# Lab – Data Normalization - Logical Database Design

In this lab you will apply the normalization techniques in class to create 4 logical model diagrams in Visio.

## Learning Objectives

* Define data normalization
* Explain why data normalization is important
* Explain how normalization helps reduce redundancy and anomalies
* Solve data anomalies by transforming data from one normal form to the next; to the third normal form
* Apply normalization with data modeling to produce good database design

### Lab Goals

Our lab goals are to:

1. Practice Data Normalization
2. Learn to build Logical models in Microsoft Visio from Normalizations

You will accomplish this by drawing the 4 diagrams from the previous lab as logical models. Draw each logical model in its own Visio document and hand in all 4 diagrams by FTPing them to your account space on the ISTSTUDENTS server. To submit in the learning unit assessment, paste the URL to the Visio file in the text box of the LUA.

### What you will need to begin

1. A copy of Microsoft Visio 2003 (or higher)
2. Access to your FTP account on ISTSTUDENTS (same logon and password as you use for SQL Server) For handing in each of your diagrams (or hand them in on paper if your instructor asks you to do so).

## Part 1: Normalize These

### Instructions

For each of the following, you will create 4 visio model diagrams showing your normalization progressions from 0NF up to 3NF. You instructor has provided a sample visio template for this purpose, containing the 4 tabs, like this:  
  


Be sure to show the normalization of the data model at each step, in each of the corresponding tabs, as we did in class.

### Exercise 1 (lab10ex1.vsd)

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### Exercise 2 (lab10ex2.vsd)



### Exercise 3 (lab10ex3.vsd)



### Exercise 4 (lab10ex4.vsd)



### Exercise 5 (lab10ex5.vsd)

