

Course Description

ENSEMBLE MODELING

Ensemble Modeling Day



Entity



Ensemble

GENESEE ACADEMY, LLC

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Overview

Data modeling for a data warehouse is different than data modeling for an operational system or for a data mart. The data warehouse has a unique set of objectives, requirements, capabilities and constraints. Amongst these are the need to track history and the need to integrate data from several different sources.

Today the demands of the data warehouse have been greatly expanded. It is now common that the data warehouse have auditable and trusted data, that the warehouse be capable of adapting very quickly to changes (new sources, changing sources, changing business rules, new deliveries, etc.), that the warehouse have very low latency towards near-real time performance, and the list goes on.

In response to this growing set of unique characteristics several innovative modeling techniques have emerged. Leading this set of new approaches is the Data Vault modeling approach. But there are several others as well including Anchor, 2G, 6NF, Temporal, Hyper Agility, Focal, and others. While the specific approaches vary, they are all forms of data warehouse modeling; they are all forms of Ensemble Modeling.

Ensemble Modeling = Data Warehouse Modeling

To understand Ensemble Modeling is to understand how new and innovative forms of modeling for the data warehouse environment differ from traditional forms, and also from each other. Moving forward you will be applying Ensemble Modeling for your EDW. This course is focused on explaining what this means and why you will be doing it. Also in this course you will gain insight into how to formalize your specific modeling pattern to match the specific needs of your organization and your EDW program.

This course includes resources and materials intended to support the learning process before and after the training day itself.

Course Description

This is a complete Ensemble Modeling course. It covers all aspects of Ensemble Modeling including Unified Decomposition, Core Business Concepts, understanding Ensembles, designing Ensembles, Concept Constellations, Attribute Clusters, modeling variations, and Ensemble feature mapping for assessing the pros and cons of specific Ensemble modeling patterns.

Students will gain a new perspective on modeling the data warehouse and a deeper understanding of the paradigm shift that is required to make these techniques succeed. This course will guide students towards a sense of clarity concerning the design and modeling of a successful data warehouse.

This course will describe and categorize several of the Ensemble modeling pattern variations. The course consists of three (3) components: The one day classroom course, the online video lessons, and the course materials.

Classroom course day

- Lectures
- Case Lab
- Exercises

Course materials

- Class presentation deck
- Workbook
- Lab
- Book

All components are designed to work together by communicating a consistent and clear message concerning the fundamentals of data vault modeling.

Classroom Course Outline

The classroom day is scheduled in a location that includes table space for each student to work, break-out areas for small group learning exercises, white boards, flip charts, and a presentation projector used during the lectures. The classroom day is engaging and highly interactive with the students. The day includes lectures, case labs, and workbook exercises.

The classroom course runs 09:00 to 17:00. Students arrive for coffee and introductions beginning at 08:30. Class starts promptly at 09:00. The classroom course schedule:

- 08:30 Arrive, Coffee and Introductions
- 09:00 Lecture: Introduction to Ensemble Modeling
What is Ensemble modeling? When and why do we use it?
- 09:15 Understanding Unified Decomposition
At the foundation of Ensemble Modeling is the concept of Unified Decomposition.
- 09:30 The Core Business Concept
Present and describe the natural Core Business Concept. Discuss techniques for identifying these concepts in our organization.
- 10:00 Keys, Relationships and Context
Ensembles contain several components which can each be classified as either a key, a relationship or some form of context.
- 10:30 BREAK
Workbook Exercise I Assigned
- 10:45 Workbook Exercise I
Complete first Workbook Exercise, Discuss, Q&A.
- 11:30 Ensemble Modeling Process
Ensemble modeling is founded in the business. The Ensemble Modeling Process is structured, interactive and dynamic.
- 12:15 LUNCH BREAK
Workbook Exercise II Assigned

- 13:00 Workbook Exercise II
- Complete second Workbook Exercise, Present, Discuss, Q&A.*
- 14:00 Ensemble Modeling applications
- Though focused on the EDW, EM is applicable to all forms of central business concept modeling including Information Modeling, MDM, Reference Models, Taxonomies and Conceptual Modeling.*
- 14:30 BREAK
- Group Case Exercise Assigned*
- 14:45 Group Case Work
- Groups complete the Case Exercise.*
- 15:25 Group Case Discussions
- Present, review, analyze, and discuss the Group Case. Q&A.*
- 16:00 Ensemble Modeling in Practice
- Modeling Ensembles, Identifying Keys, Tracking History, Splitting and Merging, Rates of Change, Reference Tables, Attribute Clusters, and Swarming.*
- 16:30 Forms of Ensembles
- Ensemble Features, Categories and Various Forms. Comparison “Forms and Features” matrix. Selecting your form of Ensemble.*
- 17:00 Class is Completed.

Course Materials

This course includes detailed course materials to help support the learning process. Beyond the classroom, several of the items are intended to be used as references and guides to support your ongoing data vault efforts. Materials for this course include:

Class Presentation Deck	Printed and bound 50 pages.
Workbook	Printed packet 10 pages.
Lab	Printed packet 6 pages.
Book	Published book 434 pages.

Target Audience

This course is intended business intelligence and data warehousing professionals. The class is intended for persons who are involved with the business, understanding the business models, gathering requirements, designing solutions, information modeling, data modeling and mart design.

The class is perfect for all forms of modelers and architects including Information Modelers, Data Modelers, Data Architects, Information Architects, and Business Analysts. Also for Business Intelligence and Data Warehousing managers, Master Data Management (MDM) professionals, designers, project leads and project owners, DW DBAs, Data Mart designers, Integration Experts, ETL Developers, and Functional Area Representatives.

Ensemble modeling is closely aligned with the business so those who are working from both business and technical perspectives will benefit equally from this course.

Logistics and Fees

All students should be enrolled at least one (1) week before the classroom course day. Please plan for this lead time in your schedule when you register for the course.

Plan to arrive to the training location by 08:30 for the classroom course day. For planning purposes the end of class is 17:00 however it is typical that students have questions after the end of class. The instructor is available until 18:00 to discuss questions.

Location specific logistics and course fees for your class can be found here:

www.GeneseeAcademy.com/course-schedule