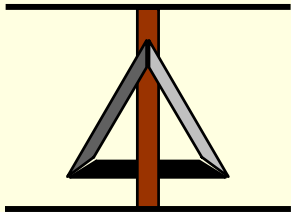


Data Model Patterns: A Metadata Map

East Coast Regional DAMA 2006

David C. Hay

May-June, 2006



Essential Strategies, Inc.

13 Hilshire Grove Lane, Houston, TX 77055

☎ (713) 464-8316

✉ dch@essentialstrategies.com

🌐 www.essentialstrategies.com

Hell, there are no rules here—we're trying to accomplish something.

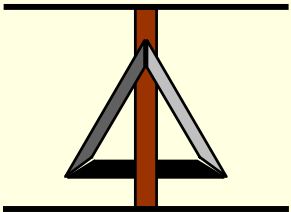
Thomas A. Edison

There are two rules for success:

1) Never tell everything you know;

Roger H. Lincoln

Column 6: motivation



Essential Strategies, Inc.







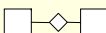
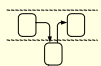

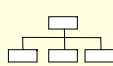



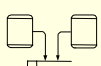
















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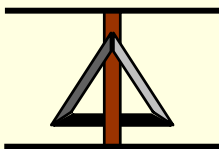
☎ (713) 464-8316

✉ dch@essentialstrategies.com

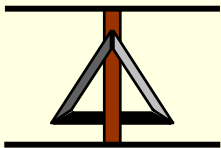
🌐 www.essentialstrategies.com

The Architecture Framework . . .

	Data (What)	Activities (How)	Locations (Where)	People (Who)	Time (When)	Motivation (Why)
Objectives / Scope (Planner's view)	List of things important to the enterprise 	List of processes the enterprise performs 	List of enterprise locations 	Organization approaches 	Business master schedule 	Business vision and mission 
Enterprise model (Business Owners' Views)	Language, divergent data model 	Business process model 	Logistics network 	Organization chart 	State / transition diagram 	Business strategies, tactics, policies, rules 
Model of Fundamental Concepts (Architect's View)	Convergent e/r model 	Essential data flow diagram 	Locations of roles 	The viable system, use cases 	Entity Life History 	Business rule model 
Technology Model (Designer's View)	Data base design 	System design, program structure 	Hardware, software distribution 	User interface, security design 	Control structure 	Business rule design 
Detailed Representation (Builder's View)	Physical storage design 	Detailed program design 	Network architecture, protocols 	Screens, security coding 	Timing definitions 	Rule specification program logic 
Functioning System	<i>(Working System)</i>					
	Converted data	Executable programs	Communications facilities	Trained people	Business events	Enforced rules



Row Two:
The business owner's View

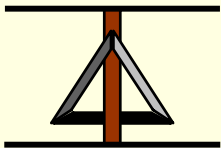


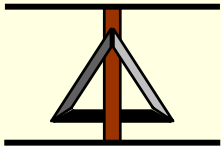
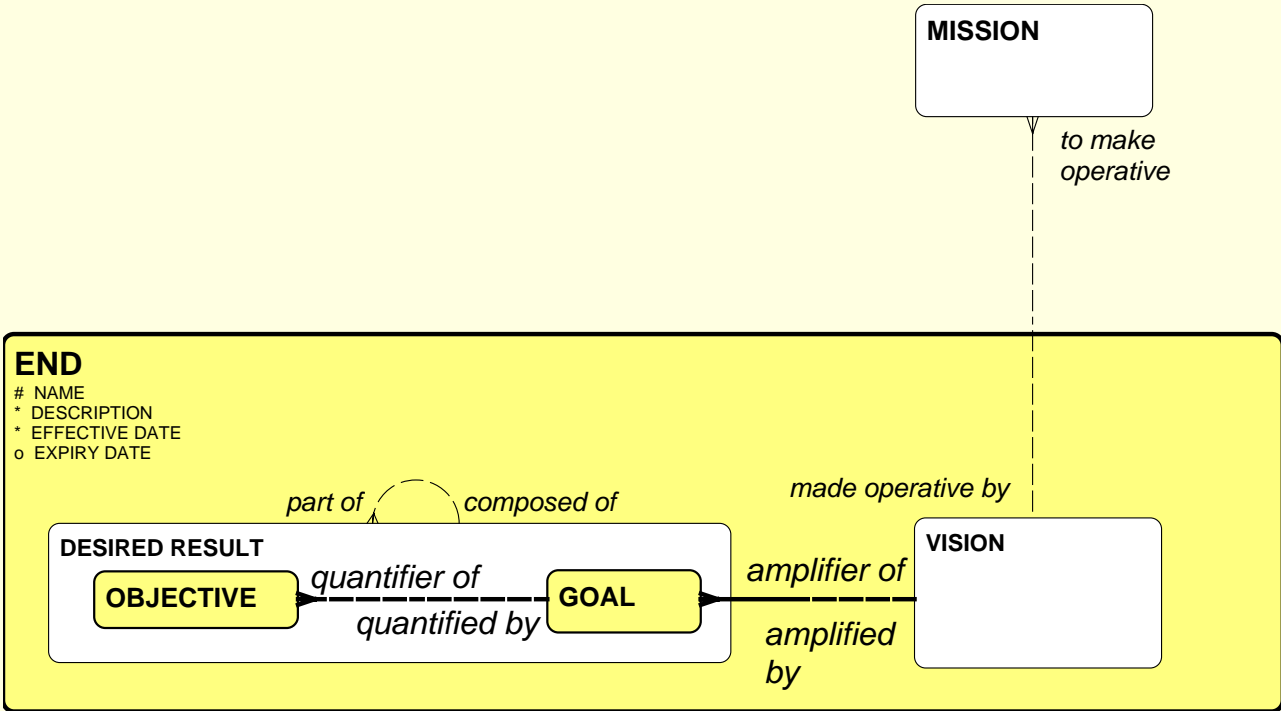
MISSION

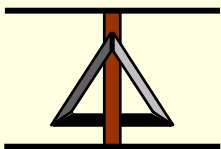
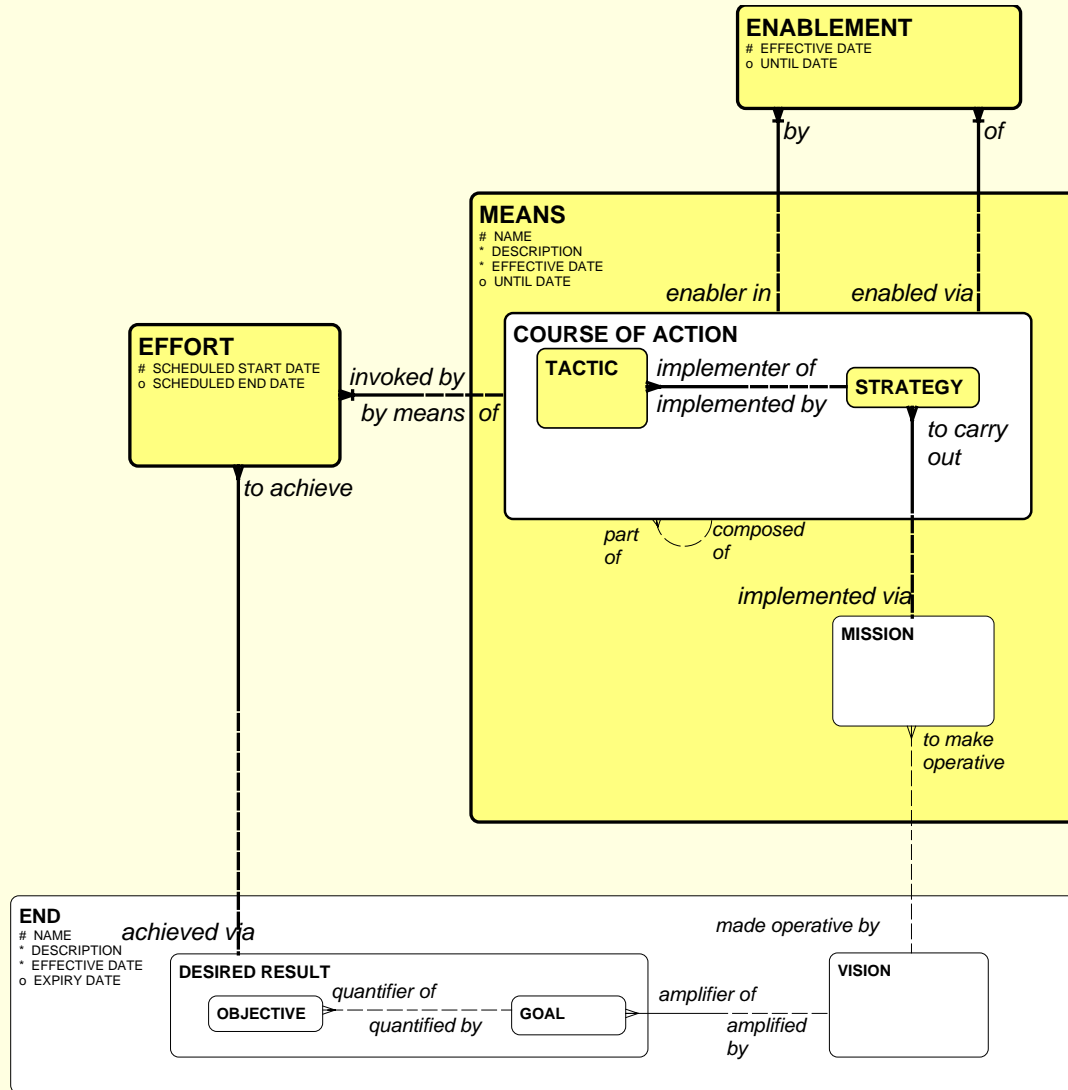
*to make
operative*

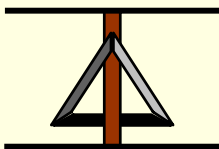
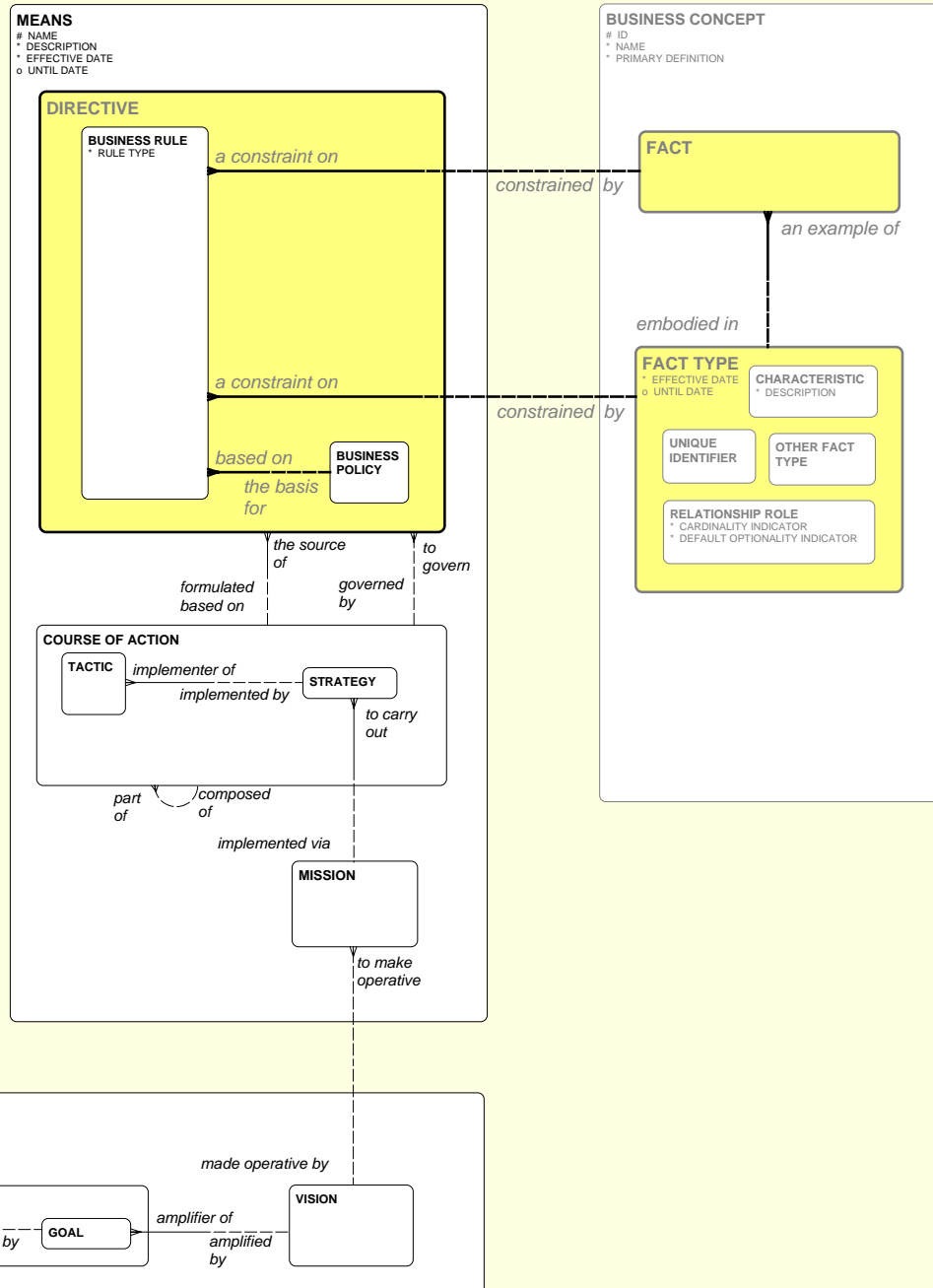
*made
operative by*

