Administrative
## Parts

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Technical Seminar  
Graduate Programs in Software  

Relational Database Design, Usage, and Implementation  

Tuesday thru Thursday, November 9-11, 1993  
8:00 A.M. to 4:30 P.M.  
University of St. Thomas - Minneapolis Campus  
1000 LaSalle Avenue  

This seminar will provide participants with an appreciation of the value of information, an understanding of how databases can produce information, and a clear concept of how relational databases can support the concepts of data modeling.  

Participants will learn how to effectively design a relational database that is manageably sized, responsive, user-friendly, accurate, and information-producing. Participants will learn how to manage data, how to determine what data should be stored, how data should be organized, and how to retrieve data accurately and efficiently.  

Participants will learn how relational database technology differs from older database technology, and will learn the current tools for relational modeling and database retrieval.  

This seminar is intended for:  
- the data processing professional who needs to design and implement a new relational database or improve an old one  
- the end-user who desires to design, implement, and administer a relational database  
- the technical manager who is about to undertake a major database design or re-design project  

The focus will be on a multi-user, shared, on-line resources.  

Lectures will be supplemented by a series of design, management, and implementation exercises. These in-class laboratory exercises will occupy approximately 20% of the seminar.  

Participants should have prior experience dealing with a collection of computerized data.  

This seminar will not cover the details of using and one particular relational database product nor concentrate on product reviews or comparisons.
After completing this seminar you should know:

- The concepts of data and information and how data produces information
- The identification procedure for entities and the procedure for determining their interrelationships
- The relational database model and how it differs from other database models
- How to construct logical data structures for modeling data
- How to construct a relational database starting from a logical data structure
- How to construct a relational database starting from an existing collection of data or existing “tables.”
- The advantages and proper use of relational models
- How to write simple queries in SQL to create, update, and retrieve data in a relational database
- How to present users with an appropriate “view” of the data
- The criteria for determining to what extent commercial database management systems are truly “relational.”
- How to tune a relational system for efficiency

Topics to be covered:

1. The Value of Information: Information, data and database concepts, the need for information-producing systems, data usage design goals, definition of an entity, and other terminology.
2. Database Models: Need for database approach, the major database management system models (flat file, indexed sequential, hierarchical, network, and relational), the importance of data independence and the complexities of multi-relational databases.
3. The Relational Database Model: Conceptual structure, terminology, relational operations, and elimination of redundancy.
5. Modeling using Logical Data Structures: Relating entities, attributes, and relationships; constraint modeling and enforcement; mapping logical data structures into well-formed relations.

About the Instructor

Dr. Thomas P. Sturm holds a Ph.D. in Computer and Information Science from the University of Minnesota with a specialization in large databases. He has been lecturing in the database area since 1971. He has done a wide variety of database design, implementation, and project management for clients such as 3M, the State of Minnesota, St. Paul Companies, and the University of St. Thomas.

Relational Database Design, Usage, and Implementation - $575 (includes tuition and course materials).
Registration deadline for this seminar is November 2, 1993.
Technical Seminar
Graduate Programs in Software

Relational Database Design and Usage

Tuesday and Wednesday, November 9-10, 1993
8:00 A.M. to 4:30 P.M.
University of St. Thomas - Minneapolis Campus
1000 LaSalle Avenue

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Participants will learn how to effectively design a relational database that is manageably sized, user-friendly, accurate, and information-producing. Participants will learn how to manage data, how to determine what data should be stored, how data should be organized, and how to retrieve data accurately.

Participants will learn how relational database technology differs from older database technology, and will learn the current tools for relational modeling and database retrieval.

This seminar is intended for:
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- the end-user who desires to design, implement, and administer a relational database
- the technical manager who is about to undertake a major database design or re-design project

The focus will be on a multi-user, shared, on-line resources.

Lectures will be supplemented by a series of design, management, and implementation exercises. These in-class laboratory exercises will occupy approximately 15% of the seminar.

