

Module 08 - EER Modeling Business Intelligence



Course Outcome

At the end of this course, students will:

- Understand basic database concepts, including the structure and operation of the relational and non-relational data model, design principles, E-R diagrams, E-R modeling, data warehousing, client/server, and internet database environments
- Apply the concept of a database transaction and related database facilities, including concurrency control, journaling, backup and recovery, and data object locking and protocols.
- Analyze advanced database topics such as distributed database systems, data modeling techniques and the data warehouse.
- Evaluate administration and security issues, and three enterprise database management systems widely used by organizations.
- Create a database management and security plan for a database project.

Core Concepts

- Business Intelligence Architecture
- Business Intelligence Benefits and Evolution
- Business Intelligence Technology Trends
- Operational Data vs Decision Support Data

Activities

- The Muddiest Point
- Concept Test

- Discussion Board
- Hands-On Practice
- Programming Exercise
- Knowledge Check
- Team Project Final Report/ Final Presentation Announcement

Required Reading

Negi, M. (2019). Fundamental of Database Management System. BPB Publications. (ISBN: 9789388176620)

- Chapter 1: Fundamentals of Data and Database Management System

Additional

Manning, A. (2015). Databases for small business: essentials of database management, data analysis, and staff training for entrepreneurs and professionals. Apress. (ISBN: 9781484202784)

Coronel, C., & Morris, S. (2019). Database Systems: Design, Implementation, & Management. Cengage Learning. (ISBN: 9780357687536)

- Chapter 13 (Database Systems Design)

Silberschatz, A., Korth, H. F., & Sudarshan, S. (2019). Database System Concepts (7th Ed.). McGraw-Hill. (ISBN: 9780078022159)

MP08: The Muddiest Point

Q1: After reading the required reading, select only one key topic that you could not clearly understand or found confusing. If you understood everything and nothing needs further clarification, find one topic/concept that you found interesting.

Briefly describe the muddiest point or the most interesting point.

Your instructor will visit the collected topics and explain the muddiest topic(s) in class.

Q2: What does the OLAP tools in business intelligence provide?

1. Provides queries for multiple and diverse data sources to create integrated reports
2. Provides multidimensional data analysis
3. Provide advanced visual analysis and techniques to enhance understanding and create additional insight of business data and its true meaning
4. Provides advanced statistical analysis to uncover problems and opportunities hidden within business data

KC08: Knowledge Check

Question 1 (Mandatory) (2 points)

What is the main goal of business intelligence (BI)?

Question 1 options:

- ☐ Integrating architecture
- ☐ Advanced data analytics
- ☐ Improved decision making
- ☐ Generate a common user interface for data reporting and analysis

Question 2 (Mandatory) (2 points)

"These cloud-based services allow any corporation to rapidly develop a data warehouse store without the need for hardware, software, or extra personnel". What does the sentence refer to?

Question 2 options:

- ☐ Data storage improvements
- ☐ Business intelligence as a service
- ☐ Business intelligence appliances
- ☐ Big data analytics

Question 3 (Mandatory) (2 points)

Which of the following is the definition of "Master Data Management "(MDM)?

Question 3 options:

- ☐ It is a collection of concepts, techniques, and processes for the proper identification, definition, and management of data elements within an organization

Is an arrangement of computerized tools used to assist managerial decision making

Is a method or process of government

Is a quantifiable numeric or scale-based measurement that assesses the company's effectiveness or success in reaching its strategic and operational goals

Question 4

What does DSS stand for?

Data server Support

Decision Support System

Decision Structural System

Q5:

Which is correct about the Operational data?

Operational data focuses on a broader time span, high level of granularity

Operational data has a narrow time span, low granularity

DB08: Discussion Board

Part 1 (Due Thursday)

What is the role of business intelligence in providing comprehensive business decision support?

Please share your idea with the group with a minimum of 250 words.

Part 2 (Due Sunday)

To extend the discussion, first review the posts of your classmates. Then choose at least two of your classmates' posts and respond with thoughtful and substantive contributions. Answer any questions from your instructor.

CT08: Concept Test

Part 1 (Due Wednesday)

The effectiveness of Business Intelligence does depend on which of the following statements? Justify your answer.

- a) It depends on different levels of aggregation, from highly summarized data.
- b) It depends on affordable products and services that are faster and easier to use.
- c) It depends on the quality of data gathered at the operational level.
- d) It depends on the frequency and complexity of query activity in the operational database which tends to be low to allow additional processing cycles.

Part 2 (Due Sunday)

Respond to **one** of your classmates by critiquing his or her choice and justification. You are not allowed to select the same classmate if you chose the peer last week. You can convince your peer with your answer if the peer's answer is different from yours. If both have the same answer, you can discuss your justification with your peer to reinforce your answer.

How a Discussion Forum works: To post on the Discussion Forum, click the name of the forum then click on **Create Thread**. Type a subject "CT08 - Your first name and last name" and a message. Then **Submit** your post.