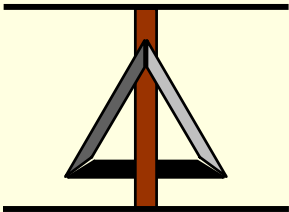


Data Model Patterns: A Metadata Map

East Coast DAMA 2006

David C. Hay

May-June, 2006



Essential Strategies, Inc.







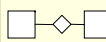


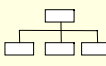





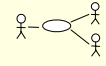














13 Hilshire Grove Lane, Houston, TX 77055

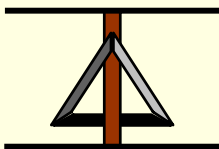
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The Architecture Framework . . .

	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 
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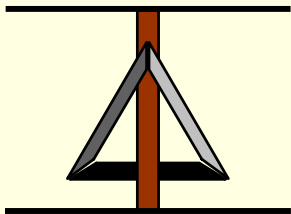


The kinds of question we ask are as many as the kinds of things which we know. They are in fact four: (1) whether the connexion of an attribute with a thing is a fact, (2) what is the reason of the connexion, (3) whether a thing exists, (4) what is the nature of the thing. Thus when our question concerns a complex of thing and attribute and we ask whether the thing is thus or otherwise qualified--whether, e.g., the sun suffers eclipse or not--then we are asking as to the fact of a connexion.

Aristotle

Posterior Analytics

Column 1: Data



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





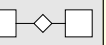


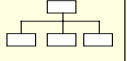


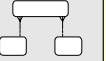


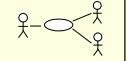











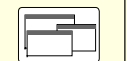


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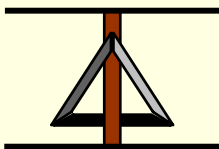
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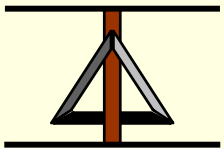
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Row Two:
The business owner's View



WORD USAGE

in

of

*composed
of*

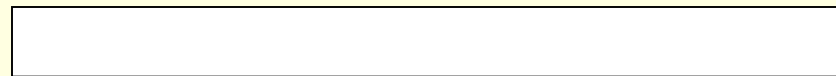
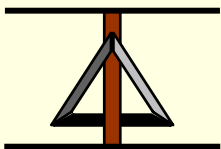
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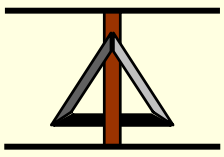
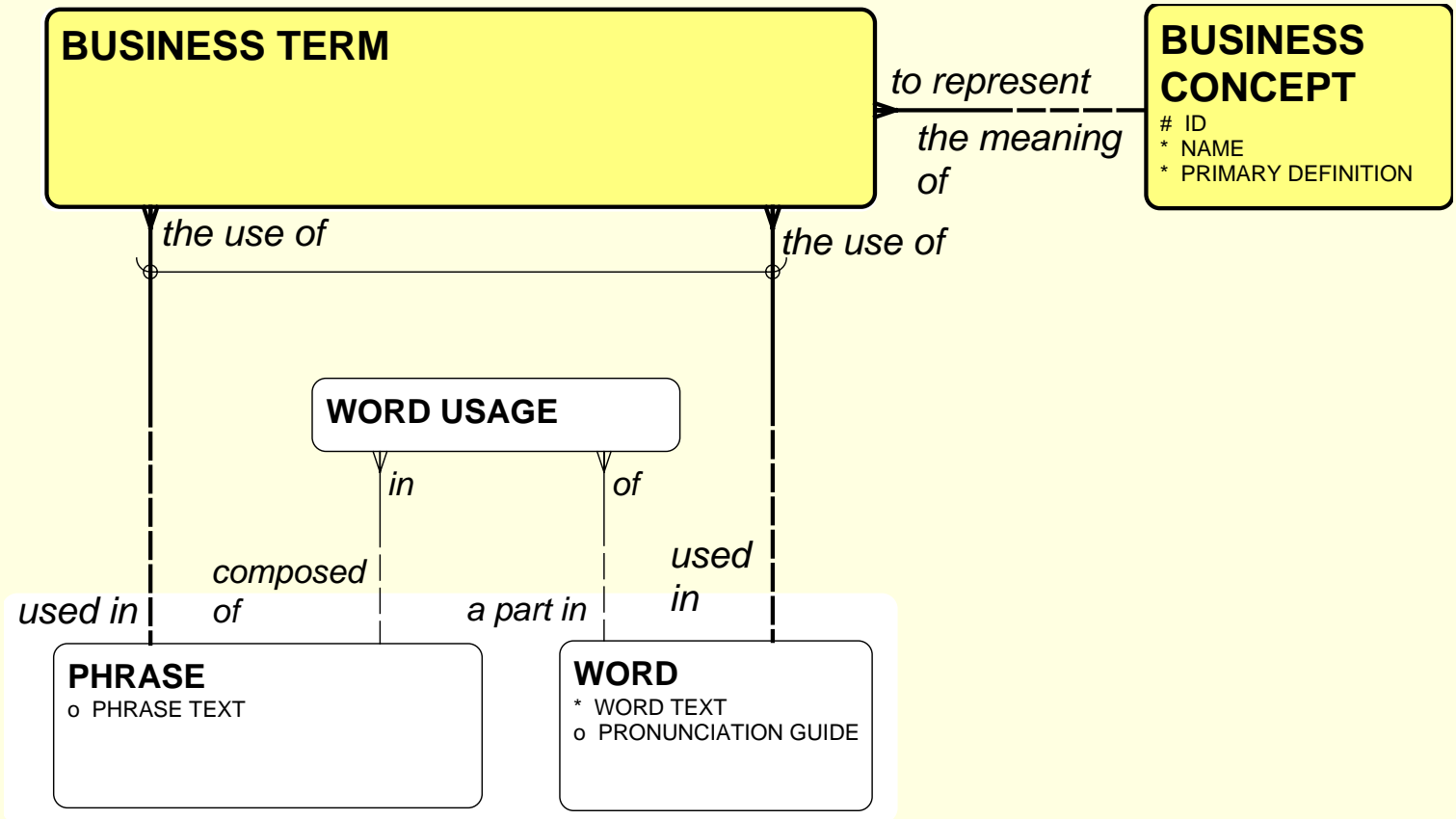
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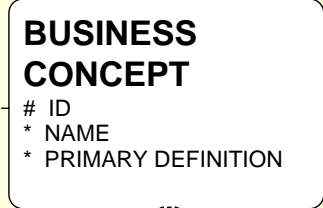
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WORD

* WORD TEXT
o PRONUNCIATION GUIDE

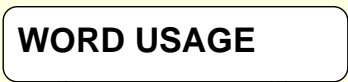




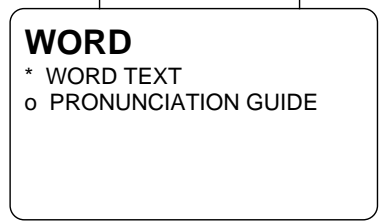
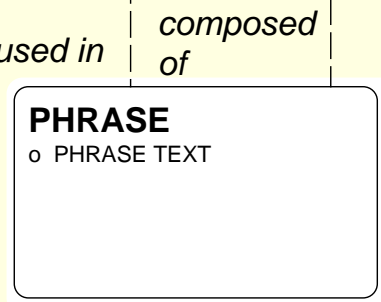


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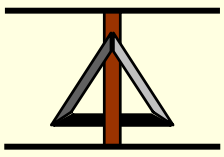
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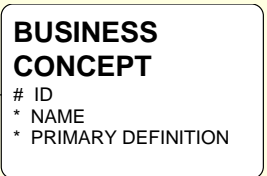
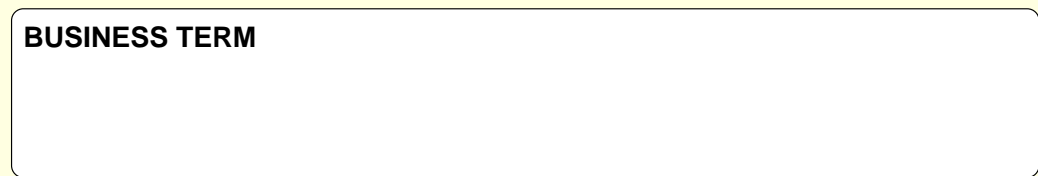


the shared understanding of
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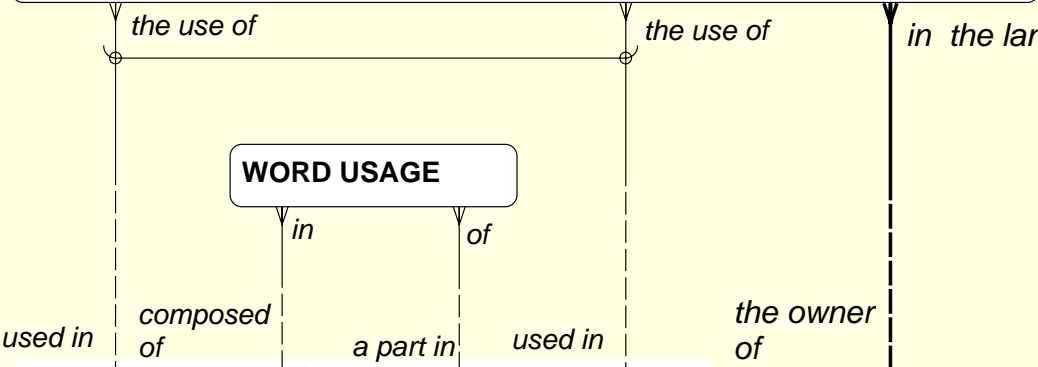


used in *composed of* *in* *of* *a part in* *used in*

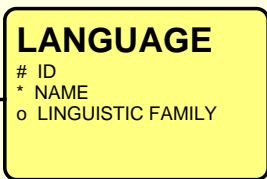
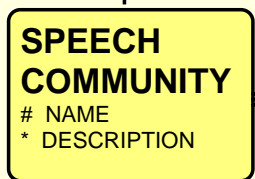
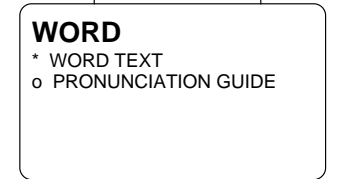
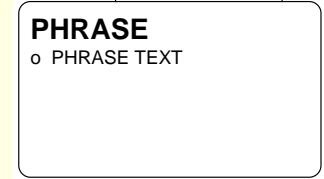




to represent
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the shared understanding of
 sharing in the understanding of