VISION



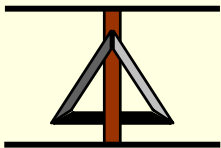






Digression

- Kinds of rules (from modal logic)
 - ***Deontic*** – Obligation, permission (Business Rules)
 - ***Alethic*** – Necessity, possibility (Physics)
 - ***Epistimological*** – It is known that (Data modeling)

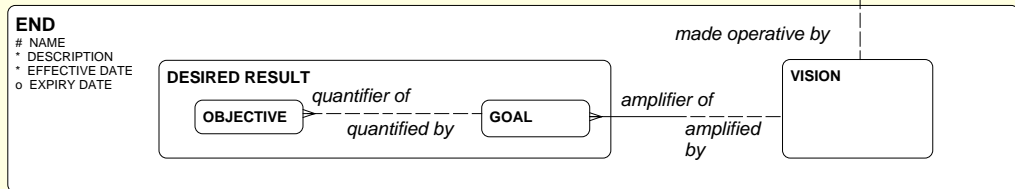
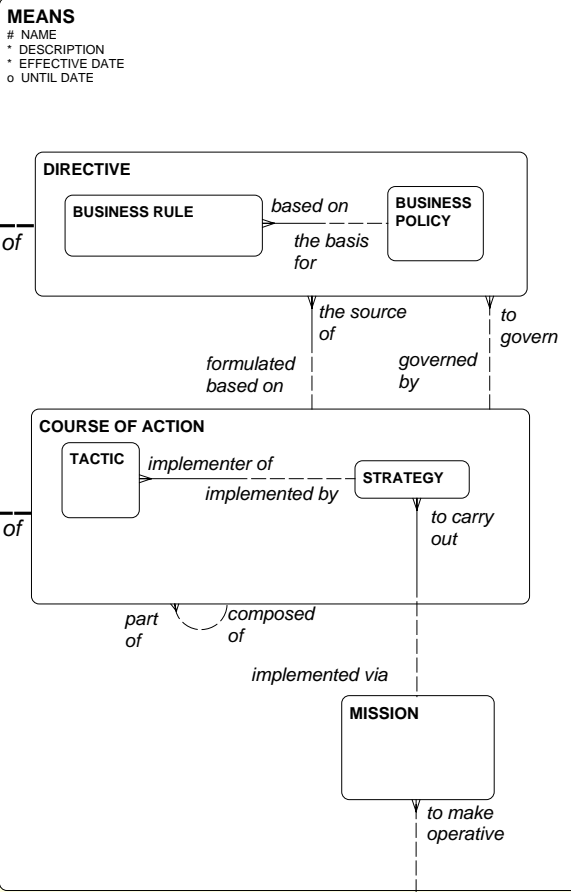


CONSEQUENCE INVOCATION
 # EFFECTIVE DATE
 o UNTIL DATE

CONSEQUENCE
 # NAME
 * DESCRIPTION

ENFORCEMENT LEVEL IMPLEMENTATION
 # EFFECTIVE DATE
 o UNTIL DATE

ENFORCEMENT LEVEL



the result of

an example of

embodied in

the source of

of

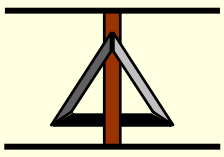
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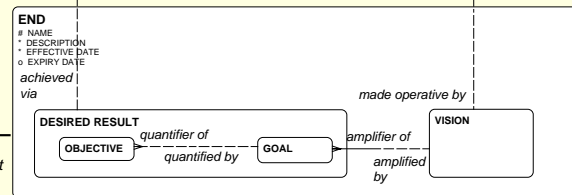
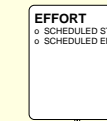
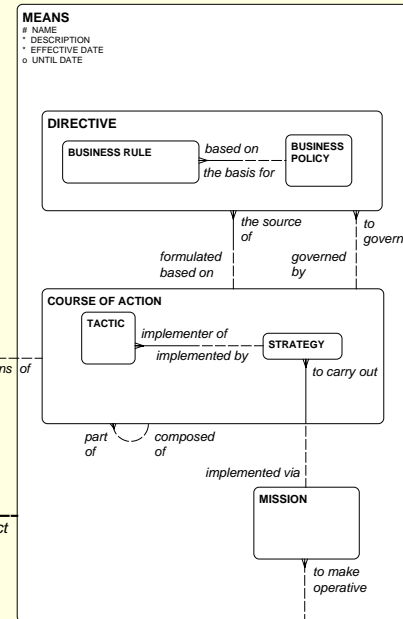
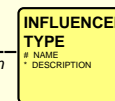
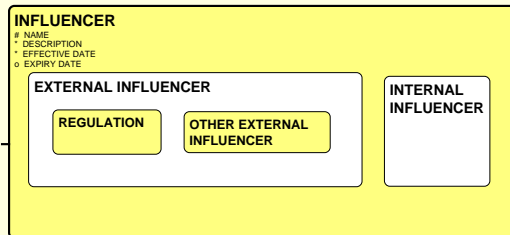
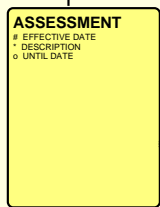
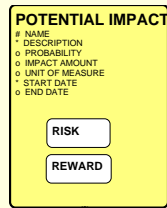
affected by

determinant of the value of

an example of

embodied in





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to reveal

on

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invoked by
 by means of
 to achieve
 the object of

invoked by

by means of

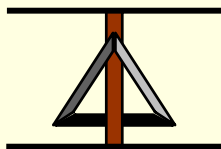
to achieve

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embodied in



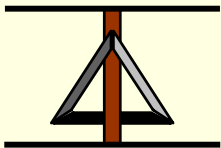
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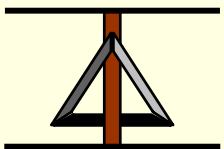
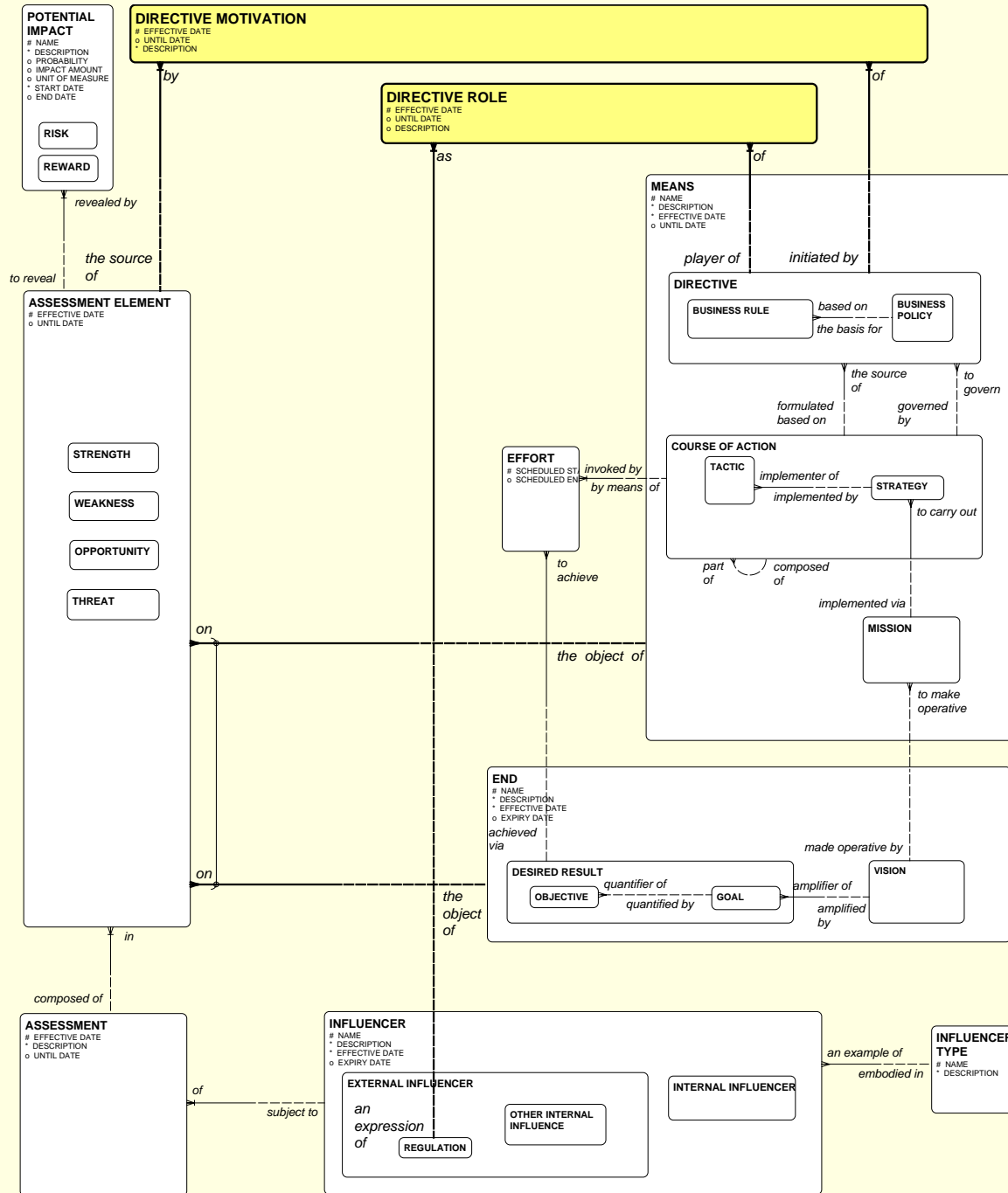
■ External

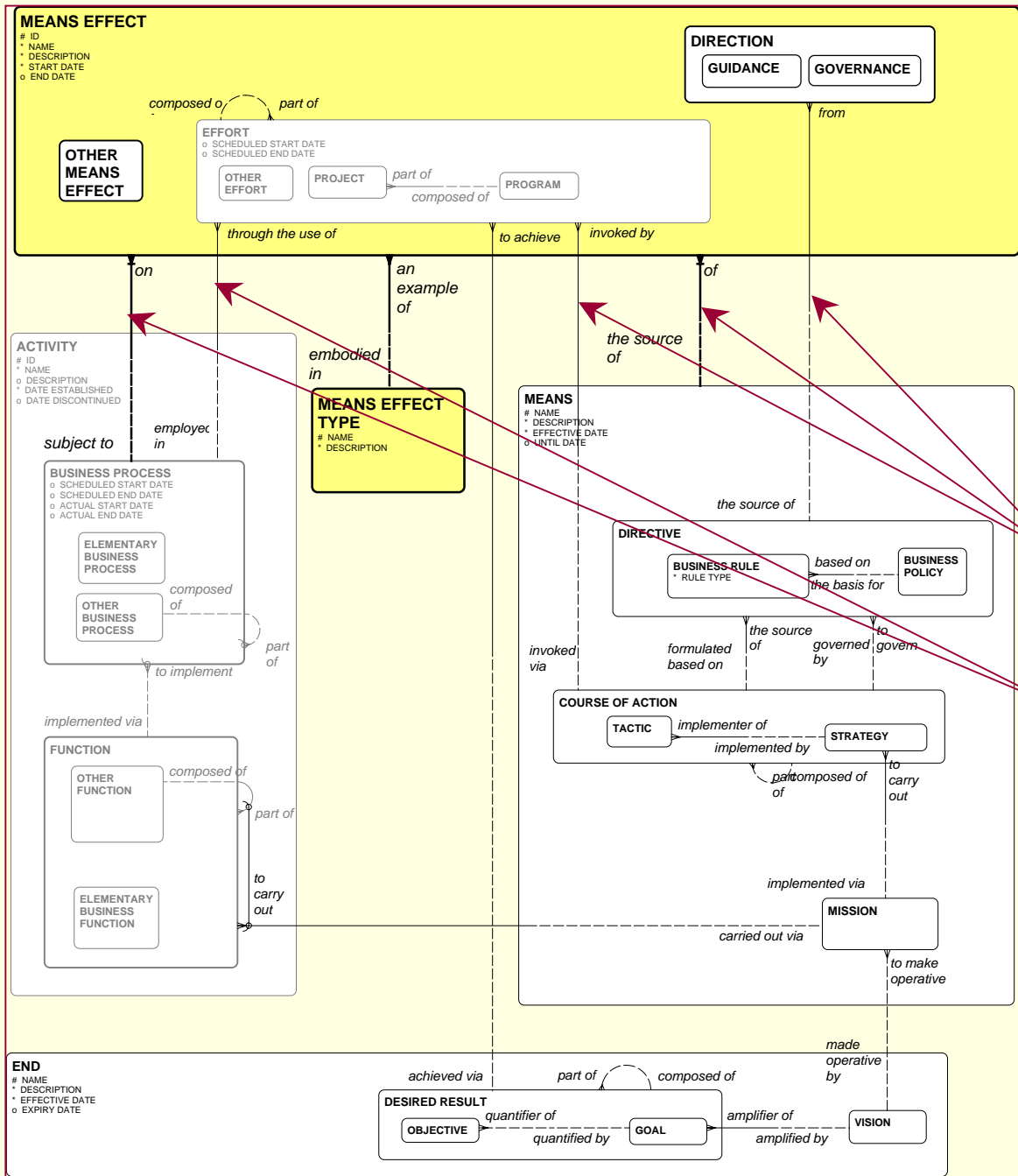
- *Environment*
- *Technology*
- *Suppliers*
- *Customers*
- *Competitors*
- *Partners*
- *Regulation*
- *Other*