Participants should have prior experience dealing with a collection of computerized data.

This seminar will not cover the details of using and one particular relational database product nor provide product reviews or comparisons.
After completing this seminar you should know:

- The concepts of data and information and how data produces information
- The identification procedure for entities and the procedure for determining their interrelationships
- The relational database model and how it differs from other database models
- How to construct logical data structures for modeling data
- How to construct a relational database starting from a logical data structure
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Fee

Relational Database Design and Usage $385
(includes tuition and course materials)
Registration deadline for this seminar is November 2, 1993.
Technical Seminar  
Graduate Programs in Software  

Relational Database Design  

Tuesday, November 9, 1993  
8:00 A.M. to 4:30 P.M.  
University of St. Thomas - Minneapolis Campus  
1000 LaSalle Avenue  

This seminar will provide participants with an appreciation of the value of information, an understanding of how databases can produce information, and a clear concept of how relational databases can support the concepts of data modeling.  

Participants will learn how to effectively design a relational database that is manageably sized, accurate, and information-producing. Participants will learn how to manage data, how to determine what data should be stored, and how data should be organized.  

Participants will learn the current tools for relational modeling.  

This seminar is intended for:  
- the data processing professional who needs to design and implement a new relational database or improve an old one  
- the end-user who desires to design, implement, and administer a relational database  
- the technical manager who is about to undertake a major database design or re-design project  

The focus will be on a multi-user, shared, on-line resource.  

Lectures will be supplemented by a series of design exercises. These in-class laboratory exercises will occupy approximately 10% of the seminar.  

Participants should have prior experience dealing with an extensive collection of computerized data.  

This seminar will not cover the details of using and one particular relational database product nor provide product reviews or comparisons.
After completing this seminar you should know:

- The concepts of data and information and how data produces information
- The identification procedure for entities and the procedure for determining their interrelationships
- How to construct logical data structures for modeling data
- How to construct a relational database starting from a logical data structure
- How to construct a relational database starting from and existing collection of data or existing “tables.”

Topics to be covered:

1. The Value of Information: Information, data and database concepts, the need for information-producing systems, definition of an entity, and other terminology.
2. The Relational Database Model: Need for relational database approach. The importance of data independence. Conceptual structure, terminology, relational operations, and elimination of redundancy.
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Fee

Relational Database Design  $195
(includes tuition and course materials)

Registration deadline for this seminar is November 2, 1993.
Relational Database Design

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University of St. Thomas  Minneapolis Campus  1000 LaSalle Avenue

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This seminar is intended for the data processing professional who needs to design and implement a new relational database or improve an old one; the end-user who desires to design, implement, and administer a relational database; or the technical manager who is about to undertake a major database design or re-design project.

After completing this seminar you should know the concepts of data and information and how data produces information; the identification procedure for entities and the procedure for determining their interrelationships; how to construct logical data structures for modeling data; and how to construct a relational database starting from either a logical data structure or an existing collection of data or existing “tables.”

$195 (includes tuition and course materials)  Register by November 2, 1993.
Formats Used

Normal
  Font: Times New Roman, 10 pt, English (U.S.), Flush left, Line spacing single
Normal Indent
  Normal + Indent: Left 0.5”
T-Text
  Normal + Font: 14 pt, Indent: Hanging 0.5”
Footer
  Normal + Tabs: 3” Centered, 6” right flush
Header
  Footer +
Footnote Text
  Normal + Font: 12 pt
S-Section
  Normal + Font: 40 pt, Bold, Centered
F-Top of Page
  S-Section + Font: 24 pt
A-Main Item
  Normal + Font: 22 pt, Indent: Hanging 0.5”, Tabs: 0.5”, 1”, 1.5”, 2”, 2.5”, 3”, 3.5”
B-MainItem Description
  A-Main Item + Font: 20 pt, Indent: Left 0.5”
C-Sub Item
  B-MainItem Description + Font: 18 pt, Indent: Left 0.25”
D-SubItem Description
  C-Sub Item + Font: 16 pt, Indent: Left 0.75”
P-Paragraph
  D-SubItem Description + Indent: Left 0.5”, First 0.5”
Materials Required