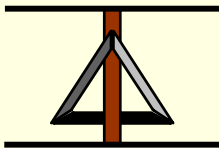


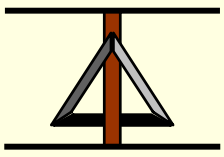
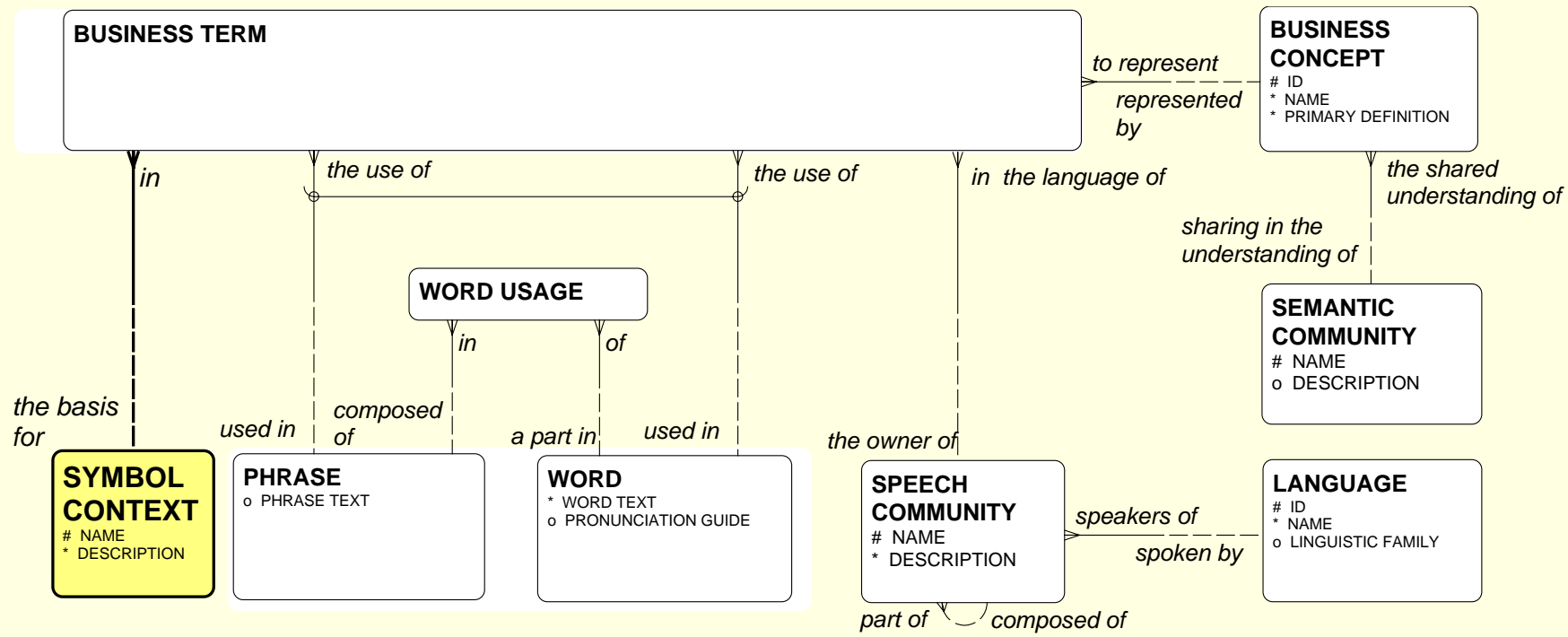
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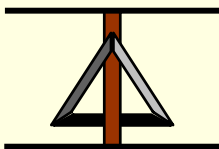
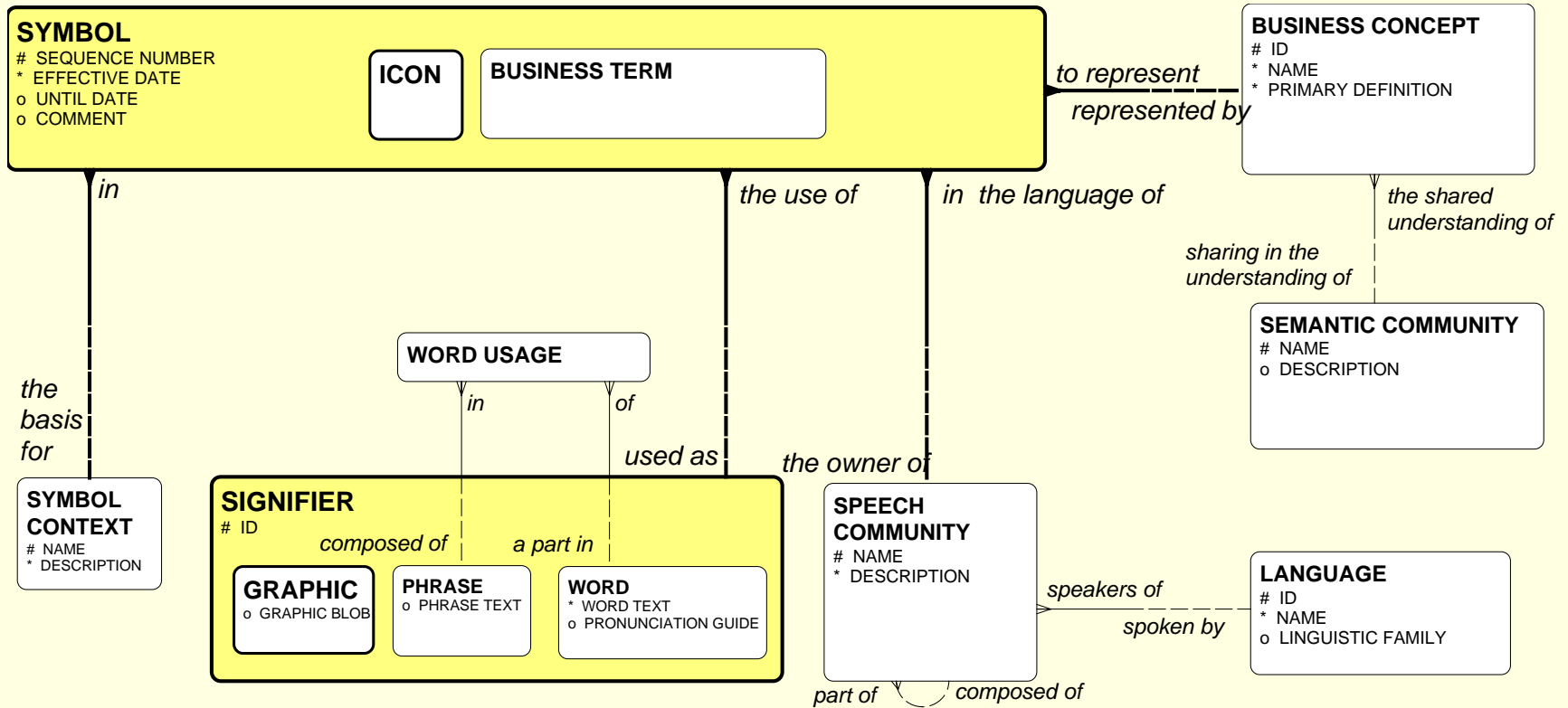
speakers of
 spoken by

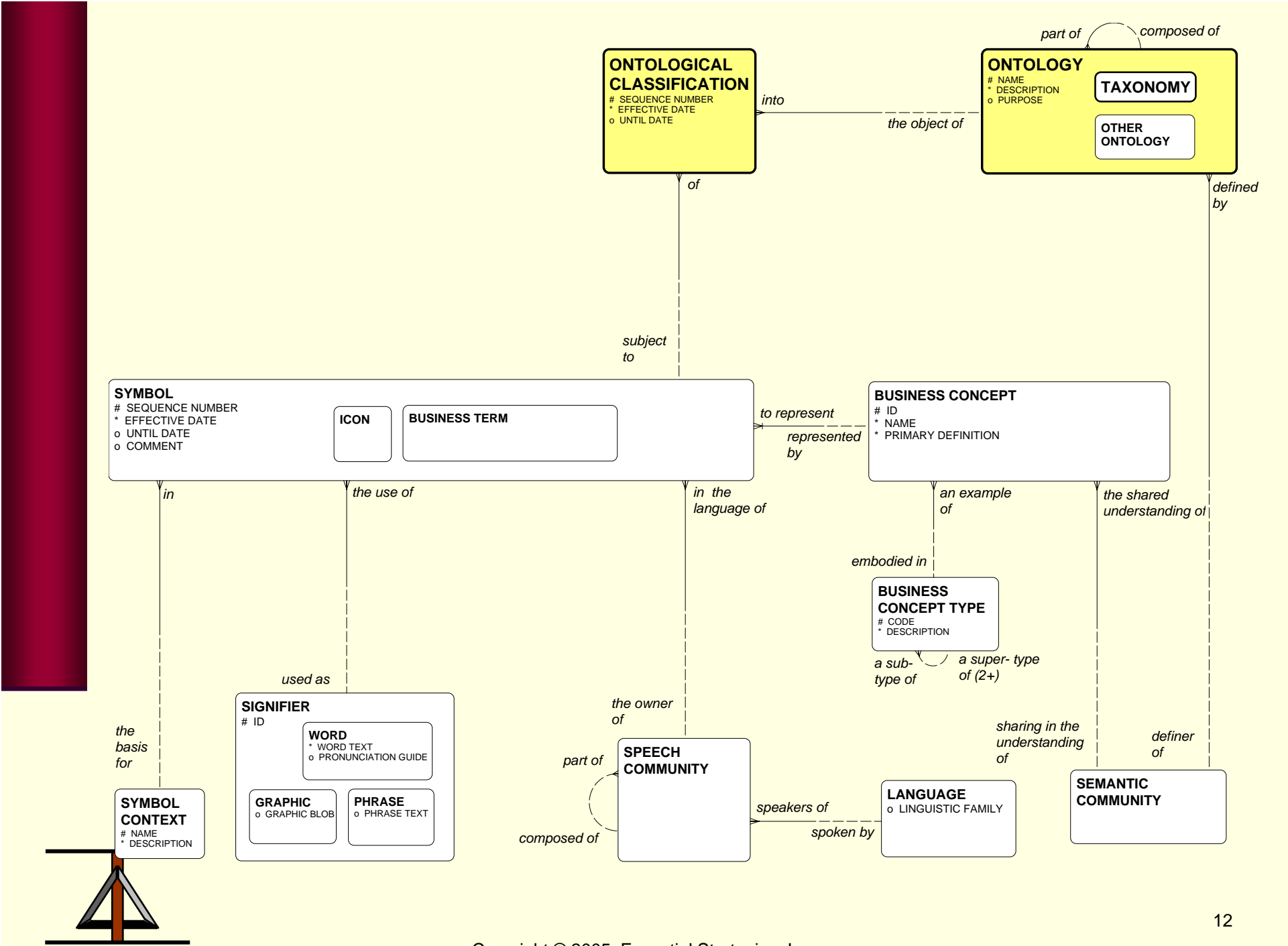
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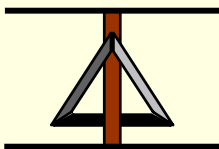
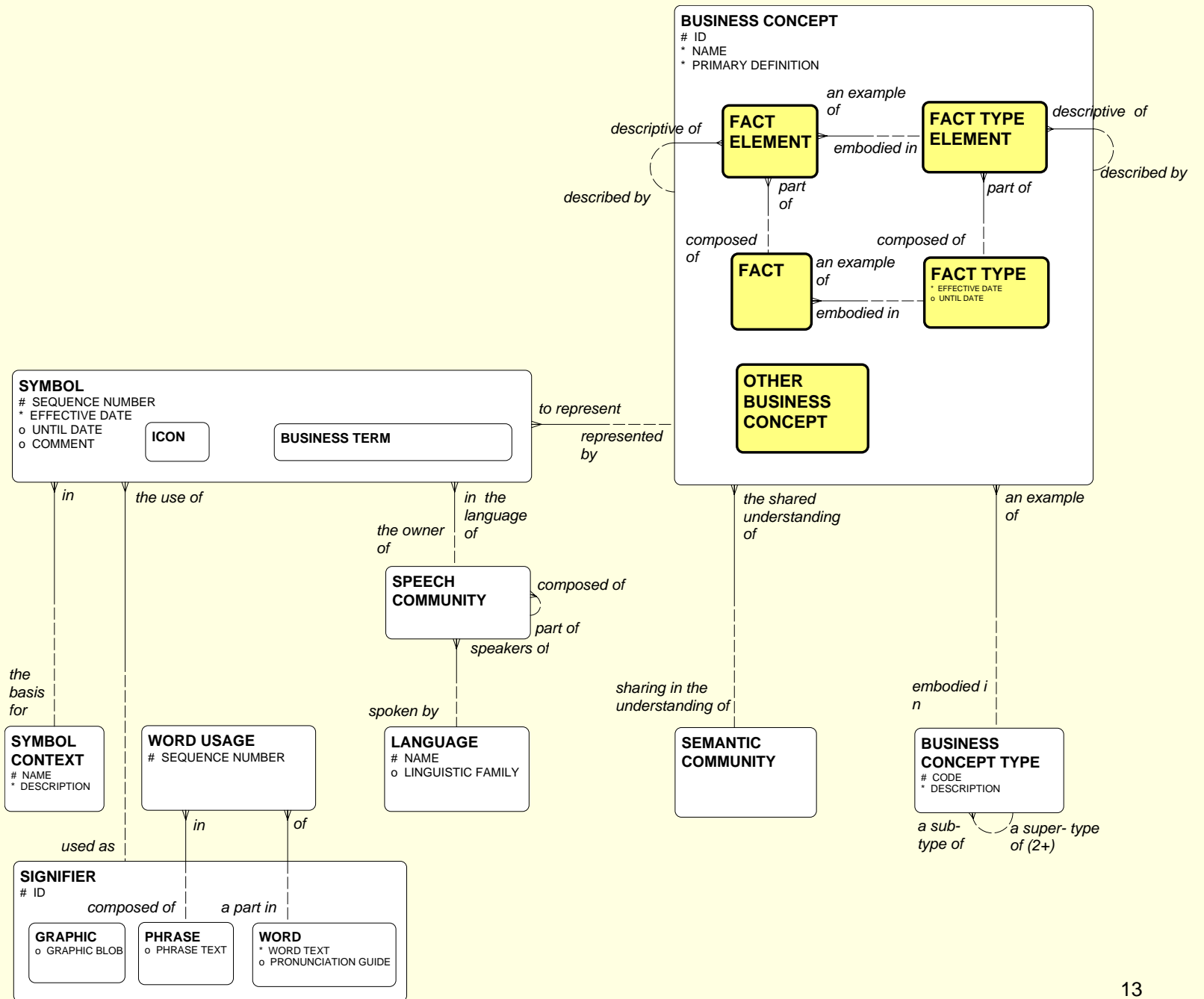
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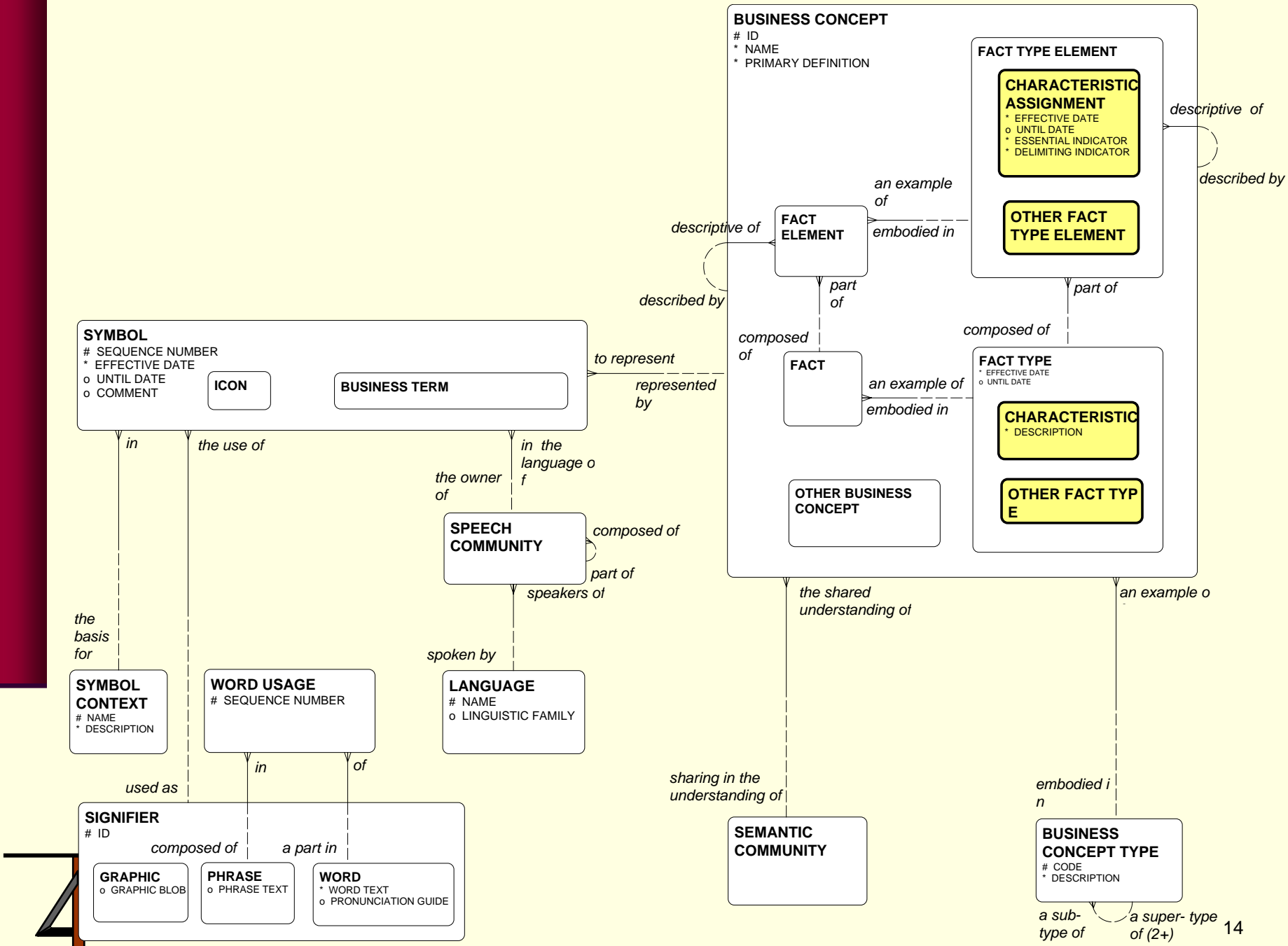


