Dr. Stefan Brass
School of Information Sciences
University of Pittsburgh

January 12, 2000

INFSCI 2710 "Database Management"
— Homework #1: ER-Model —

Reading Assignment:

Please read the following chapters from the book by Elmasri and Navathe (3rd Edition):

- Chapter 1, "Databases and Database Users" (19 pages)
- Chapter 2, "Database System Concepts and Architecture" (17 pages)
- Chapter 3, "Data Modeling Using the Entity-Relationship Model" (33 pages)

Actually, you should have read Chapter 1 and 2 already.

Exercise 1 — 10 Points

Suppose a group of people wants to collect useful web links. Please develop an entity-relationship schema for a database containing the following information:

- For each member of the group, we want to store first name, last name, and the email address.
- For each web page (link), we want to store the URL, and the title of web page.
- We want to manage several collections of web links, each collection dedicated to one topic e.g. one about Oracle and another one about SQL Server. For each such topic, we want to store the name of the topic, and the group member who created the topic ("topic manager").
- For each web page in our database, we want to store to which topic (or topics) it belongs.
- Members can vote on the quality of web pages by assigning them between 0 points ("trash, remove from this collection") and 10 points ("great, I really love this page"). Members can disagree on the quality of a page, e.g. one rates a page 5 while another member rates the same page 8. So potentially, we have to store the points for every combination of member and web page. However, not every member has to vote for every page.

You do not have to specify data types for the attributes. Also, you do not have to specify keys and cardinalities (since we have not yet treated them in class). You may submit handwritten diagrams, but please make sure that everything is readable.

Due Date:

Please submit your solution on next Wednesday (January 19) before the lecture.