1. Student registration list
2. Tent cards
3. Notebooks
   3-ring binder
   materials printed two sides
   divider tabs with printed inserts
4. Loose supplemental handouts
   exercises
   solutions
   one-minute paper forms (one per student per day)
   evaluations
5. Blackboard or whiteboard
   Chalk or dry erase markers
6. At least 1, preferably 2 flip charts
7. Marking pens for flip charts
8. Overhead projector and screen
9. Transparencies
10. Transparency marking pens
11. Blank transparencies
12. Refreshments
13. Lecture room
14. Blank paper
15. Reference materials
   file folder of articles
   expanded course manual
16. Masking tape
17. Pointer
One-Minute Paper

1. What was the main point of today's lecture modules and labs?

2. What remaining, unanswered question do you have after today's work?
This questionnaire contains guidelines for expressing your assessment of the instructor and the seminar which you have attended. This evaluation will be used by the director of the MSDD Department and the instructor.

Thank you for your assistance.

PART 1: Give a rating of 1(lowest) to 5(highest) for each item, and make additional comments which would be useful to the evaluator:

<table>
<thead>
<tr>
<th>THE INSTRUCTOR</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Very Good</th>
<th>Excellent</th>
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<tbody>
<tr>
<td>1. The instructor was organized and prepared for class</td>
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<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>2. The instructor demonstrated a thorough knowledge and understanding of the topic</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>3. The instructor made clear the relevance and application of course materials and ideas</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. The instructor was able to communicate difficult concepts and ideas</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. The instructor stimulated thinking and discussion, where appropriate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>6. The instructor gave adequate examples and illustrations from outside the text</td>
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<td>2</td>
<td>3</td>
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<td>5</td>
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<tr>
<td>7. The instructor was enthusiastic about the subject matter</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>8. The instructor was interested in helping participants master the seminar and lab material</td>
<td>1</td>
<td>2</td>
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<td>5</td>
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<td>9. The instructor made participants feel free to express themselves both in and out of class</td>
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PART II: THE SEMINAR

1. The seminar was well-planned 1 2 3 4 5
2. Seminar objectives were made clear and the syllabus was followed 1 2 3 4 5
3. The seminar provided learning opportunities that supported the stated objectives 1 2 3 4 5
4. Lab exercises were useful 1 2 3 4 5
5. Handouts were useful 1 2 3 4 5
6. The seminar corresponded with the brochure description 1 2 3 4 5
7. Overall course quality 1 2 3 4 5

PART III: OTHER

1. What were the strengths of this seminar?

2. What were the weaknesses of the seminar and what recommendations do you have to improve this seminar?

3. What were the strengths of the instructor?

4. What could the instructor improve upon and what recommendations do you have to improve the quality of instruction?

5. Any other comments?
Relational Database Design
Seminar Evaluation

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<td>Instructor:</td>
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Please indicate the quality of each item below by marking an “x” in the square.

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<th>Fair</th>
<th>Good</th>
<th>Very Good</th>
<th>Excellent</th>
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<td>Knowledge of instructor</td>
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<td>Lab exercises</td>
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<td>Handouts</td>
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<td>Instructor availability in lab</td>
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<td>Overall course quality</td>
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<th>Generally</th>
<th>Yes</th>
<th>Yes, very much so</th>
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<tr>
<td>Did you feel properly prepared for this course</td>
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<tr>
<td>Did this course satisfy your personal or job requirements</td>
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<td>Did the instructor satisfactorily answer all of your questions</td>
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Why were you interested in taking this course?

What can we do to make this course better or more useful?

What are your general comments regarding this course?