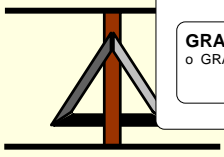
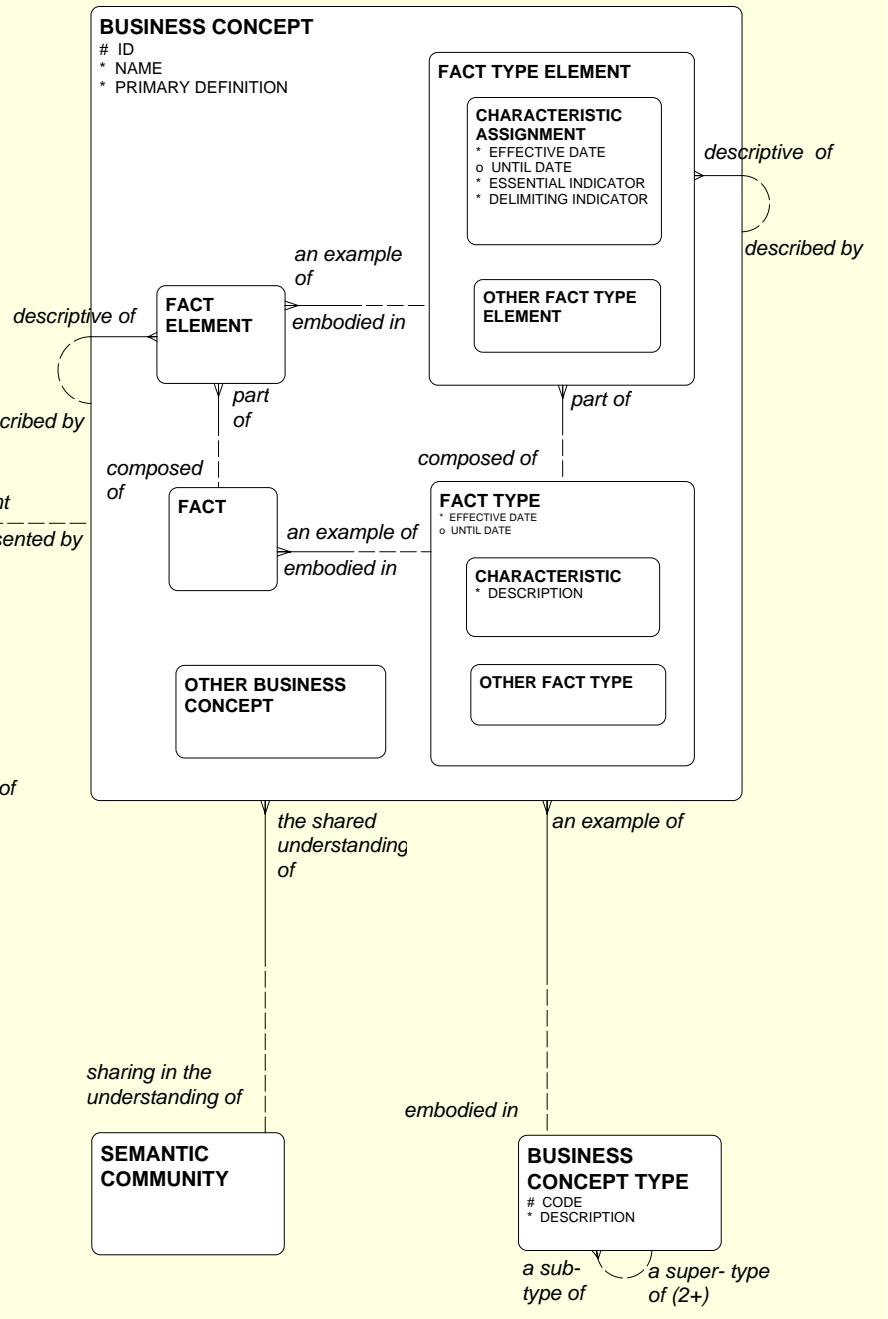
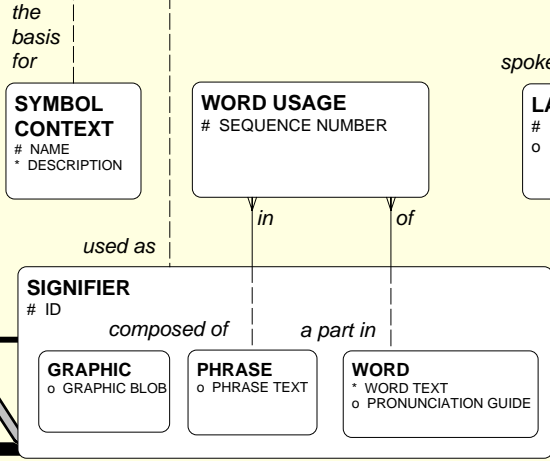
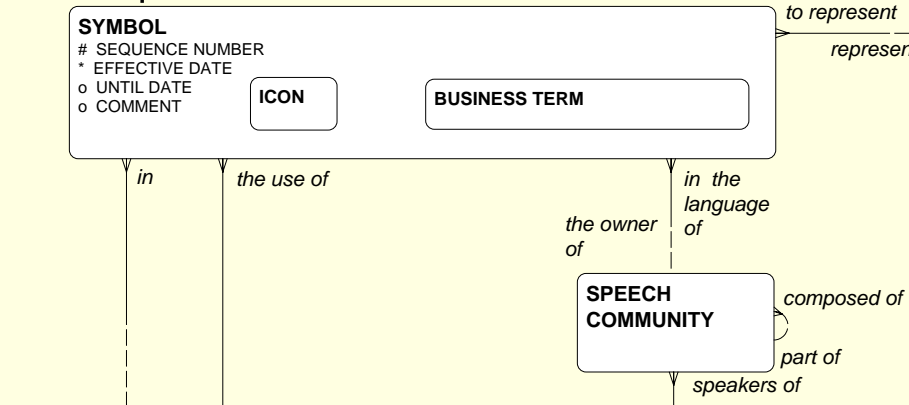
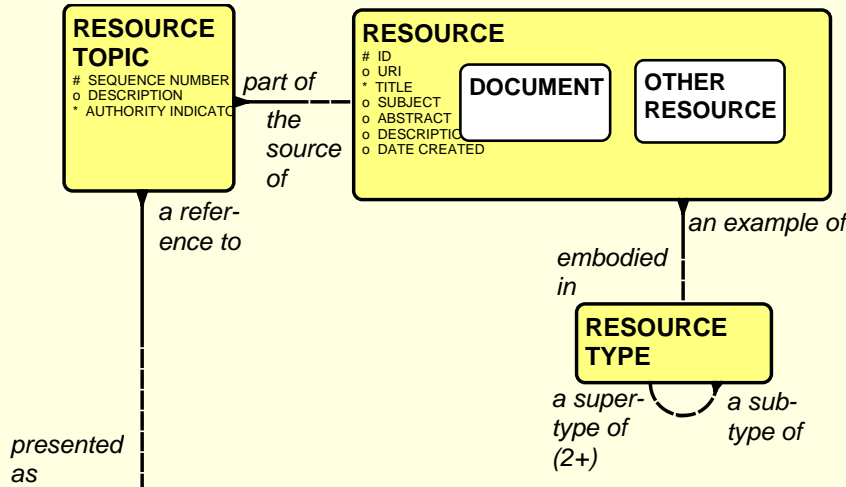


