



DAT251x

Introducing Data Modeling

Lab 01 | Lab Setup

Estimated time to complete this lab is 10 minutes

Overview

In this lab, you will be collecting or installing applications in preparation for working on future labs.

Getting Started

Labs in this course may be completed using just hand written or drawn models. However, you may want to use desktop applications or specialized drawing tools to make modifying lab results easier.

If you choose to hand-draw or write to complete any of the labs, we recommend graph paper and a pencil to help you with laying out diagram objects and making corrections and enhancements.

Labs

For Lab 2 – Normalizing Data, you’ll be making lists of entities and attributes. No diagramming will be required. You can list the entities and attributes on paper or use a spreadsheet to help you organize your lists, as in *Exhibit 1 - Entity Attribute List* below.

	A	B
1	Entity	Attribute
2	Location	Location Code
3		Facility Code
4		Name
5		Status Code
6		Coordinates
7		
8	Customer	Customer ID
9		Given Name
10		Other Name
11		Family Name
12		Nickname
13		Salutation Code
14		
15		
16		

Exhibit 1 - Entity Attribute List

For Lab 03 – Designing Logical Data Models and Lab 04 – Designing Physical Data Models, you will be producing an Entity Relationship Diagrams. You may hand-draw these diagrams, if that works best for you.

An easier option may be to continue attributing the entities in a spreadsheet, then print and cut out the entities, apply them to paper, then draw the relationships between them. Be sure to leave some rows in your entities for adding foreign keys or new attributes you discover as you do this exercise. See *Exhibit 2 - Entity and Attribute List with Datatypes, Keys and NULLs* for an example.

As you begin Lab 04 - Designing Physical Models, you can copy your Lab 03 Designing Logical Data Models worksheet as a start for your Physical Data Model tasks.

	A	B	C	D	E
1	Entity	Attribute	Key Type	Datatype	Null
2	Location	Location Code	PK	Character(10)	NOT NULL
3		Facility Code	FK	Character(10)	NOT NULL
4		Name		Character(50)	NOT NULL
5		Status Code	FK	Character(4)	NOT NULL
6		Coordinates		Character(50)	NULL
7					
8					
9					
10					
11					
12	Customer	Customer ID	PK	Character(10)	NOT NULL
13		Given Name		Character(50)	NULL
14		Other Name		Character(50)	NULL
15		Family Name		Character(50)	NOT NULL
16		Nickname		Character(50)	NULL
17		Salutation Code	FK	Character(6)	NULL
18		Birth Date		Date	NULL
19					
20					
21					
22					
23					
24					

Exhibit 2 - Entity and Attribute List with Datatypes, Keys and NULLs

Optional Setup

If you have experience using data modeling or database design tools, you may want to install trial or community editions of specialized applications. Support for these tools is not provided as part of this course; however, you can find more information about getting started with third-party data modeling tools at www.datamodel.com/gettingstarted.