

A.I.S. Class 18: Outline

- College Computing Stage 5
- Learning Objectives for Chapter 12
- Chapter 12 Summary
- Group Work for Chapter 12 (1)
- Group Work for Chapter 12 (2)
- College Computing
- CLASSROOM PRESENTATION 4

College Computing Stage 5

- Do we want Customer#, Vendor#, etc. to be numeric? Why? Will Autonumber be appropriate?
- Consider appropriate Coding Schemes
- Will Autonumber be appropriate for events?

Learning Objectives for Chapter 12

- After studying this chapter you should be able to:
 - ◆ use the General Systems Model to describe an information system for meeting the information needs relative to revenue business processes
 - ◆ identify a comprehensive set of information needs and user requirements for a database driven information system for revenue business processes
 - ◆ develop an extended entity relationship diagram depicting a data oriented view of revenue business processes

Learning Objectives for Chapter 12

- ◆ convert an extended entity relationship diagram of revenue business processes to tables for implementation in a relational database system
- ◆ construct a context diagram and a level 0 data flow diagram depicting a process oriented view of revenue business processes
- ◆ identify the tables and database forms that would be created to implement the data and process oriented models
- ◆ indicate how accounting views such as a sales journal and current accounts receivable can be generated in a relational database system

Learning Objectives for Chapter 12

- ◆ indicate how non-financial information needs can be met in a relational database system for revenue related business processes
- ◆ identify controls that should be implemented in a database system for revenue business processes
- ◆ indicate how a database system for revenue business processes can be audited using the features available in relational database systems
- ◆ adapt an existing database design to accommodate changes in users' needs and business rules

Chapter 12 Summary

- General Systems Model
- Information needs
- Revenue business processes
- REA modeling - EER
- REA modeling - data repository
- REA modeling - normalization
- DFD models
- ACCESS implementation
- Controls
- Auditing
- Change management

Group Work for Chapter 12 (1)

- The EER Diagram for Revenue Business Processes shown in Chapter 12 *in 1997* was a valid EER diagram - but it had not been designed by following the REA methodology we have been learning strictly
- Working in your groups, identify at least ten shortcomings of 1997's model *without referring to the current model in Chapter 12*
- Are there also errors in 1997's data repository structure? If so, what are they?

Group Work for Chapter 12 (2)

- Consider the Data Repository Structure for a Mail Order company handed out in class:
 - ★ What errors, if any, does it contain?
 - ★ Sketch an REA model for it
 - ★ How would you produce the various reports requested?

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■ DFDs

- ★ Tables/Data Stores not named consistently from one Step to another
- ★ Don't miss link tables on DFDs
- ★ Include "event" reports on Recording DFDs
- ★ Some useless/unnecessary reports generated
- ★ Some reporting processes lack sufficient data to generate the reports
- ★ Some tables in DFDs did not appear in Data Repository Structure
- ★ Some problems with sources for maintaining DFDs
- ★ Some confusion between (1) whom or where data comes from and (2) who enters it in the system
- ★ Raw Materials is NOT maintained when we acquire more, but when we stock a new material!!!

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■ Data Repository Structure

- * Generally, there were too few reference tables
- * Use the required format
- * Use our naming conventions (Camel Code and hyphens without spaces to show link tables – NOT underscores)
- * Concatenated key (in Link tables) still need to be underlined even when the parts are themselves foreign keys
- * {} cannot appear in tables in 1NF
- * Quantities often omitted from Link tables
- * Many groups did not include Prices in acquisition or sales data repositories
- * Many groups did not have enough information for College Computing to know how much to pay
- * Do we have enough data to depreciate Fixed Assets?
- * Do we have enough data to compute payroll deductions?

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■ Production Reports – some ideas

- ★ Production Schedule
- ★ Job Orders / Job Sheets
- ★ Materials Issued Forms
- ★ Production statistics
- ★ Work-In-Progress
- ★ Cost variances
- ★ Cost of goods manufactured

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- Service Reports – some ideas
 - ★ Service Orders
 - ★ Services Received
 - ★ Services Paid
 - ★ Service Accruals
 - ★ Checks
 - ★ Comparative Service Cost Analyses
 - ★ Analyzed Service Expenses
 - ★ Services Payable

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■ Finance Reports – some ideas

- ★ Loan Terms
- ★ Interest Expense
- ★ Loan Repayment Schedule
- ★ Loan Maturities Schedule
- ★ Checks
- ★ Short-term Loan Liabilities
- ★ Long-term Loan Liabilities

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■ Sales Reports

- ★ Some possibilities appeared in the slides for the last class . . .

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- REA Diagram - UML
- Data Repository Structure

CLASSROOM PRESENTATION

■ Group Project Stage 4

Finally . . .

- Classes will meet in Lab 003 on Wednesday November 9