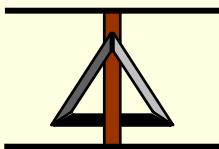
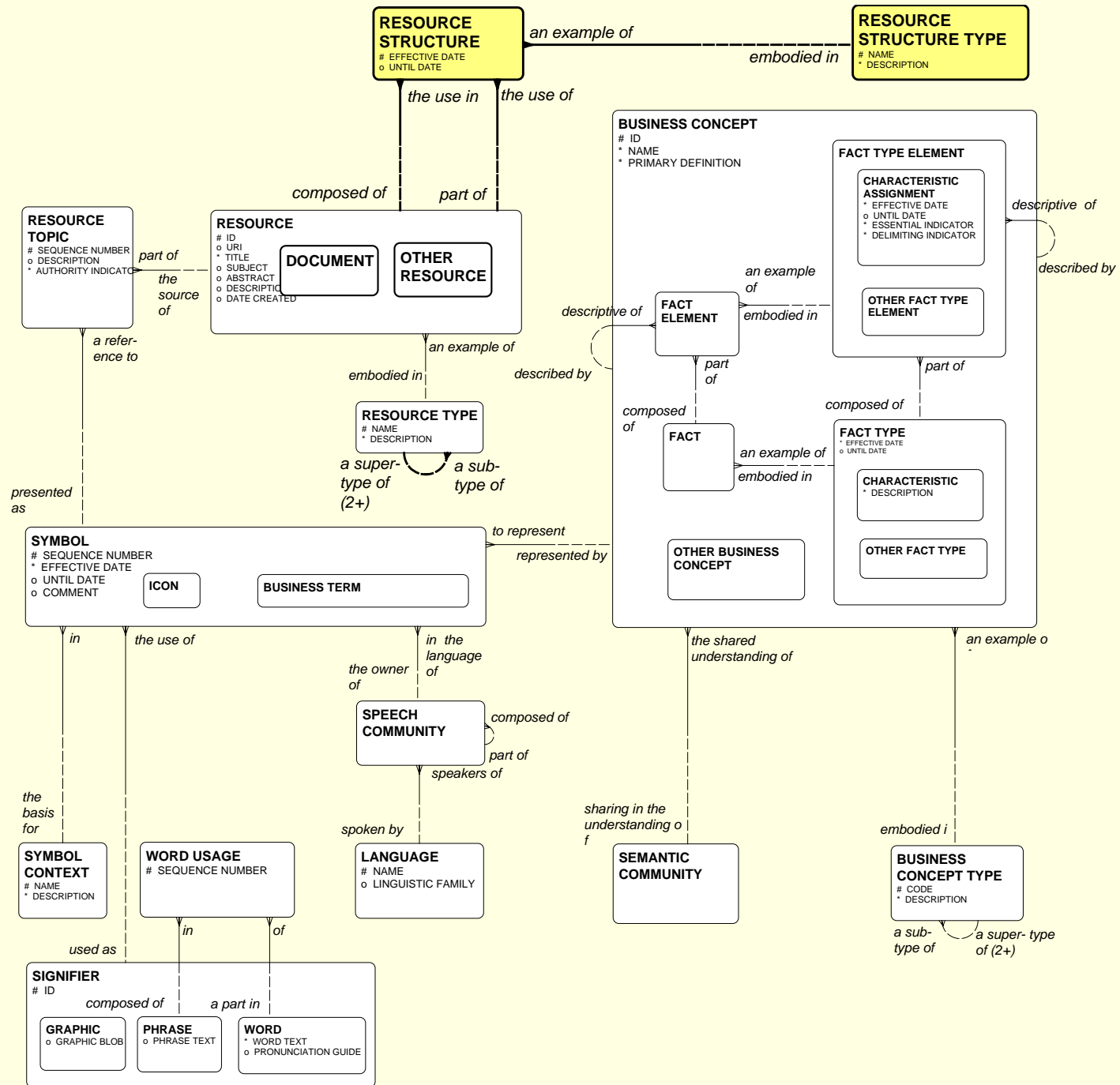


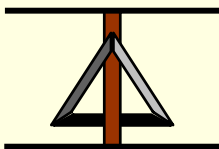
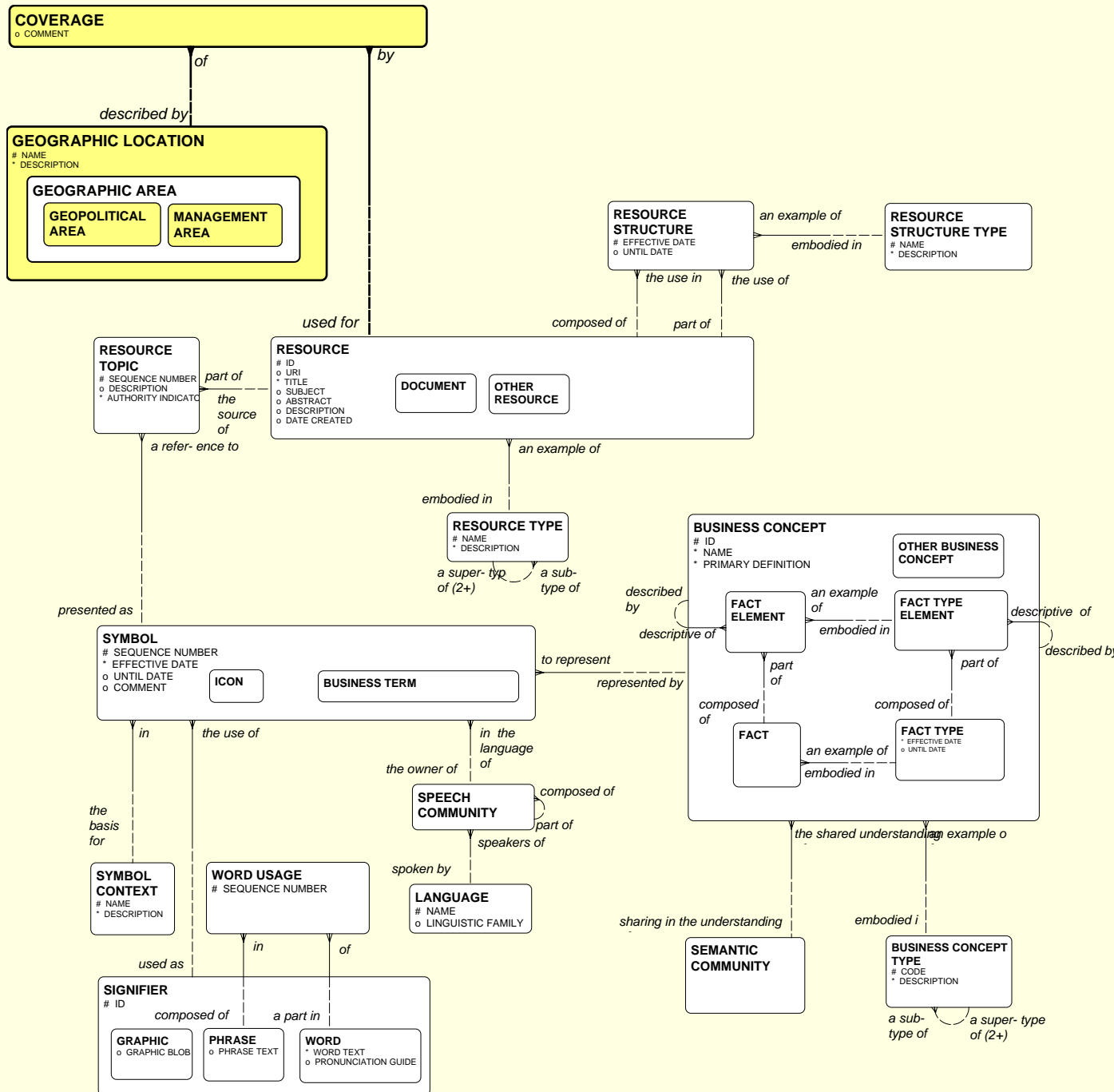






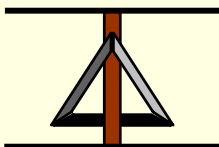




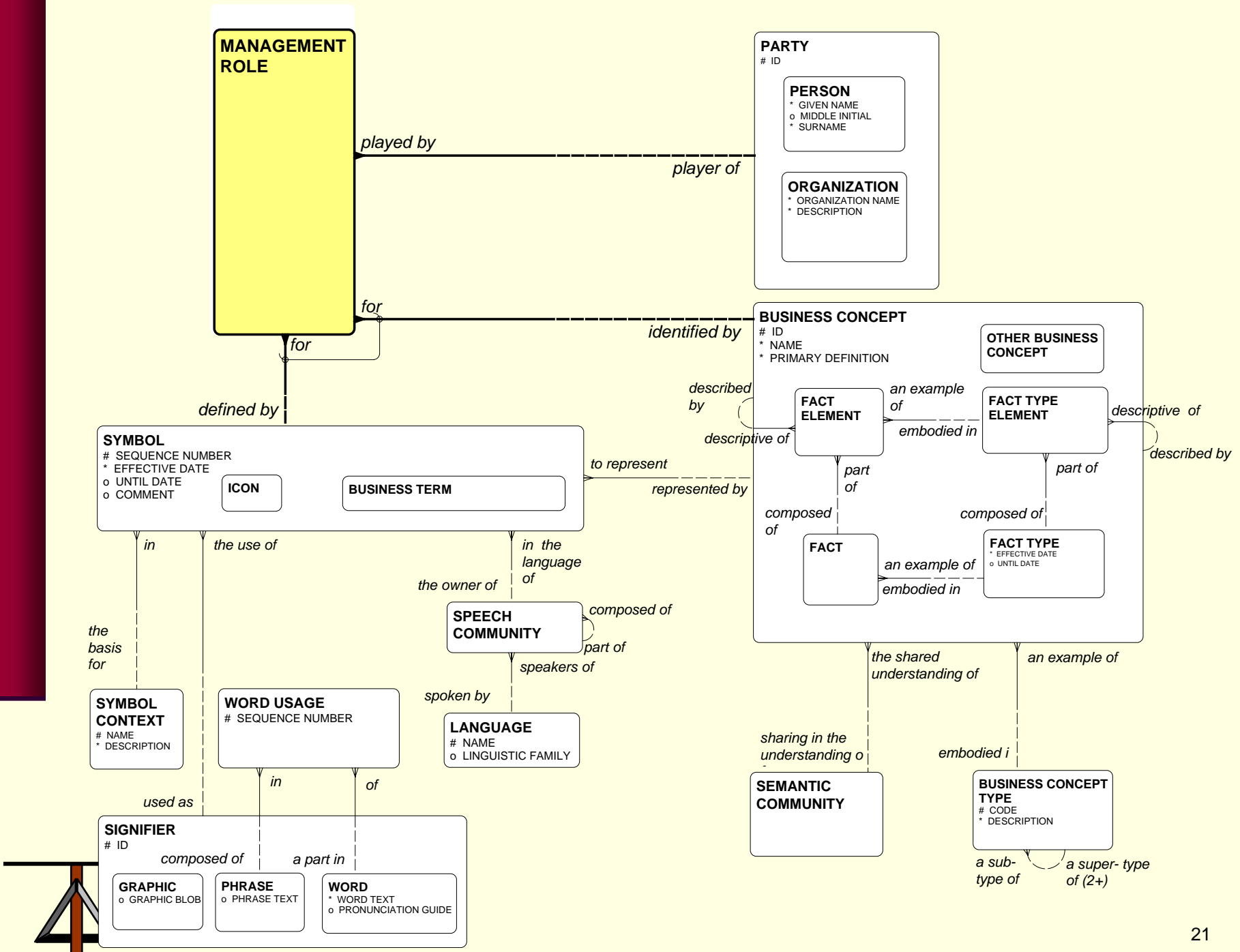


The Dublin Core . . .