■ Internal

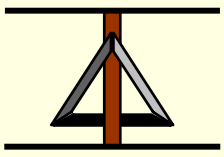
- *Habit*
- *Assumption*
- *Infrastructure*
- *Issue in dispute*
- *Prerogative*
- *Resource*
- *Corporate value*
 - Explicit
 - Implicit
- *Other*



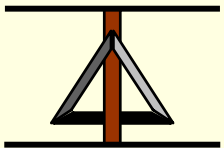




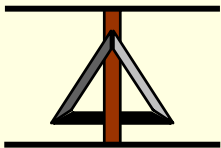
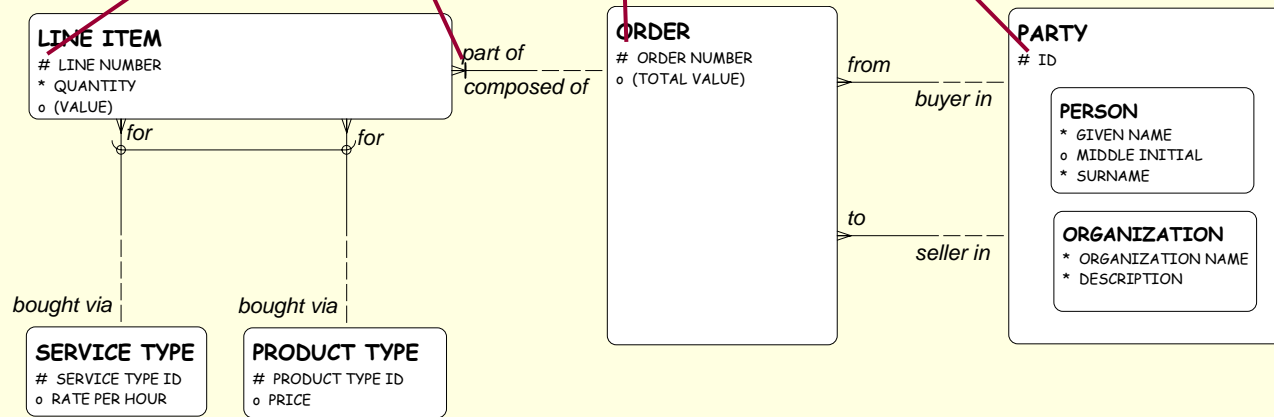
*Note:
 Relationships have
 sub-types!*

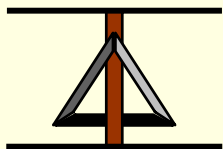
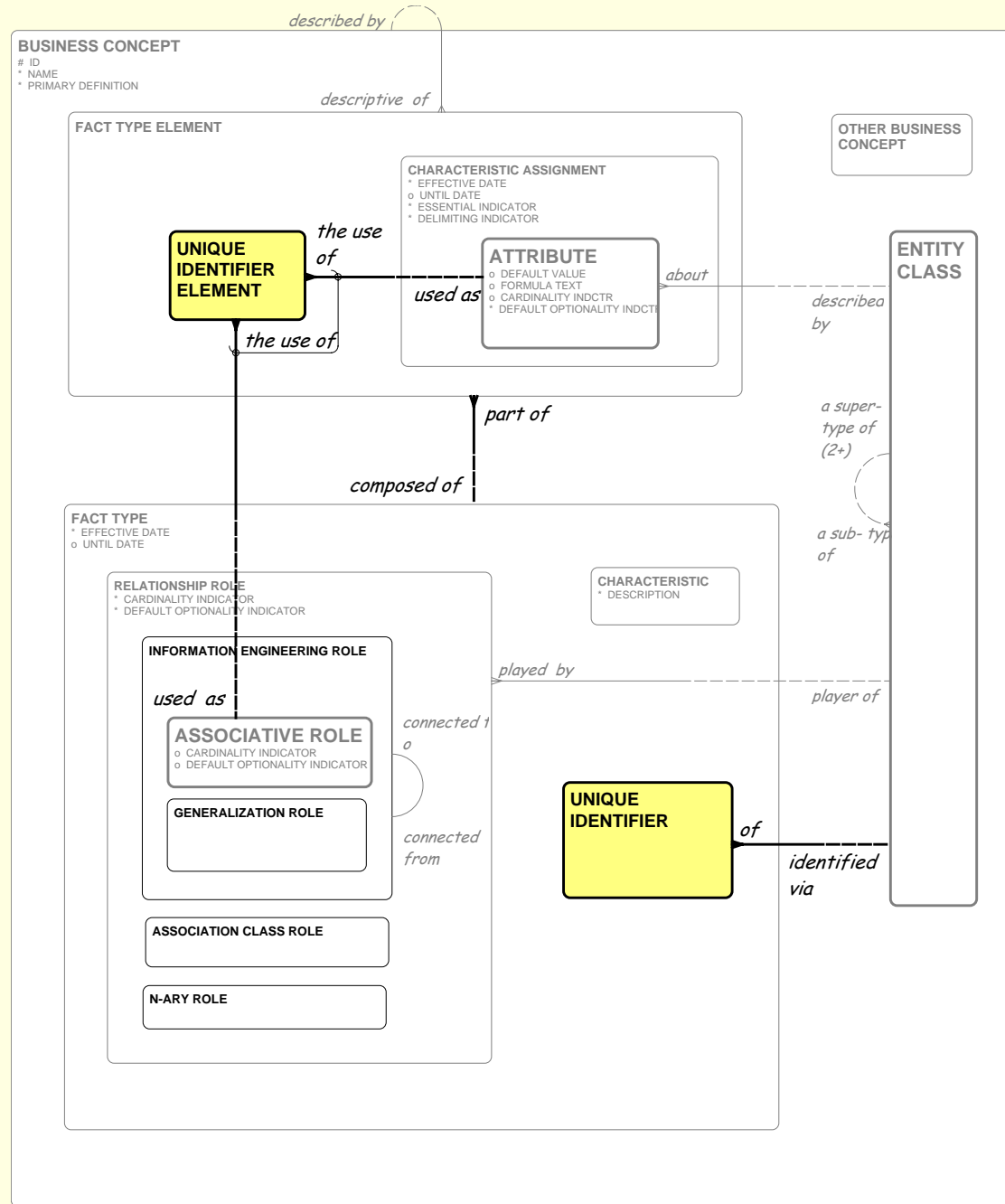


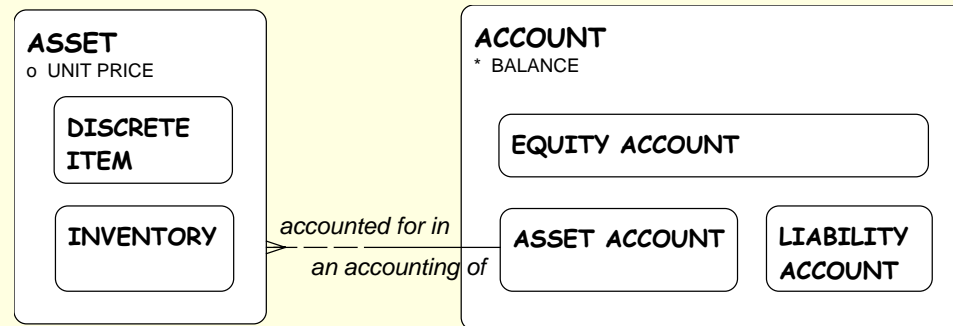
Row three:
The architect's View



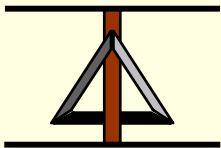
Unique Identifiers



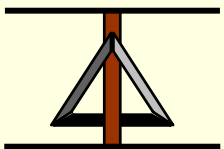
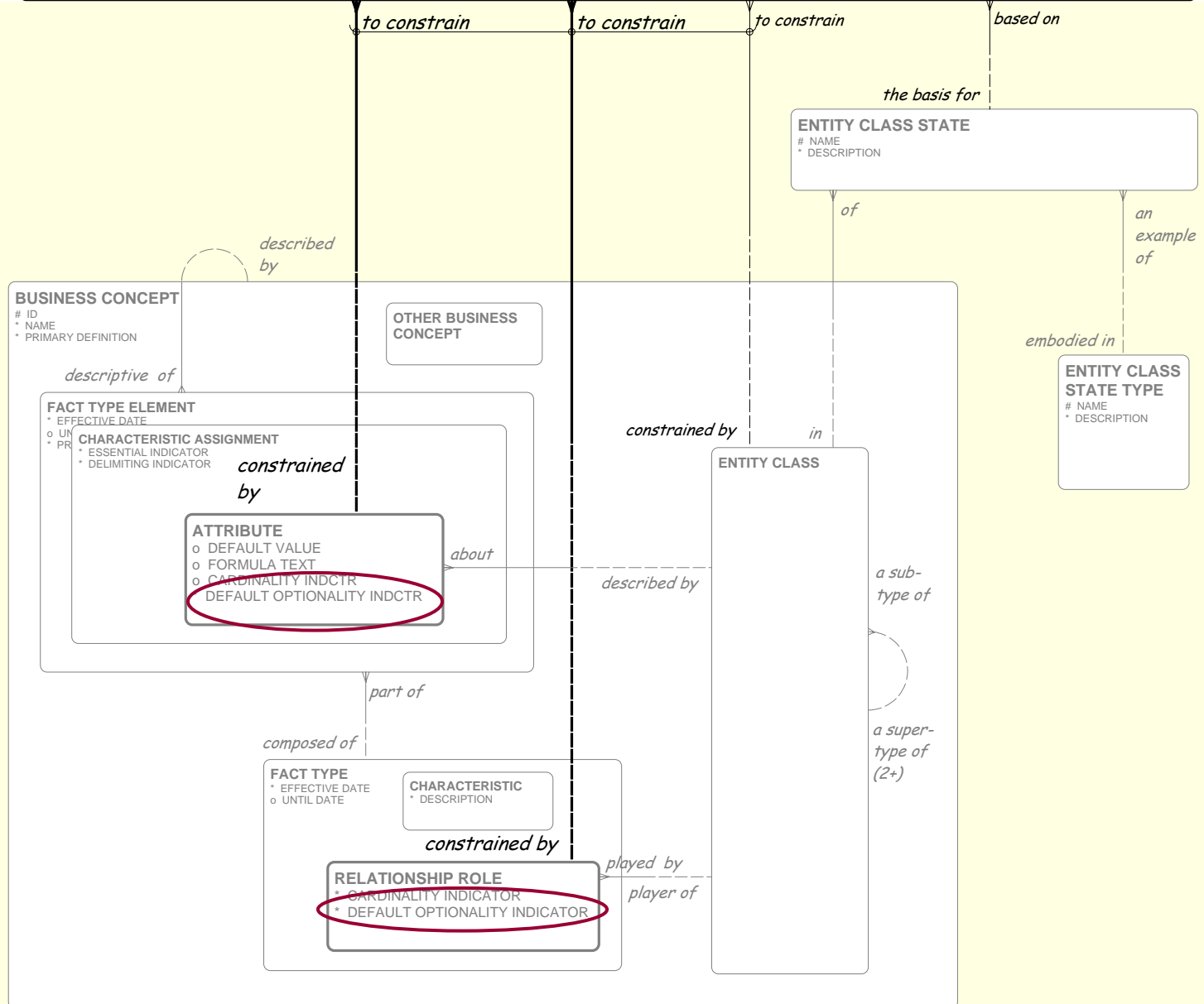




Ok, so *when* does the INVENTORY have to be *accounted for in* an ASSET ACCOUNT?



