:	

Data Attribute Dictionary

Below is a Data Attribute Dictionary that contains all the attributes and definitions. Note: the attributes below are listed in alphabetical order, not by entity.

ContactStreetAddr	A 50-character alphanumeric field holding an emergency contact person's street or box address.
ContactCity	A 25-character alphanumeric field holding an emergency contact person's city.
ContactState	An emergency contact person's state.
ContactZip	An emergency contact person's zip code.
ContactHomePhone	An emergency contact person's home phone number.
ContactrWorkPhone	An emergency contact person's work phone number.
ContactLastname	A 30-character alphanumeric field holding an emergency contact
ContactEustrame	person's last name.
ContactFirstname	A 25-character alphanumeric field holding an emergency contact person's first name.
ContactMidname	A 25-character alphanumeric field holding an emergency contact person's middle name.
EmpID	A unique, sequentially-assigned identifier for an employee of up to 5 digits.
EmpFirstname	A 25-character alphanumeric field holding an employee's first name.
EmpLastname	A 30-character alphanumeric field holding an employee's last name.
EmpMidname	A 25-character alphanumeric field holding an employee's middle name.
EmpNickname	A 25-character alphanumeric field holding an employee's nickname.
EmpSSN	An employee's Social Security Number.
EmpHomePhone	An employee's home phone number.
EmpStreetAddr	A 50-character alphanumeric field holding an employee's home street or box address.
EmpCity	A 25-character alphanumeric field holding an employee's home city.
EmpState	An employee's home state.
EmpZip	An employee's home zip code.
EmpDOB	An employee's date of birth.
EmpMaritalStatus	An indicator of an employee's marital status.
EmpOfficePhone	An employee's office phone number
EmpSup	The EmpID of an employee's supervisor
EmpJobTItle	A 50-character alphanumeric field holding an employee's job title.
EmpAnnualSalary	The amount of yearly salary for a salaried employee.
EmpHourlyWage	The amount of hourly wage for an hourly employee.
EmpMaxWkHours	The maximum number of hours per week that an hourly employee is scheduled to work.
EmpContractHourlyWage	The amount of hourly wage for a contract employee.
EmpPermEmployer	A 75-character alphanumeric field holding the name of a contract employee's permanent employer.

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DeptID	A 4-character alphanumeric field holding a department name
	abbreviation.
DeptName	A 30-character alphanumeric field holding the full department name.
RoomNum	A 4-character alphanumeric field holding a room's number.
MailStop	A 3-character alphanumeric field holding a mail stop
BldgID	A 3-character alphanumeric field holding a building name abbreviation.
BldgName	A 30-character alphanumeric field holding the full building name.
DedRequestDate	The date of a miscellaneous deduction request.
DedName	A 50-character alphanumeric field holding the name of a miscellaneous
	deduction.
DedAmount	The dollar amount of a miscellaneous deduction.
DedFrequency	A 10-character alphanumeric field indicating how often a miscellaneous
	deduction will be deducted.
UWYear	The calendar year for a United Way contribution.
UWType	An indicator for the United Way contribution type.
UWAmount	The dollar amount of the United Way contribution.