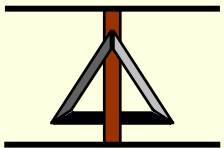
Dublin Core Term	Metadata Element
Contributor	<i>created via authorship role/ an example of authorship role type "Contributor"</i>
Coverage	<i>to describe an aspect of coverages / of a geographic location.</i>
Creator	<i>created via authorship roles/ an example of authorship role type "Creator"</i>
Date	resource: "Date Created"
Description	resource: "Description"
Format	<i>embodied in copy: "Format"</i>
Identifier	resource: "ID"; resource: "URI"
Language	<i>the source of resource elements/ a reference to a symbol/ in the language of a speech community/ speaker of a language*</i>
Publisher	<i>created via authorship roles/ an example of authorship role type "Publisher"</i>
Relation	<i>part of a resource structure/ the use of another resource</i>
Rights	<i>created via authorship roles/ an example of authorship role type "Rights holder"</i>
Source	<i>part of resource structure/ an example of resource structure type "Source"</i>
Subject	resource: "Subject"
Title	resource: "Title"
Type	resource type: "Name"



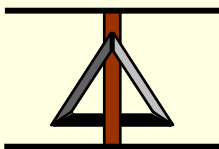
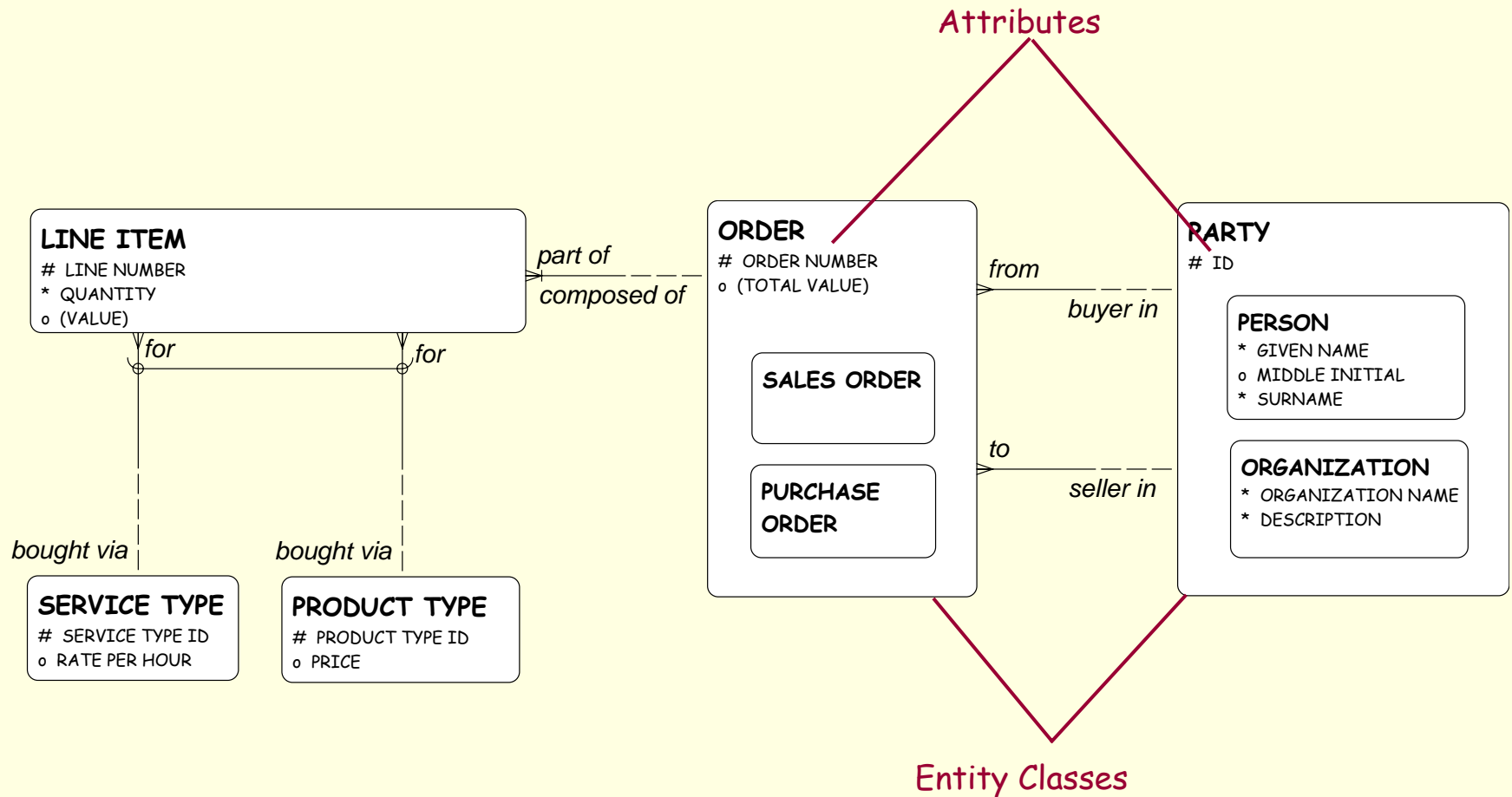
* Read "/" as "that is (are)..."

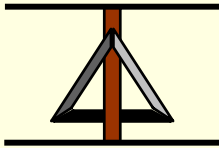
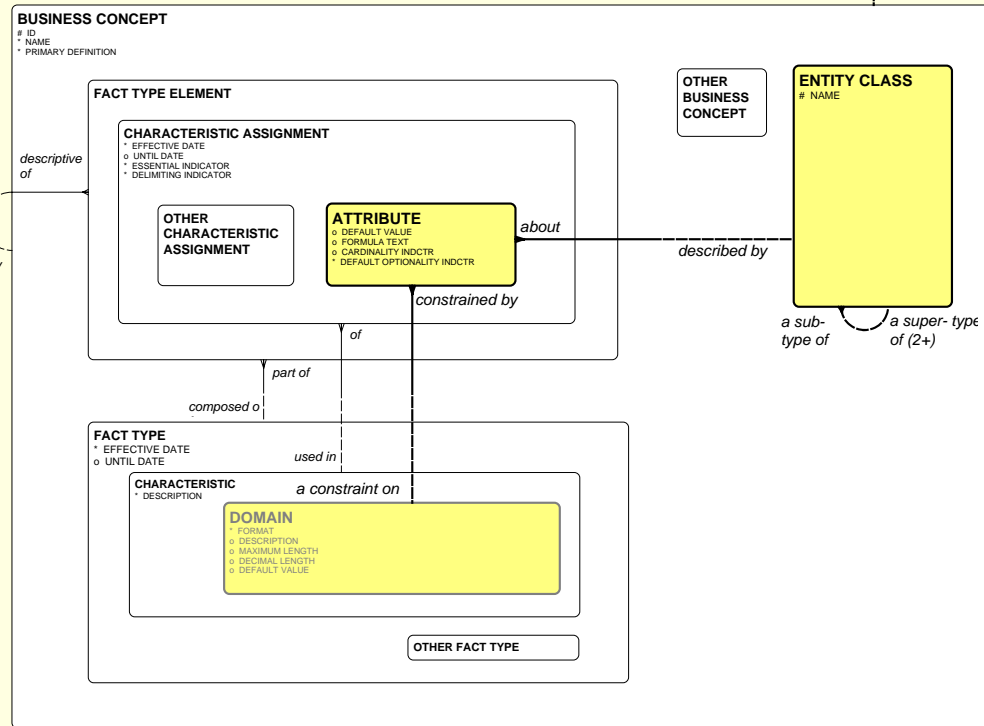
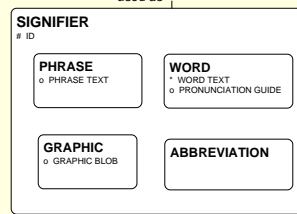
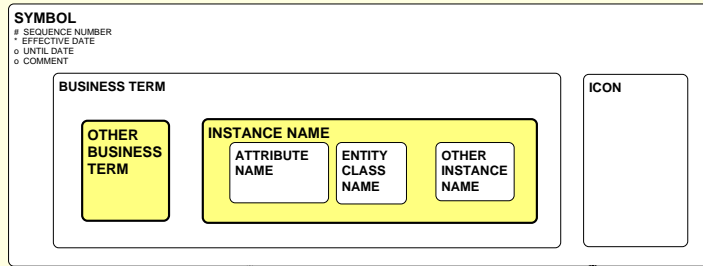


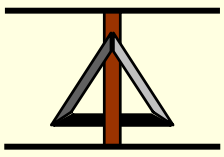
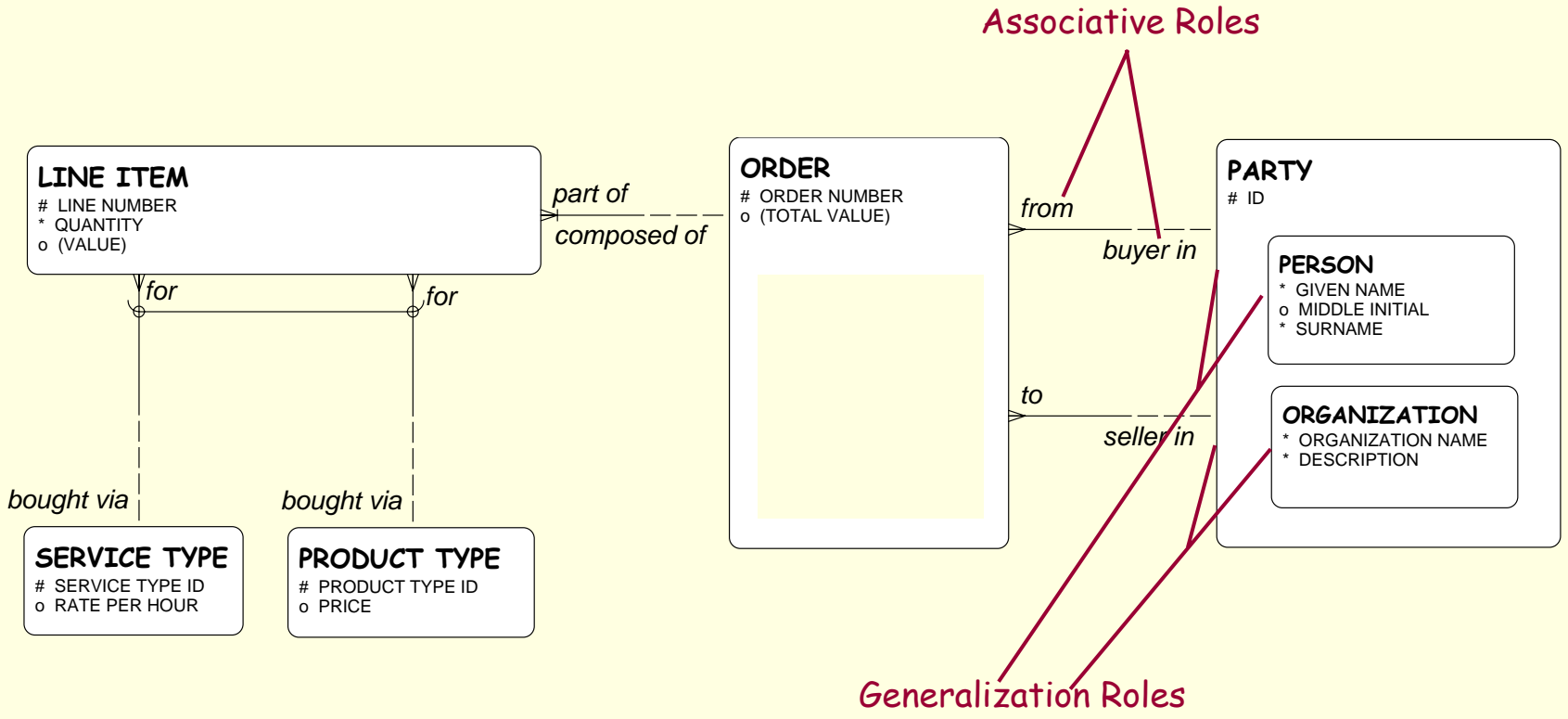
Row Three:
The architect's View