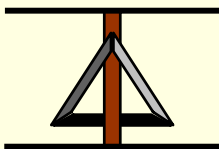
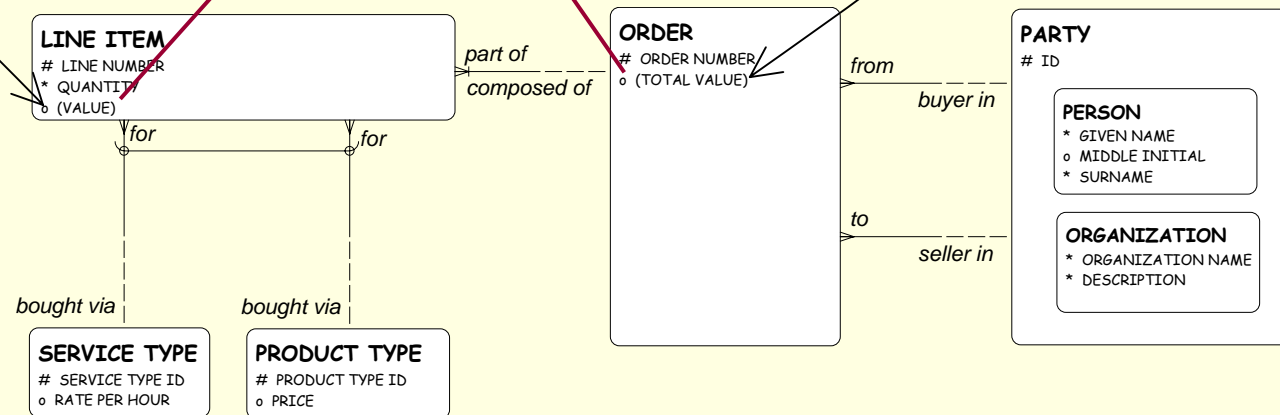
OPTIONALITY CONSTRAINT
 ○ MANDATORY INDICATOR

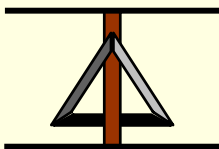
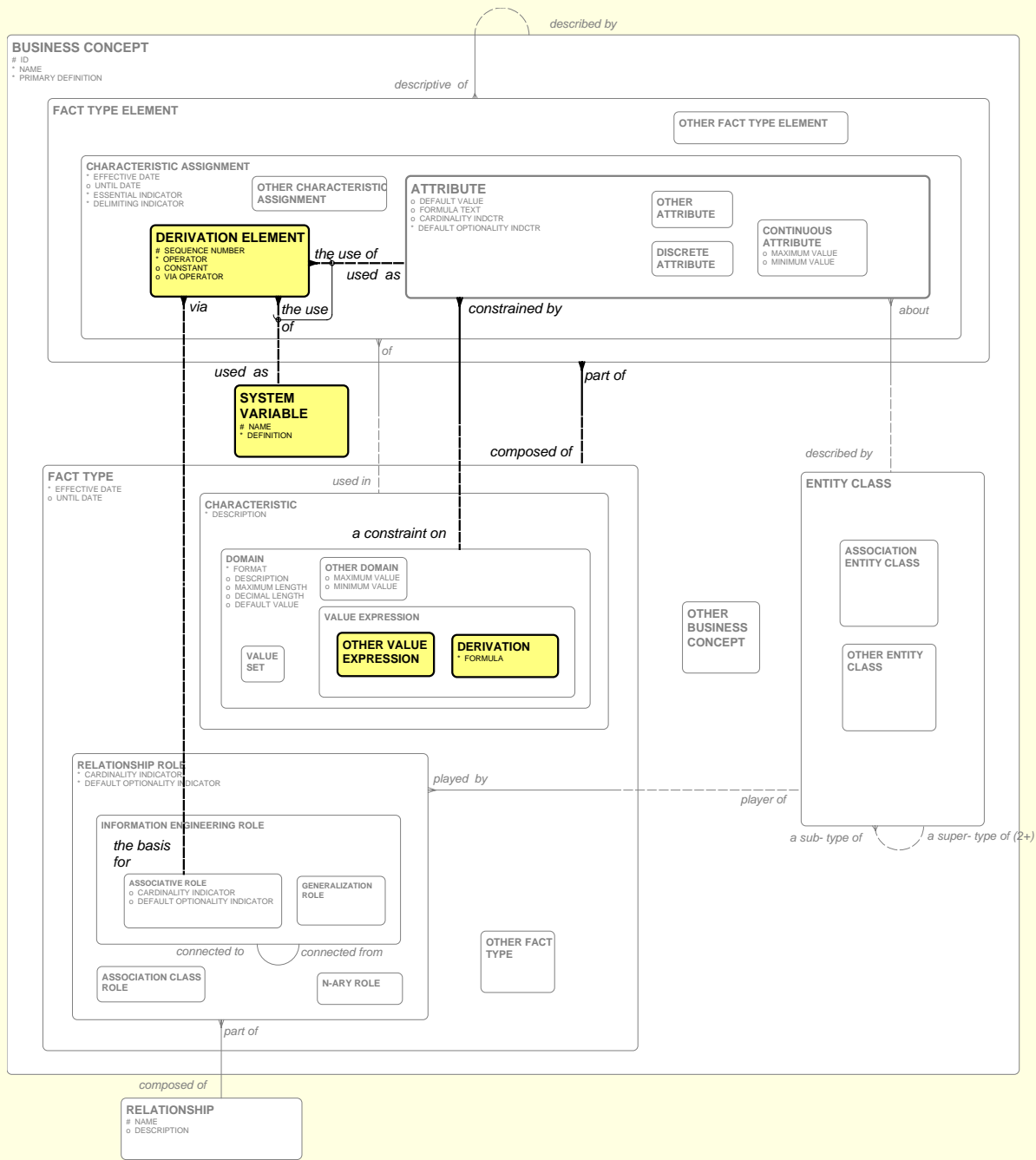


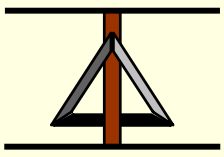
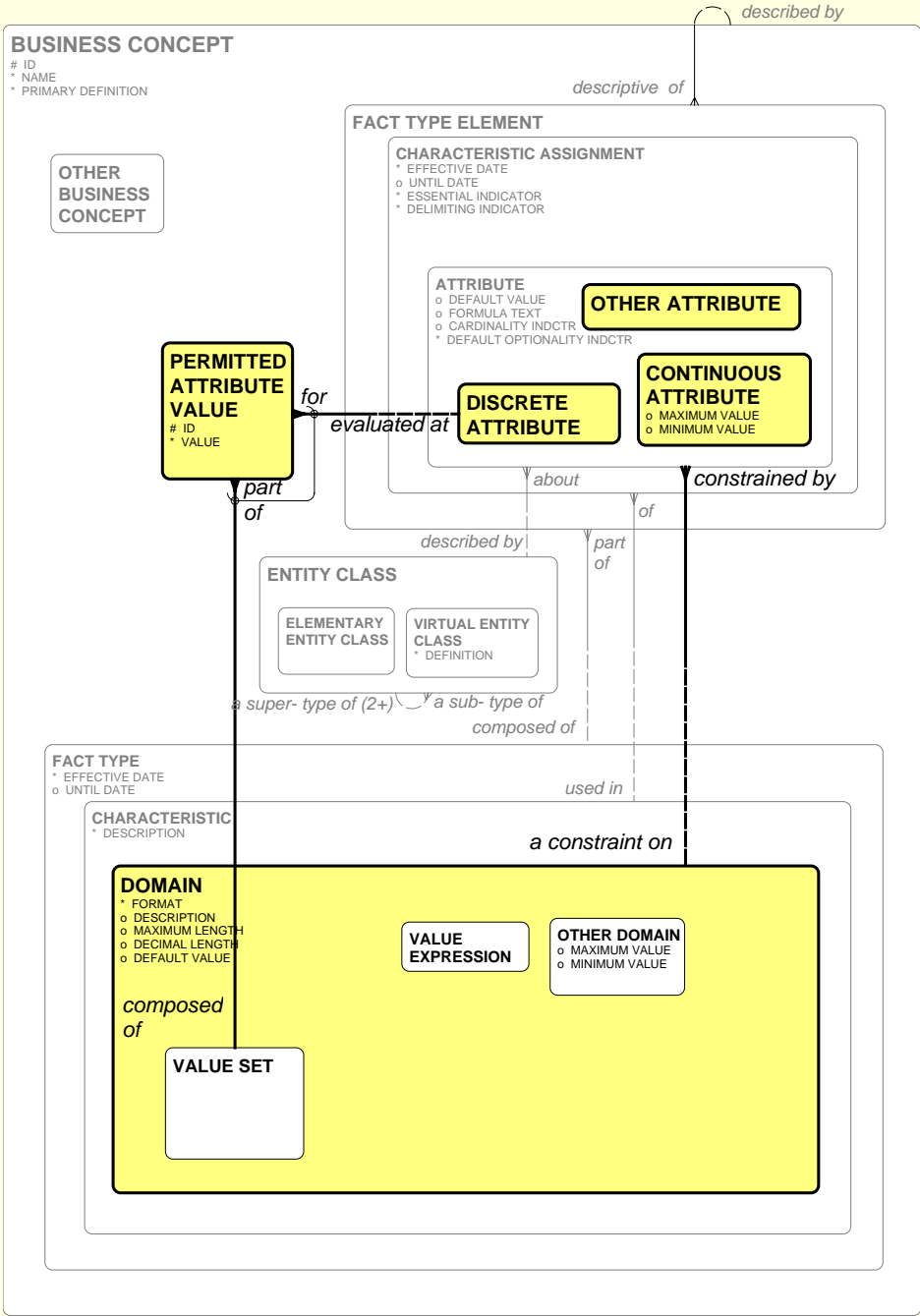
LINE ITEM.Value =
INFER (PRODUCT TYPE.Price,
for PRODUCT TYPE)
 *
 LINE ITEM.Quantity

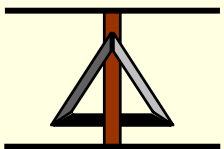
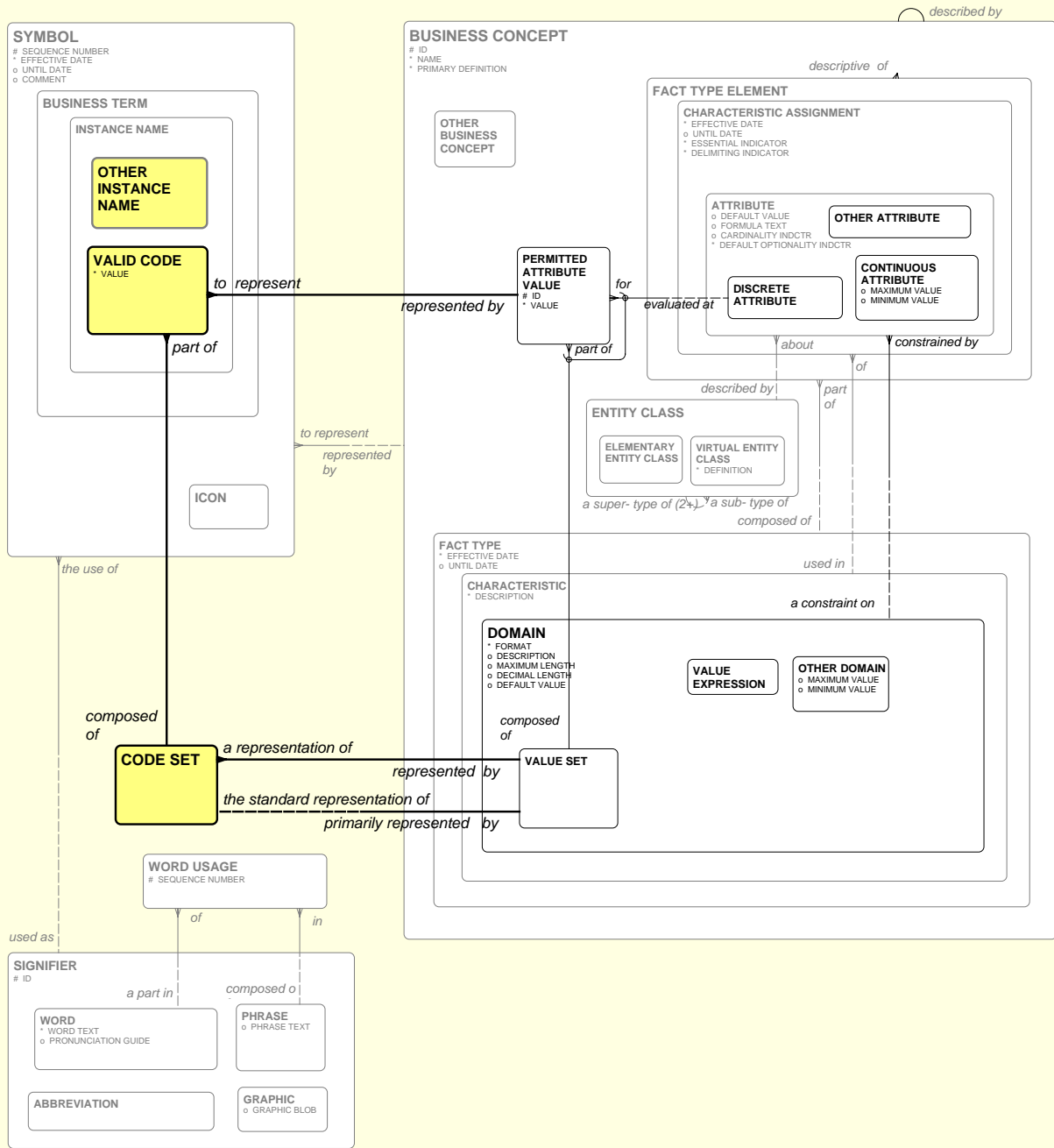
ORDER.Total Value =
SUM (LINE ITEM.Value,
composed of LINE ITEM)

