

BUSINESS NORMALIZATION CONCEPTS COURSE

(Course Code: DM2)

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Business Normalization Concepts Course

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What is Business Normalization?

Business normalization applies a number of business rules to the definition and meaning of data, so enabling business experts and IT experts to identify data and information that are needed for the organisation based on its current needs, as well as its anticipated future needs.

It ensures that the many uses of that data throughout an organisation can be satisfied from a single non-redundant version. Thus information derived from that single data version is able to be maintained consistent and up-to-date. Common reusable business processes can also be defined that operate efficiently against the data.

Data Administrators and Data Base Administrators have used normalization techniques for years to design data bases that readily accommodate change. These techniques are often called "*Traditional Normalization*" to distinguish them from "*Business Normalization*". Traditional normalization has been found to be difficult for business experts to apply. In contrast, Business Normalization uses a variation in the normalization rules that business experts understand more readily. They can participate actively with IT experts, using business knowledge to develop normalized data models that reflect great business expertise. With business and IT experts working together in a design partnership, data bases are designed to incorporate business rules and expert rules that address current and future business needs.

Business normalization is a vital component of data modeling which, in turn, is an essential prerequisite for development of data bases, Data Warehouses, for Business Re-Engineering and for business transformation to take advantage of the Internet and corporate Intranet technologies. Business normalization can also be used to identify data used by legacy systems and data bases, and develop data models that can be used to migrate the legacy data to other environments.

Purpose of the Course

This course teaches business managers and their staff ("business experts") as well as analysts, data administrators and data base administrators ("IT experts") the steps and rules of business normalization, so enabling them to work together in a design partnership to develop data models for their organization.

A data model provides a blueprint of the data needed to support business processes, and the information needed by management for decision-making. A data model is a prerequisite for:

- Development of integrated data bases to be used for Applications and for redevelopment of Legacy Systems
 - Development of a Corporate Repository for Data and Information Warehouses
 - Identification of re-engineered business process opportunities
 - Business Re-Engineering to take advantage of the Internet and Intranets
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Prerequisites

- This course assumes that the student has previously completed the Data Modeling Concepts Course.
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Audience for the Course

- Business managers and their staff who need to understand the application of business normalization to data modeling, so they can participate actively in partnership with IT staff in data modeling sessions that draw on their business expertise.
 - IT managers, data administrators and systems development staff who need to understand the application of business normalization to data modeling, so they can participate with business managers and staff in data modeling sessions: enabling the IT staff to draw on their systems development expertise in a design partnership with the business experts.
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Objectives of the Course

On completion of the course, both business experts and IT experts will understand:

- How to develop a normalized entity list from any unnormalized data source.
- How business normalization can be used to identify current business needs.
- How business normalization can be used to eliminate redundant data versions, to implement integrated data bases that can be used more effectively.

- How business normalization can be used to identify future business needs and cross-check the accuracy of business meaning to design for the future.
 - How expert knowledge can be captured in fifth business normal form (5BNF) Structure entities to manage knowledge as a valuable business asset.
 - How business normalization and data mapping both support each other, and how they can be used iteratively in data modeling to uncover business meaning.
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Certified Business Data Modeller

Participants in this course can qualify as a *Certified Business Data Modeller* by completing the prerequisite *Data Modeling Concepts* course, and by completing the *Data Modeling Case Study Workshop*.

The student edition of the *Visible Advantage* modeling tool is supplied to each student. This is a limited capacity, but full-function modeling tool that is used in conjunction with the case study workshop. It includes laboratory exercises and instructions for entering your case study solution into Visible Advantage so that you can check the validity of the solution before its submission.

The Visible Advantage encyclopedia must be returned to us by email as your solution to the CBDM Exam, for individual assessment. If required, we will set additional remedial study and exercises until each student demonstrates a full understanding of the relevant Data Modeling and Business Normalization concepts.

Following completion of the workshop, the student edition of Visible Advantage is retained by each student and can be used for small projects, if required. The encyclopedia from each small project can be automatically merged into larger project encyclopedias, using the enterprise edition of Visible Advantage - if relevant. This enables students to apply the skills they have learned to specific areas of your enterprise where they have particular expertise.

To register for Certification, please complete and submit the Registration Form, providing also an email address. We will email to you a password and further details so that you can download and install the courses and workshop materials.

Course Outline

Shows how business normalization cross-checks are used to uncover business meaning, identify homonyms and synonyms, and identify potential future business needs.

- ***Fourth and Fifth Business Normal Form:*** Shows the rule and use of Fourth Business Normal Form (4BNF) to identify supertypes and subtypes. Covers the identification and capture of business expertise in Fifth Business Normal Form (5BNF) Structure entities, as dynamically-updated business knowledge defined by business experts.
 - ***Business Normalization Examples:*** Uses progressively completed course exercises, as well as many business examples, to illustrate application of the five business normal form rules. Shows how these rules can help identify additional business needs that may have been missed earlier, so that systems and data bases that are later developed do address the business requirements.
 - ***Course Exercises:*** Twelve course exercises of increasing difficulty are included for student completion throughout the course, together with sample solutions.
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Duration of the Course

The course material, when presented as PowerPoint visuals, will take approximately 4 - 6 hours to complete. With completion of the twelve included course exercises, a total of 8 - 10 hours will be required depending on each student's progress.

Course License Agreement

The courses and workshop are delivered in an electronic format as a password-protected compressed file, downloaded using an email message which also contains the Course License Agreement. Before downloading, decompressing or expanding the courses and installing them on a machine for use, please read the terms of the Agreement carefully. If you do not agree with them, you should promptly destroy all copies of the file, whether electronic, printed or otherwise and notify Information Engineering Services Pty Ltd in writing by post, electronic mail or facsimile of its destruction. On receipt of this notification, your money will be refunded. You will otherwise be taken to have accepted and agreed to all the terms of the Agreement, and will therefore be bound by it.