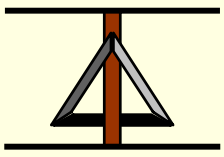
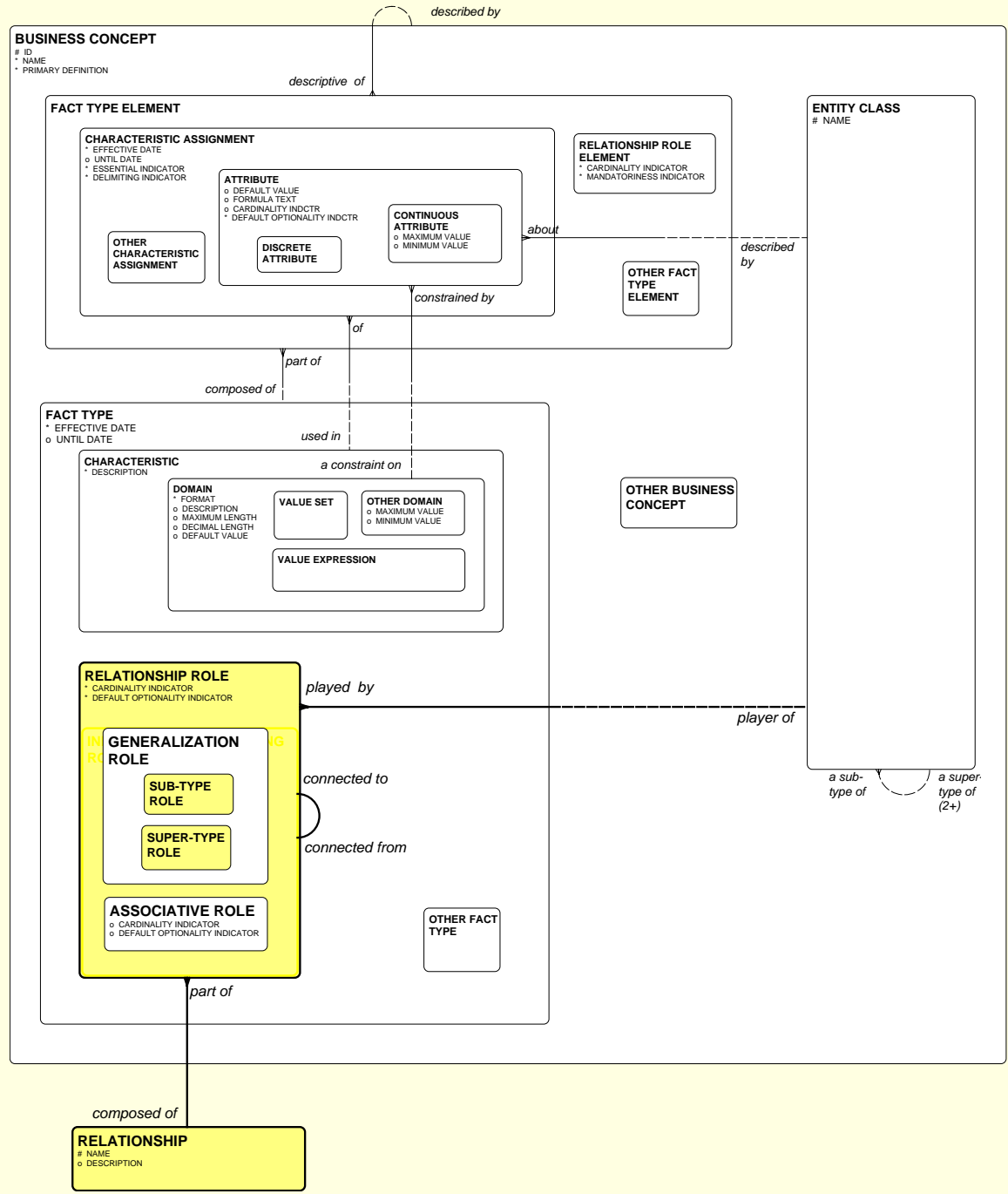


Sample Entity / Relationship Diagram . . .

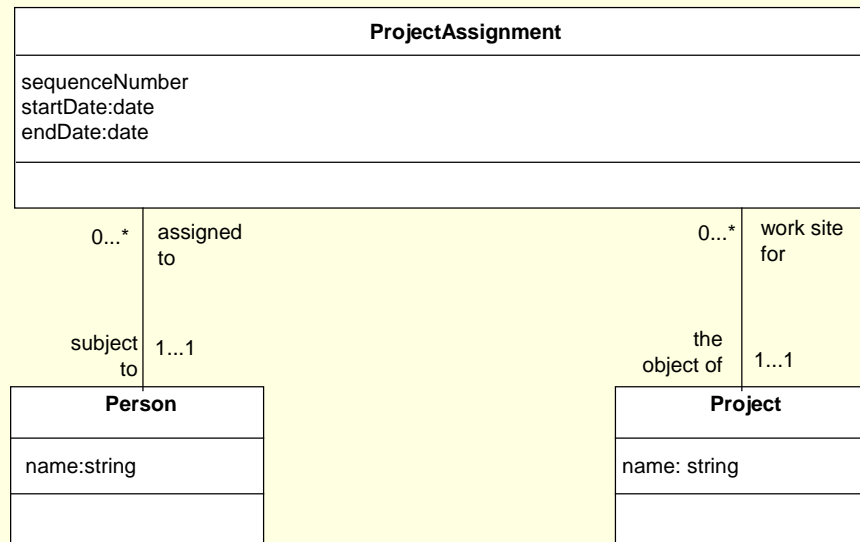




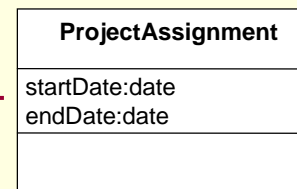




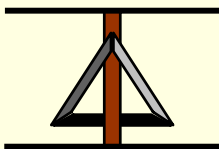
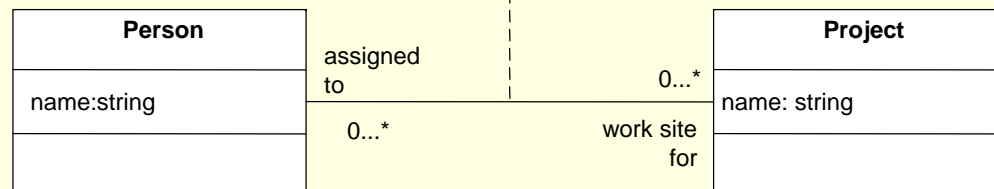
Sample Intersect Entity Classes . . .

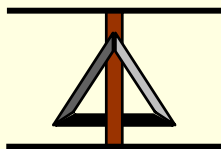
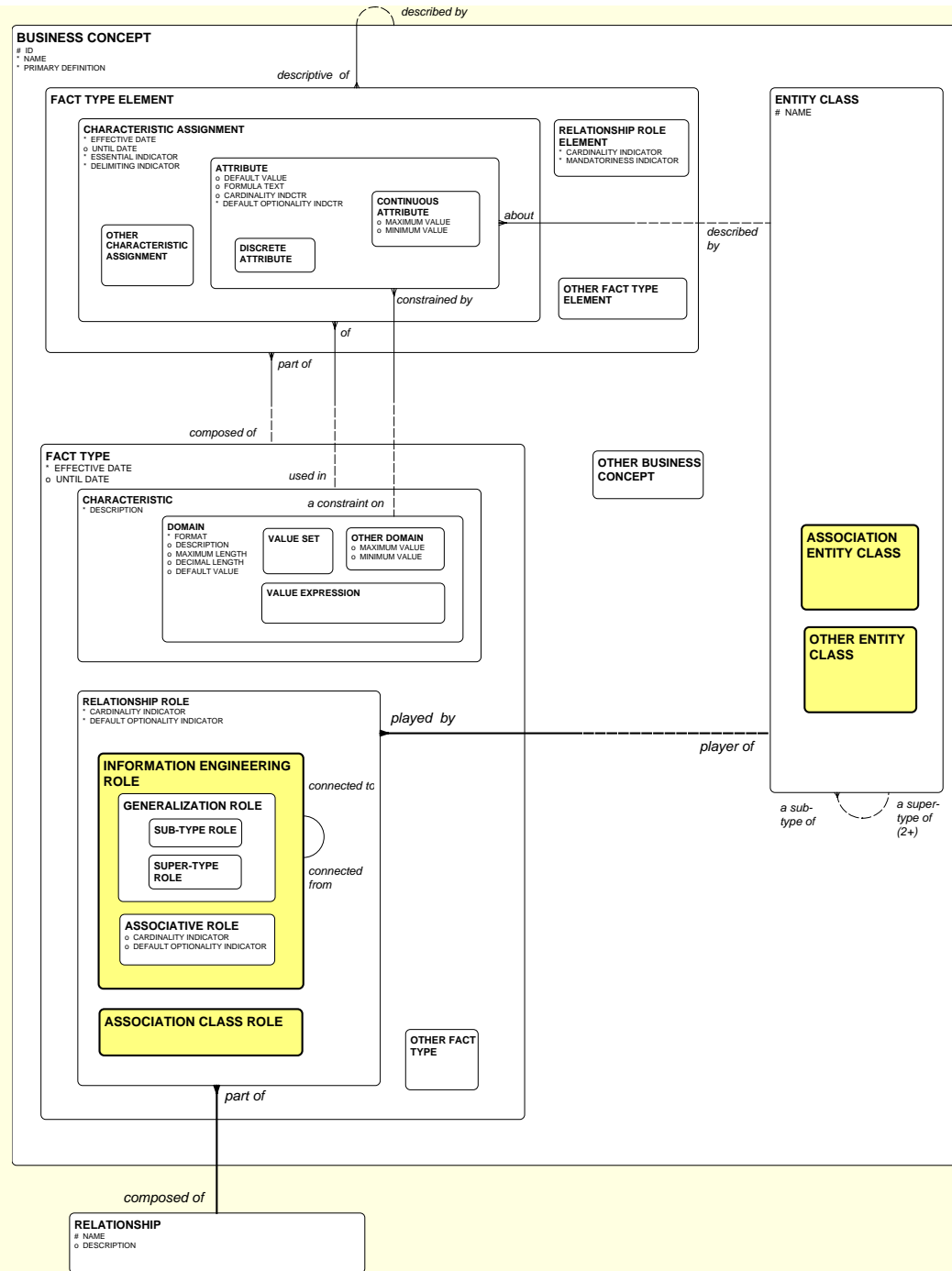