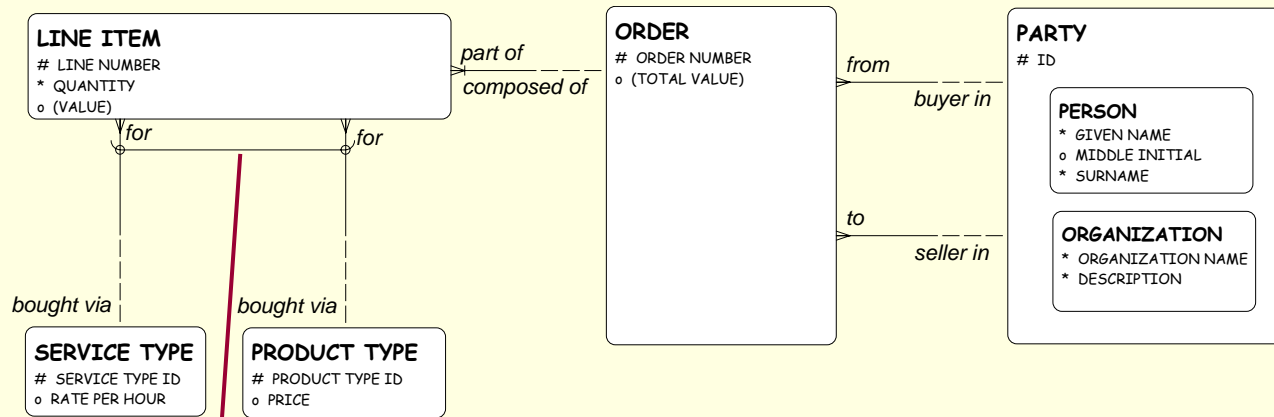
Derived Attributes



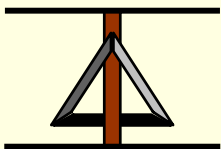


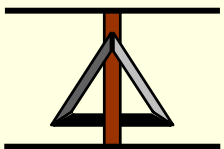
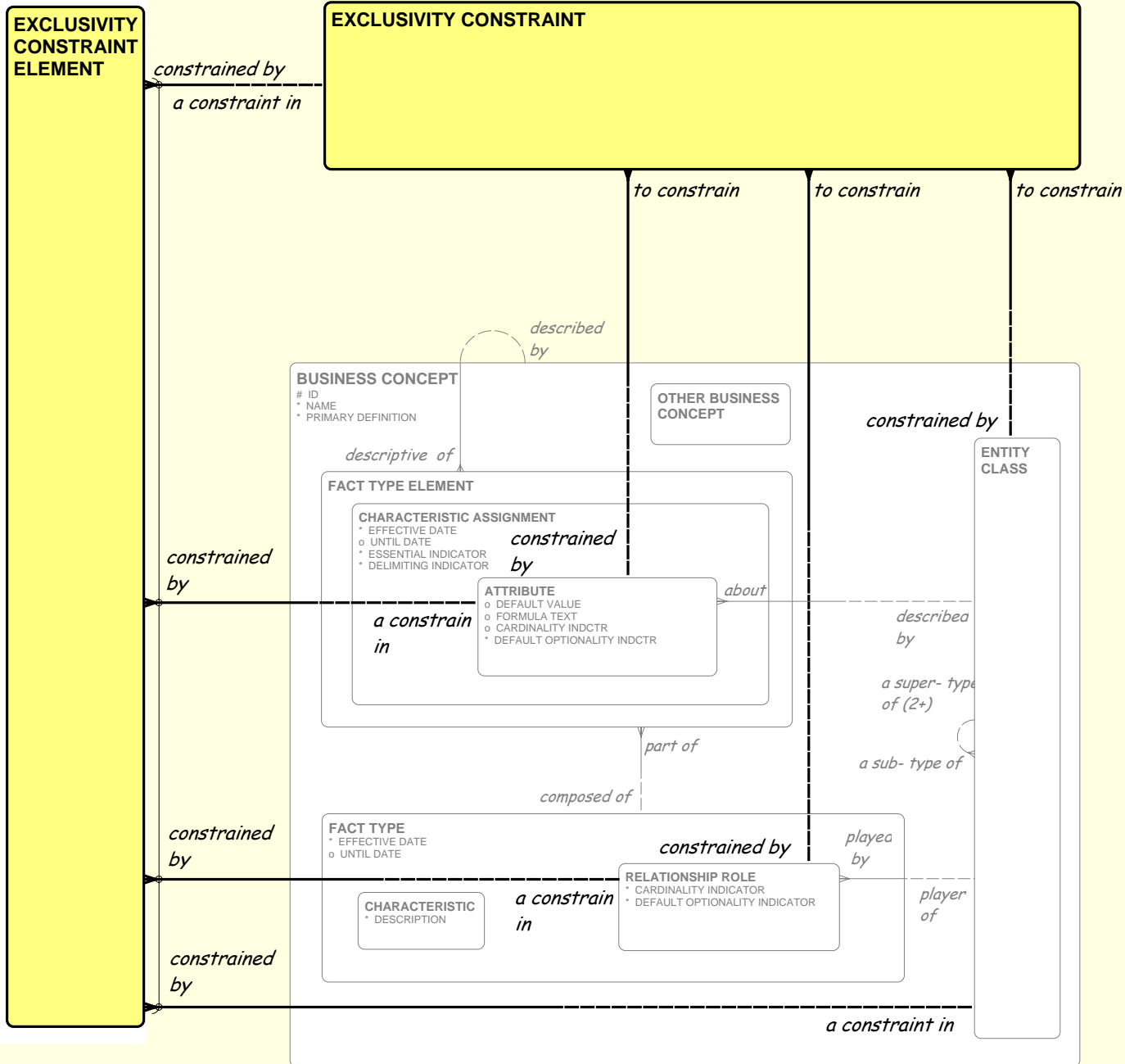


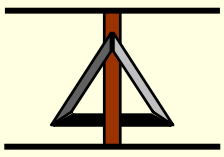
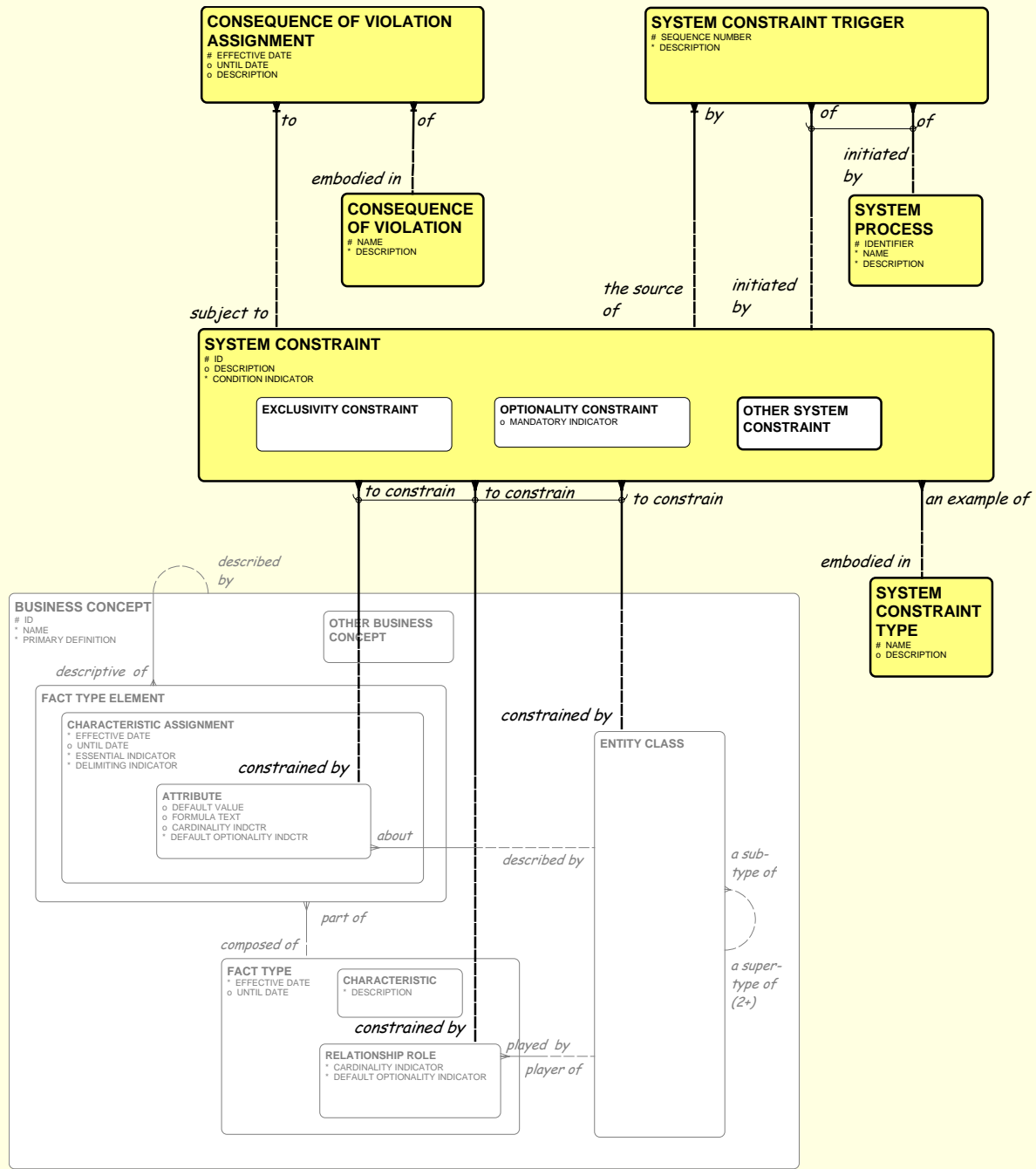


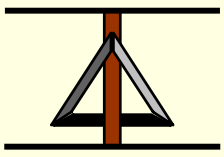


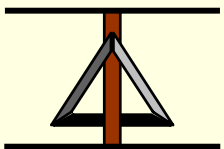
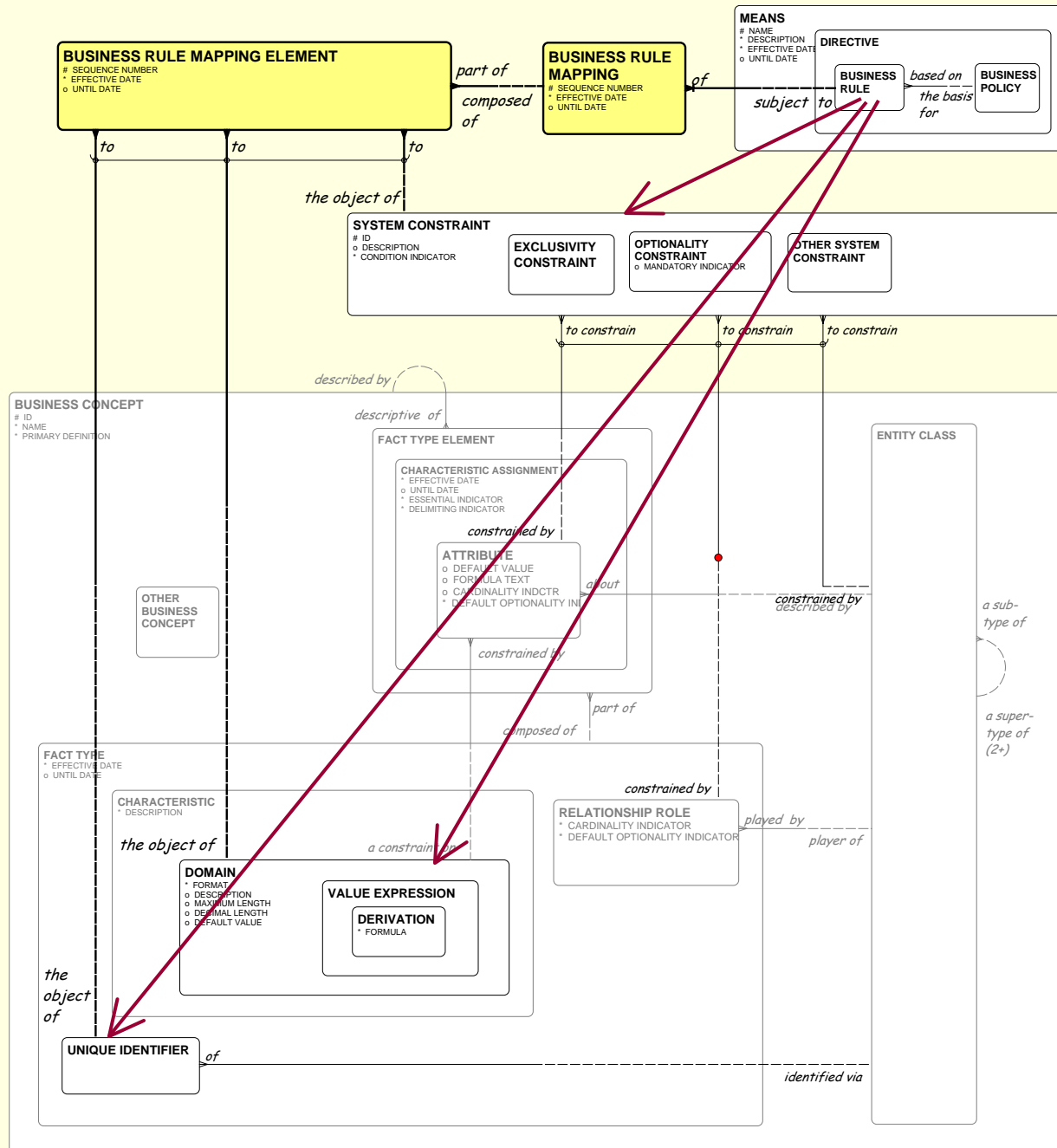
Exclusion Constraint
(Arc)

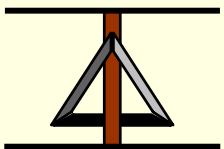
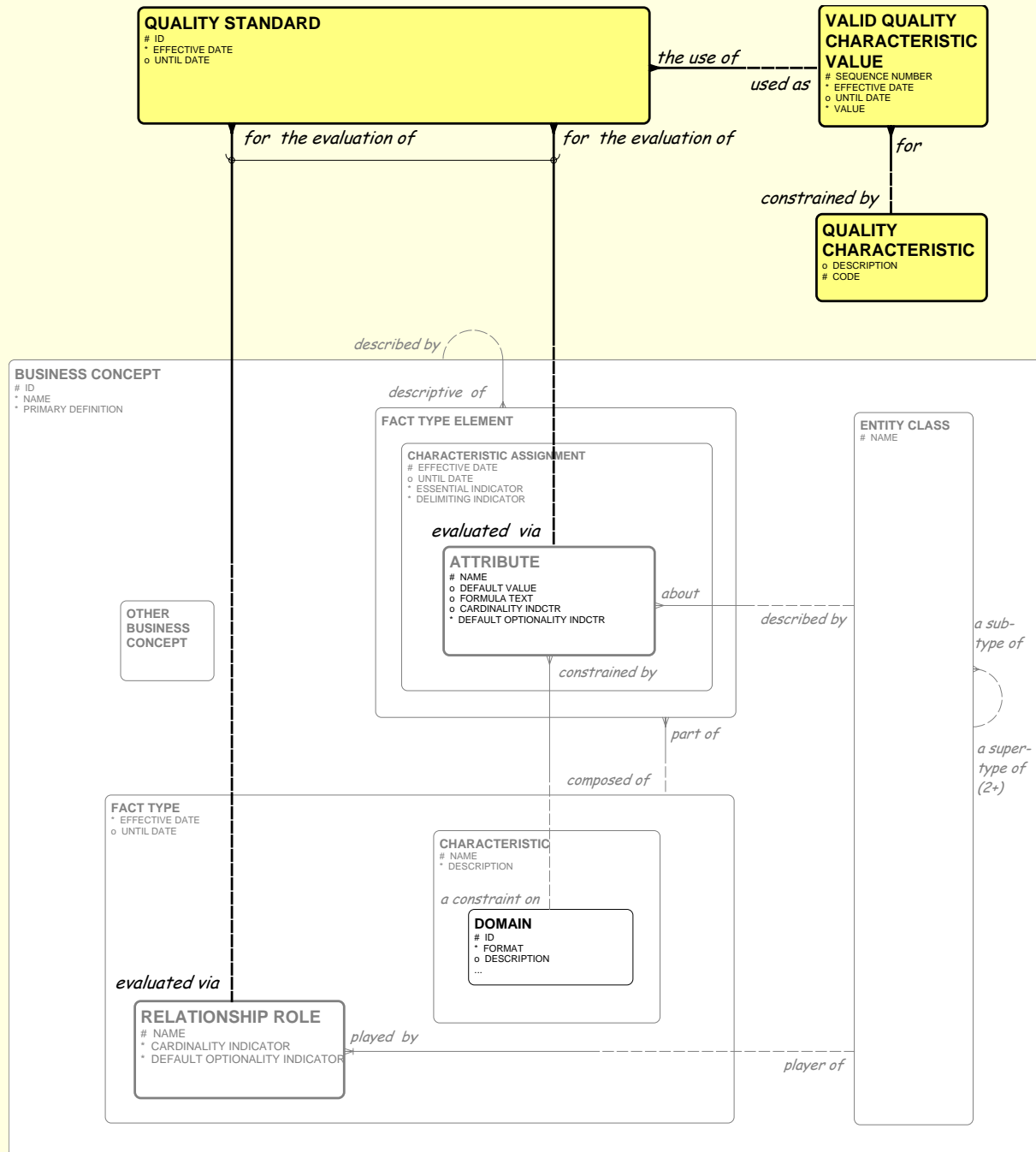




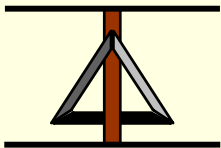


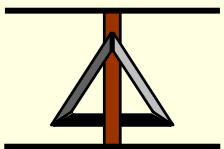
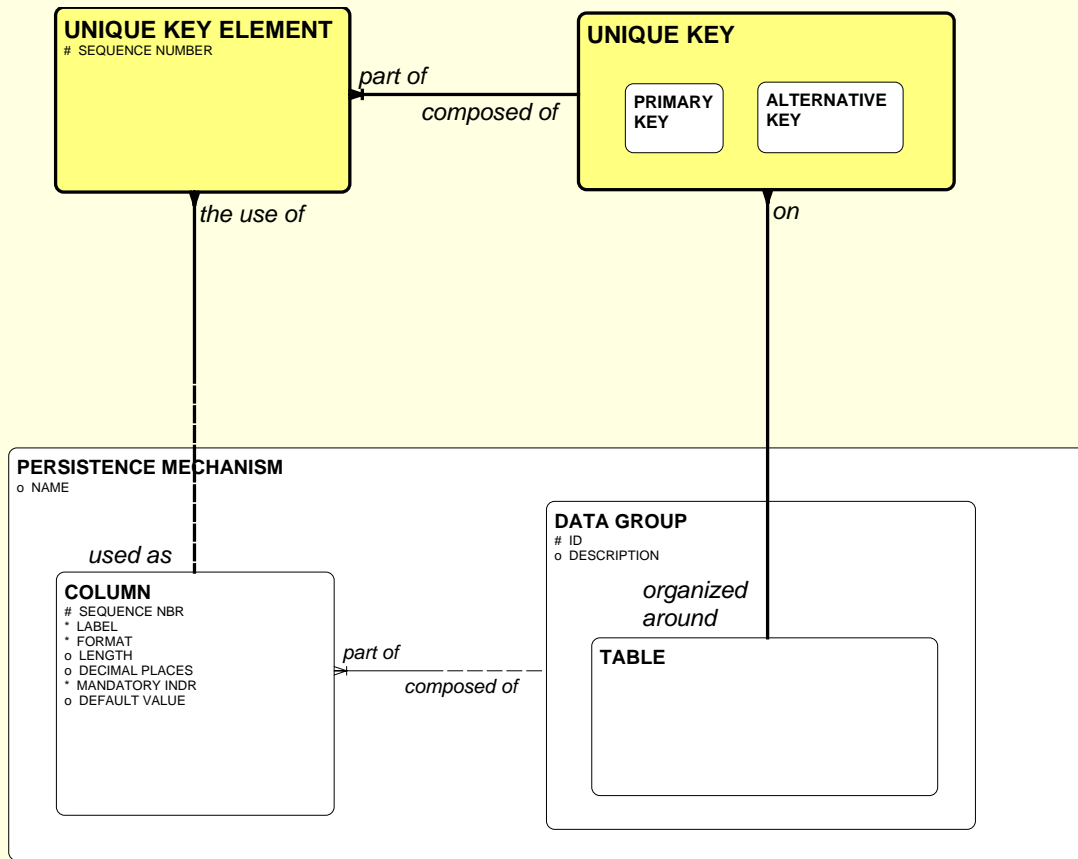


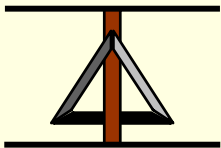
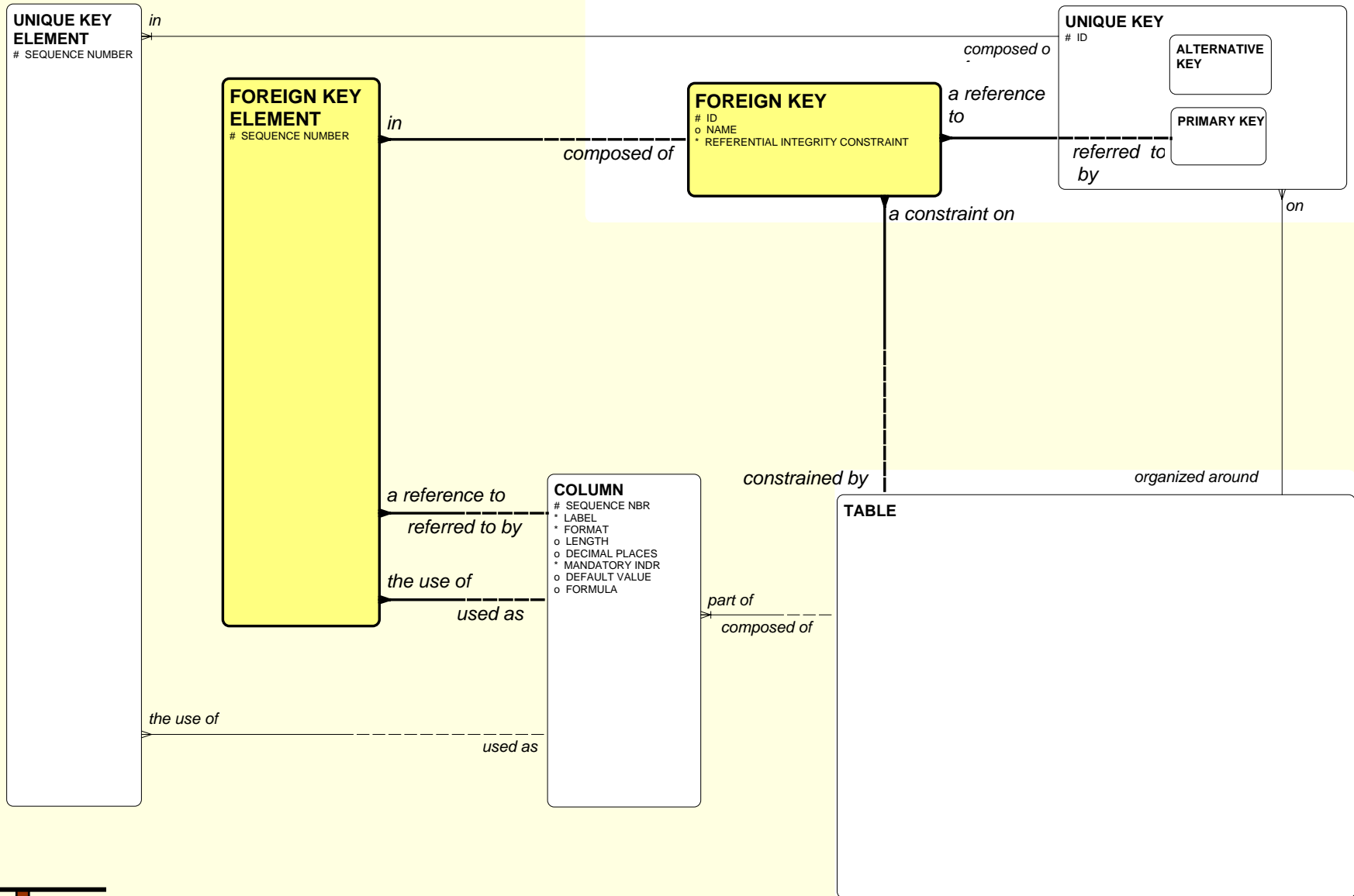