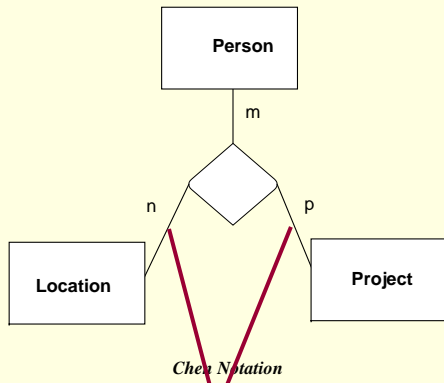
Association Entity Class



Association Class Role

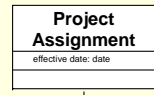




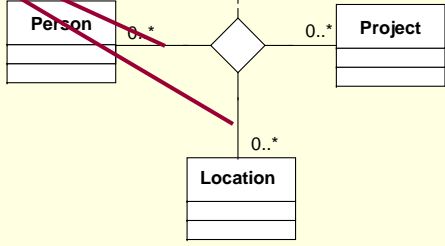


N-ary Roles

Association Entity Class

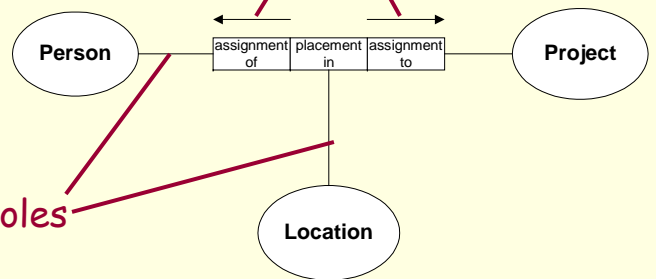


Association Class Role



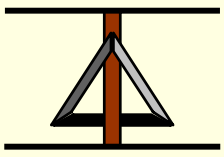
UML Notation

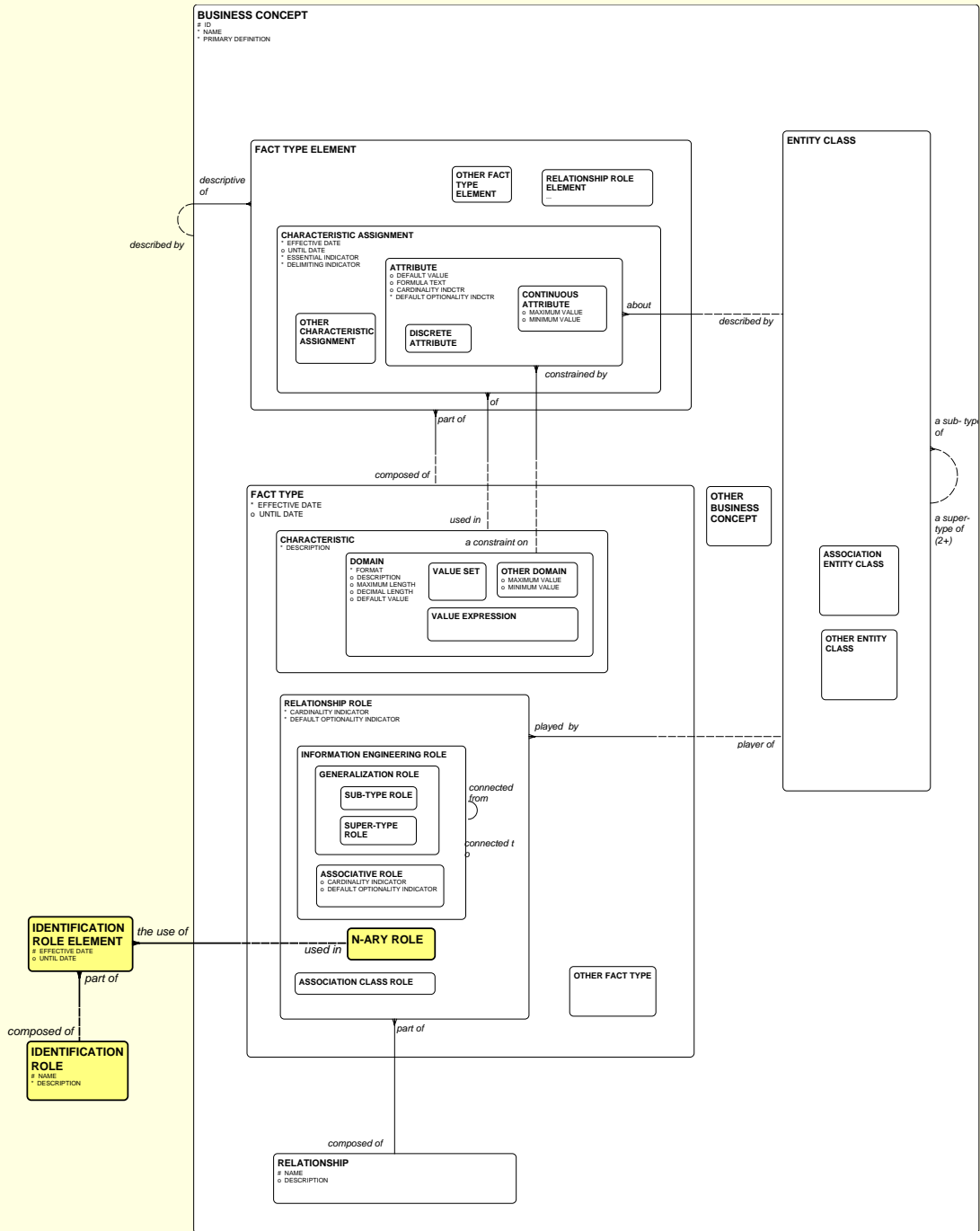
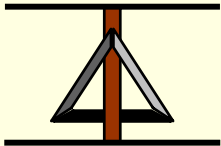
Identification Role

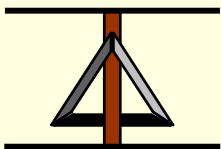
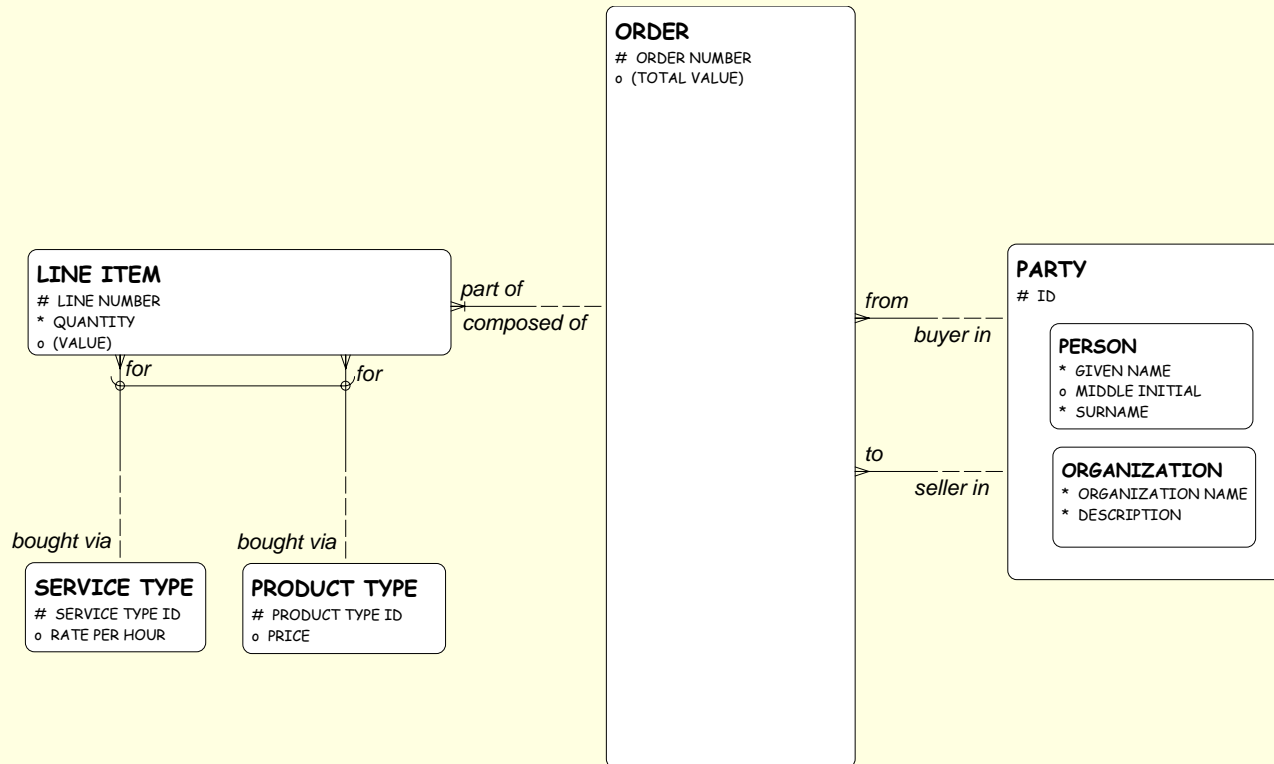


N-ary Roles

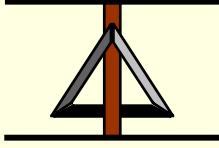
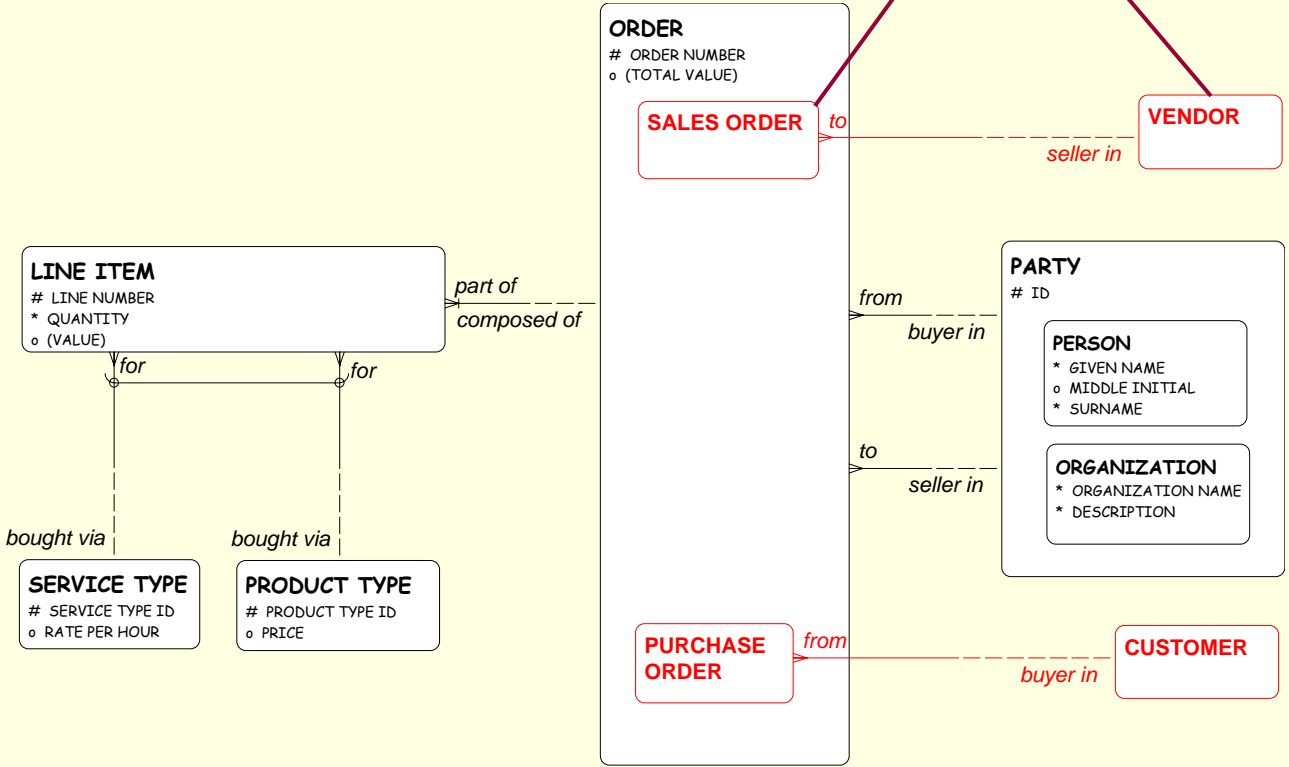
ORM Notation