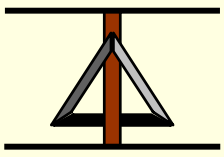
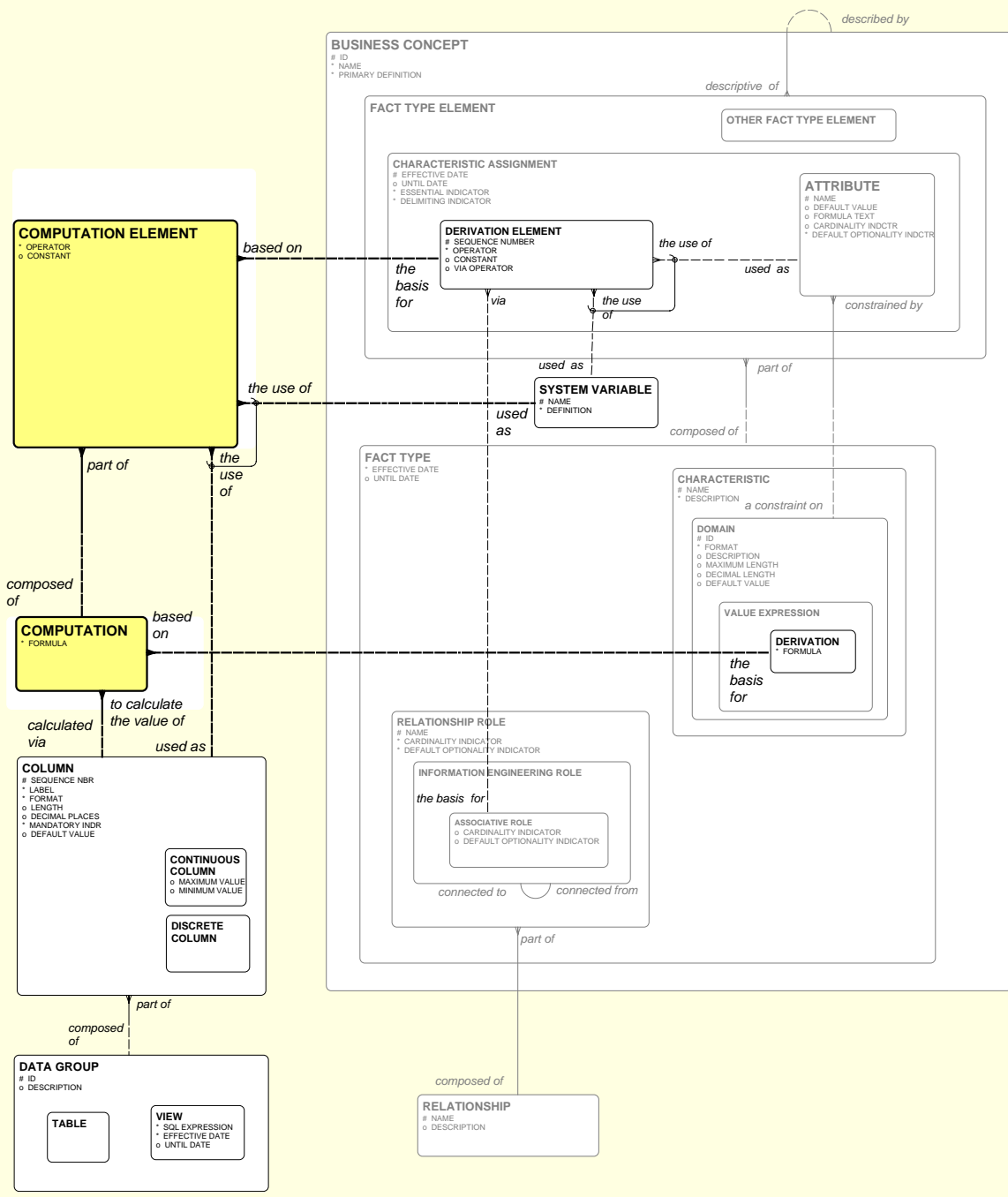


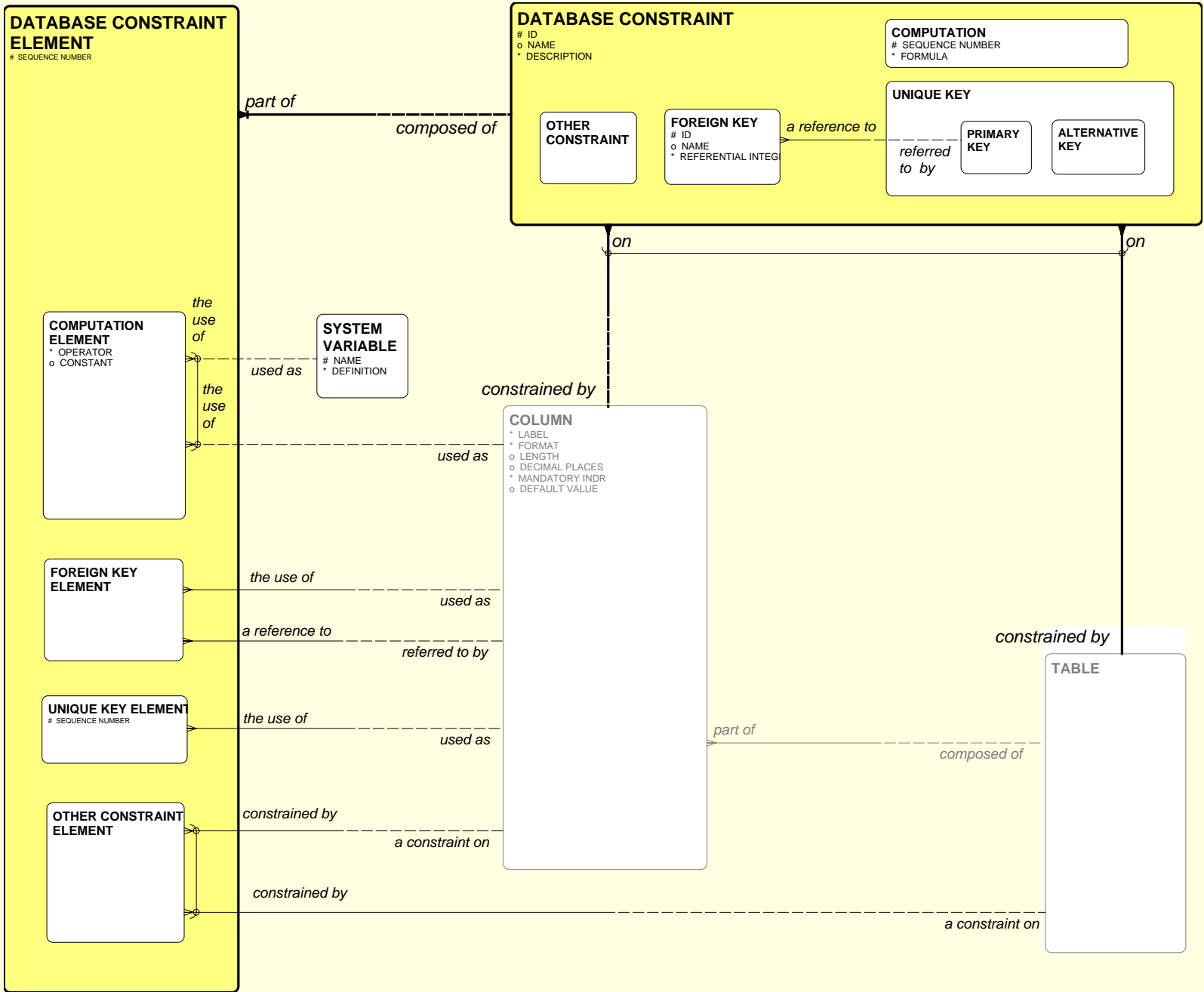
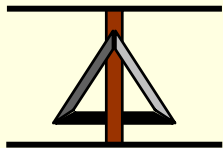
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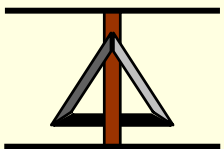
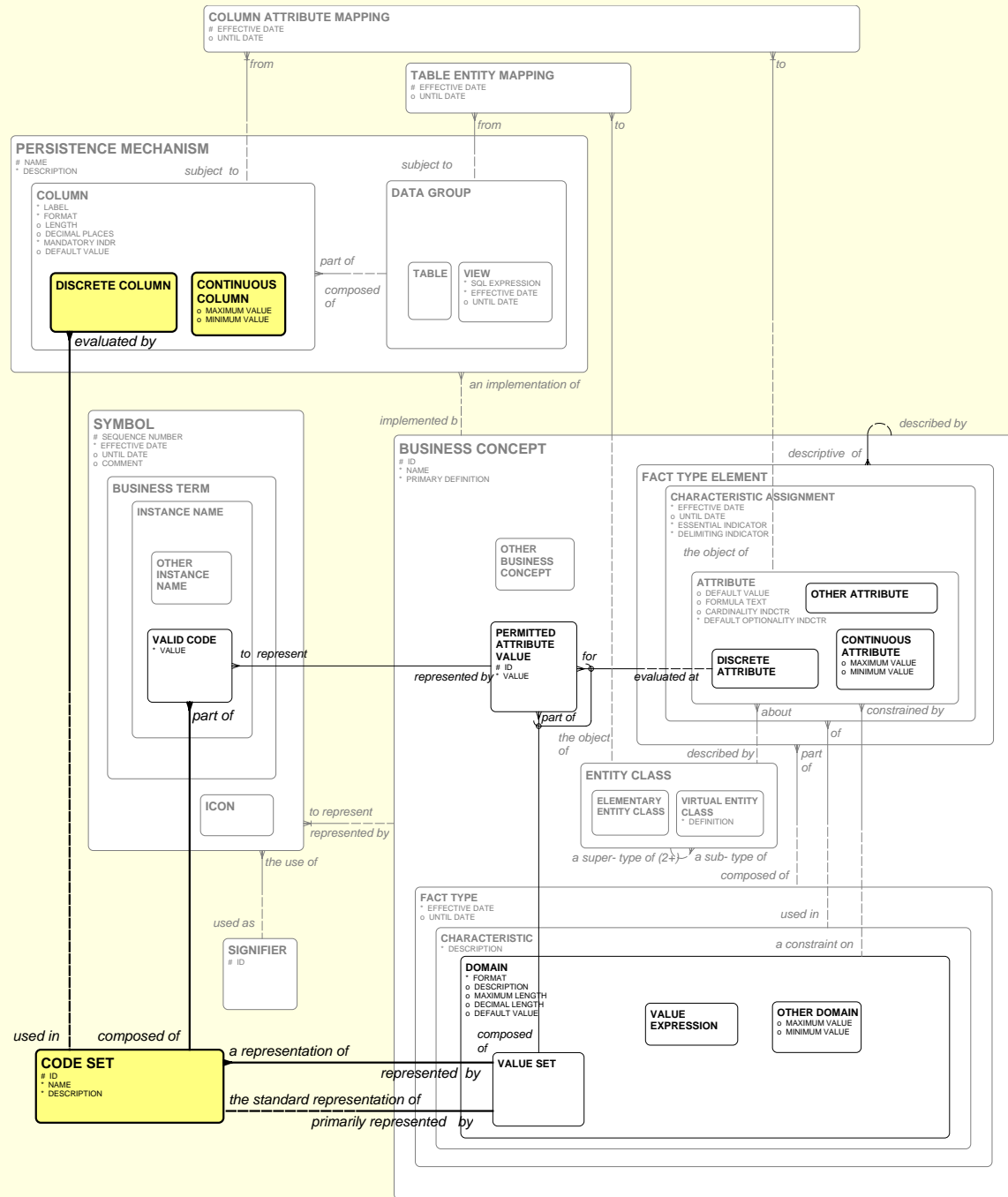


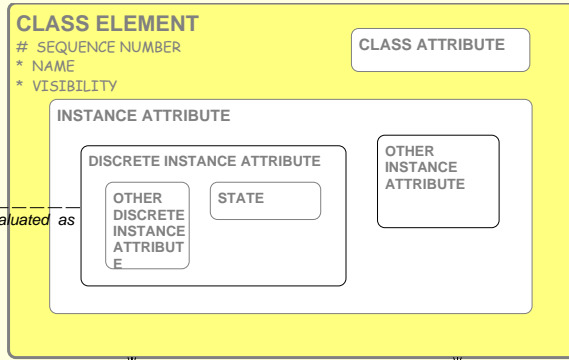
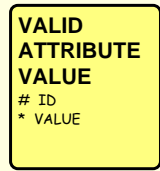












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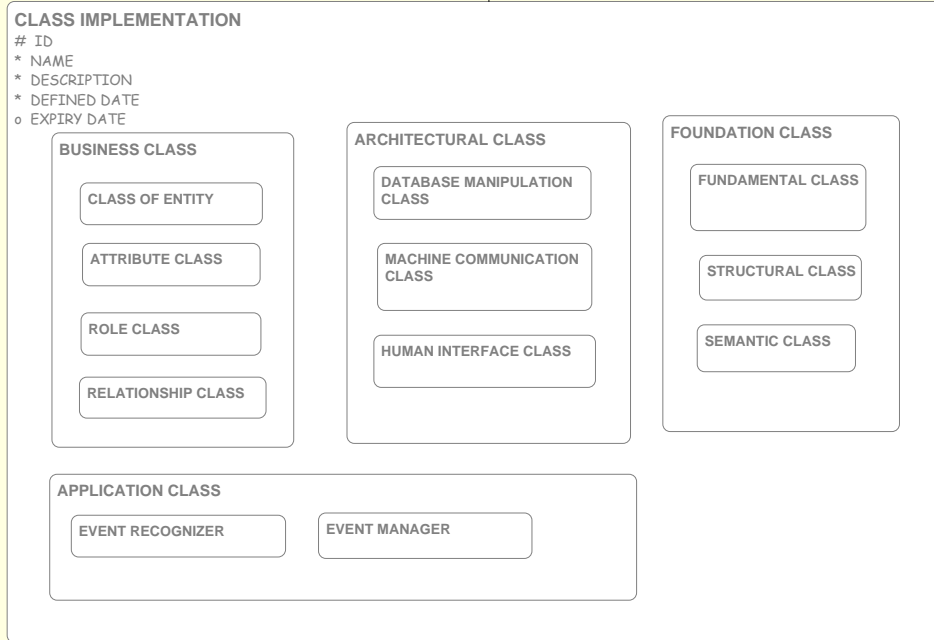
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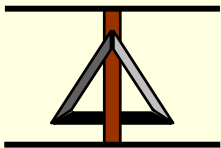
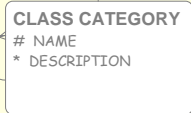
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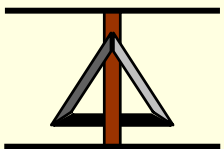
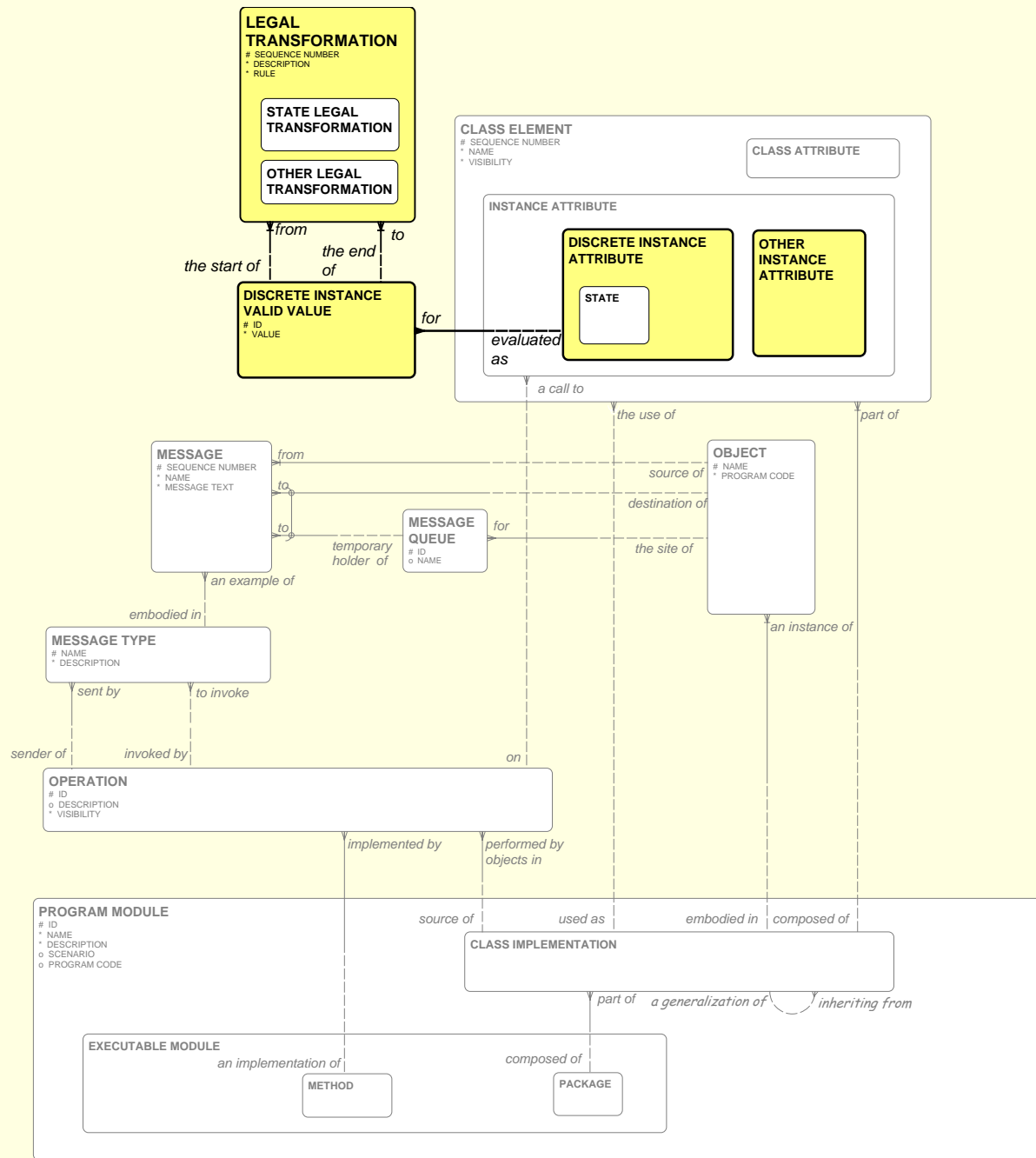
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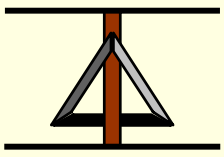
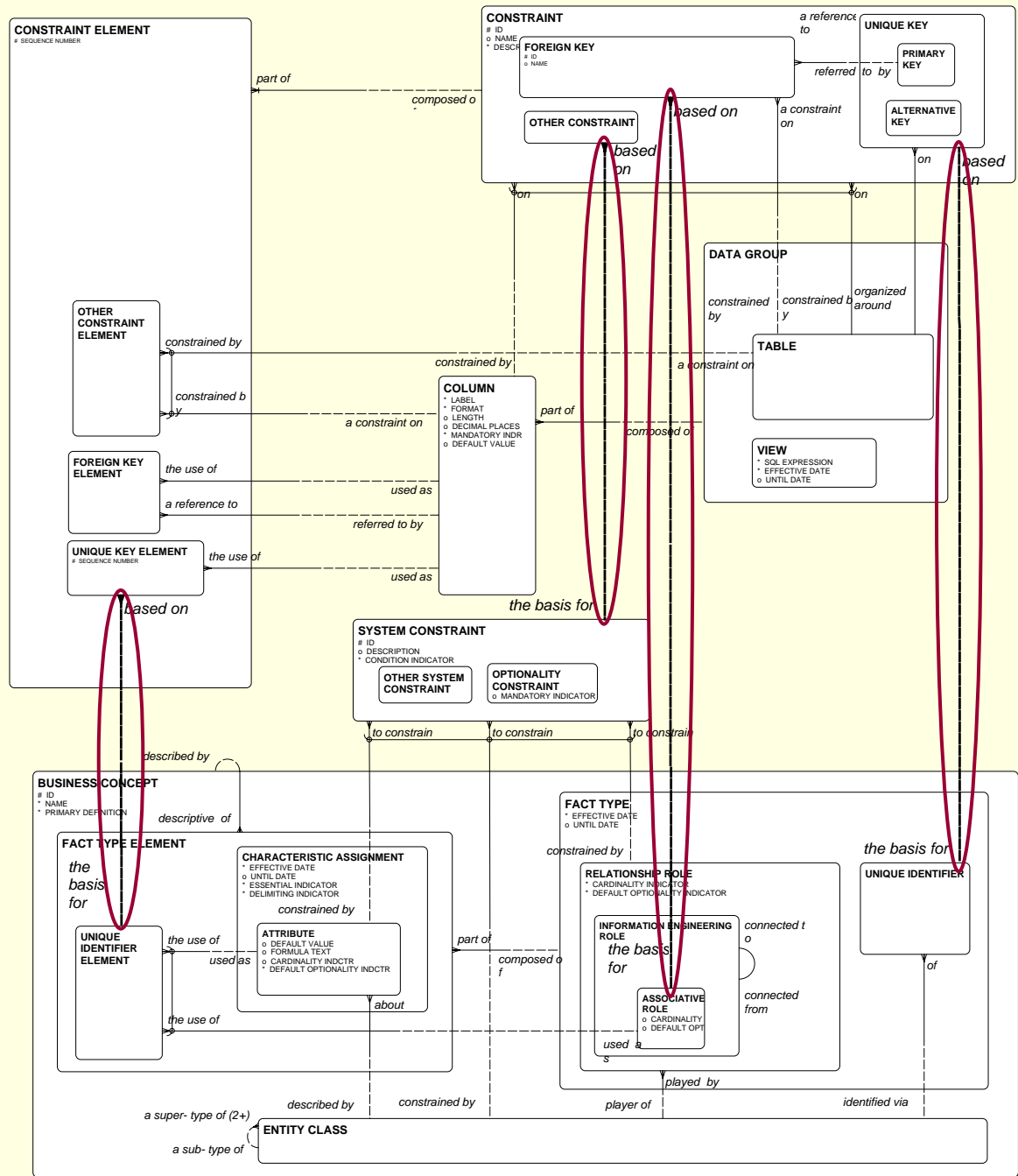
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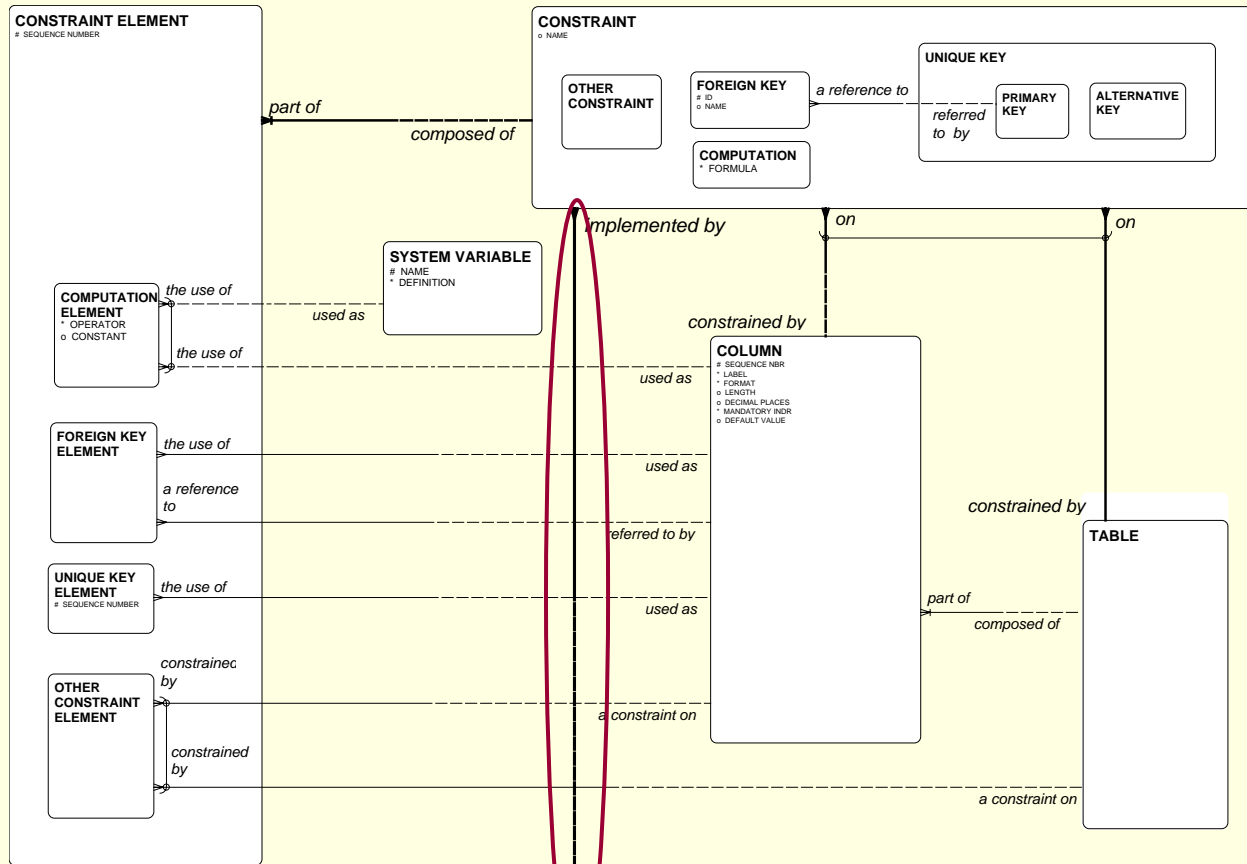
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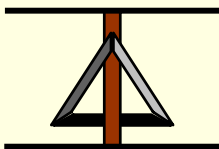
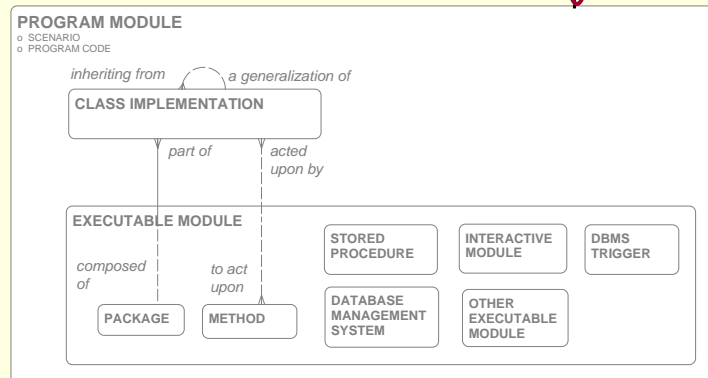








an implementation of



THE END

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