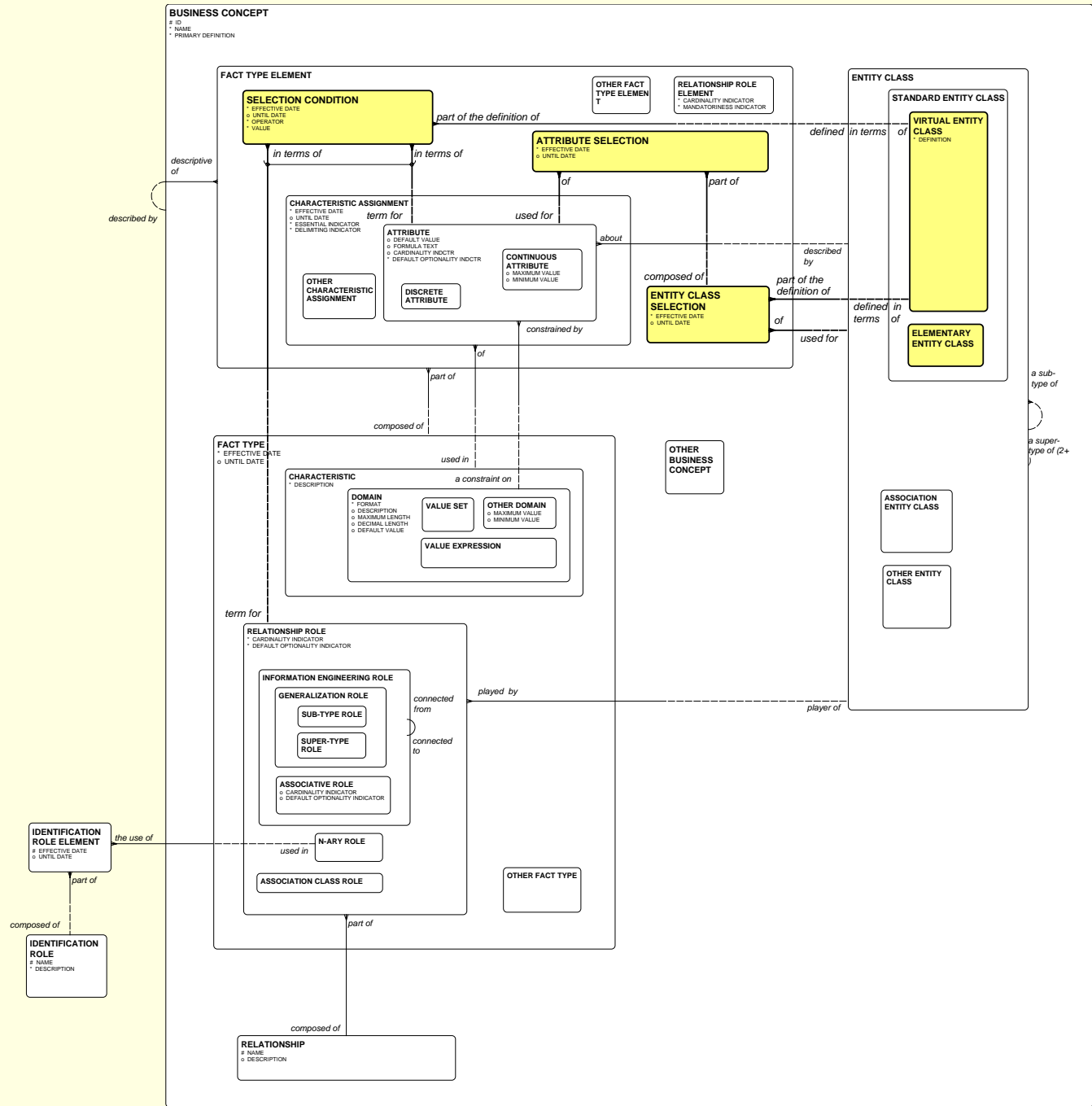
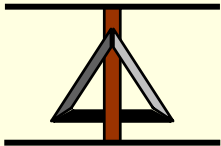




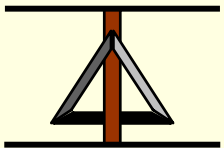


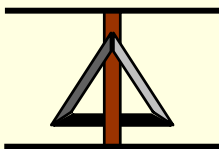
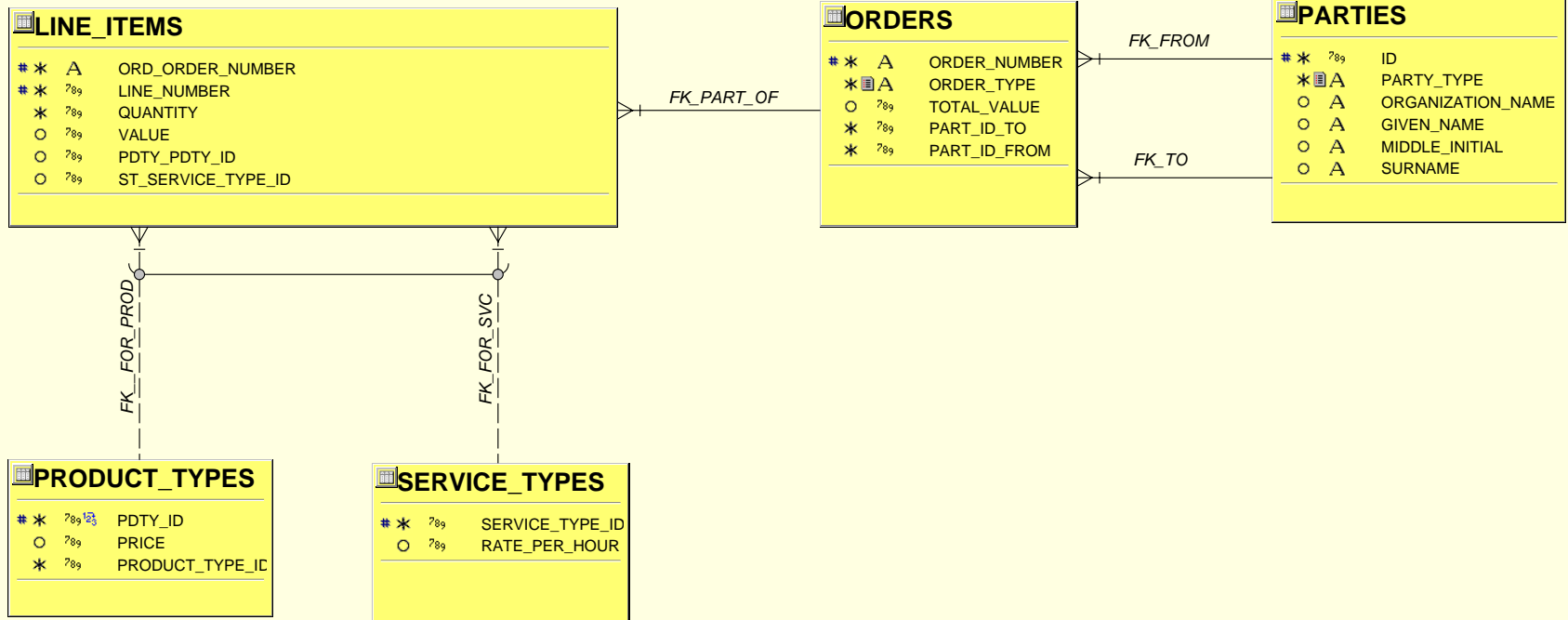
Virtual Entity Classes

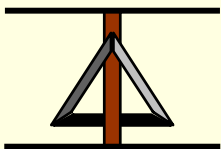
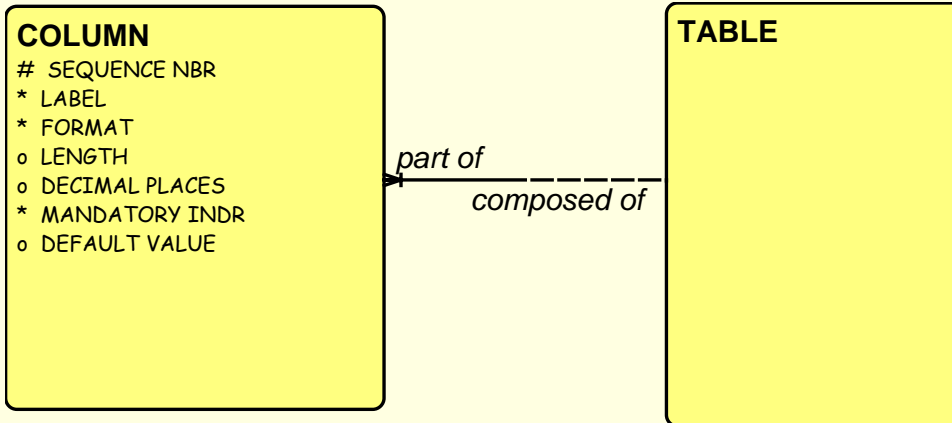




Row Four: The Designer's View

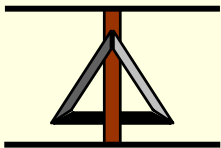


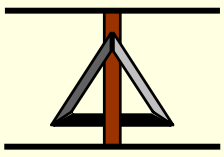
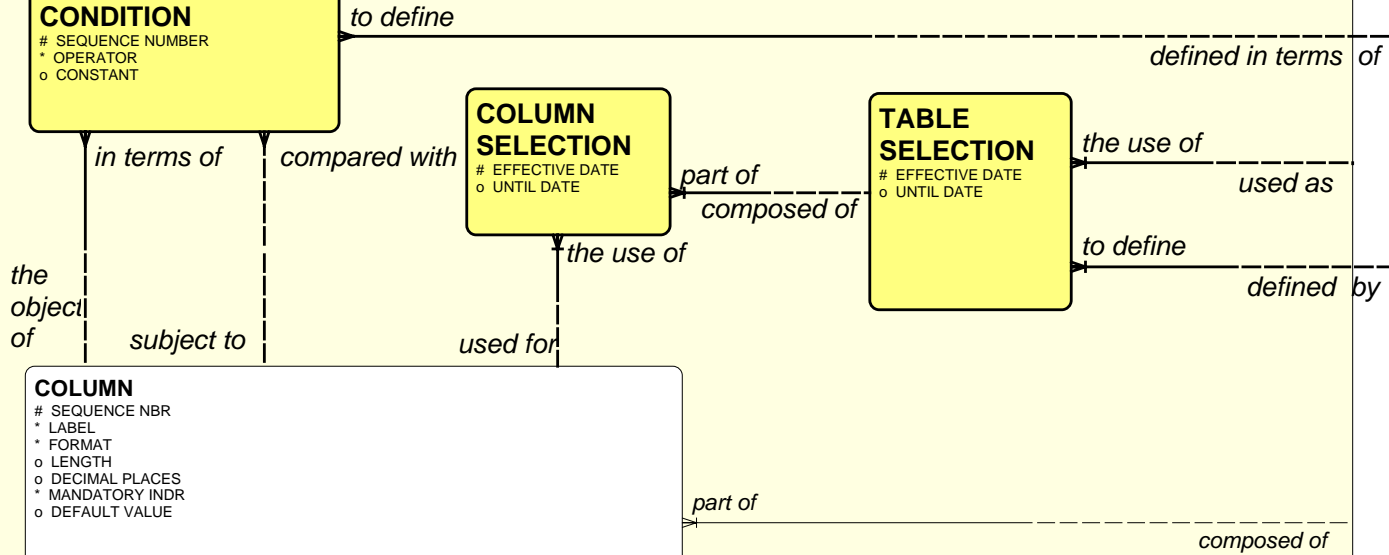
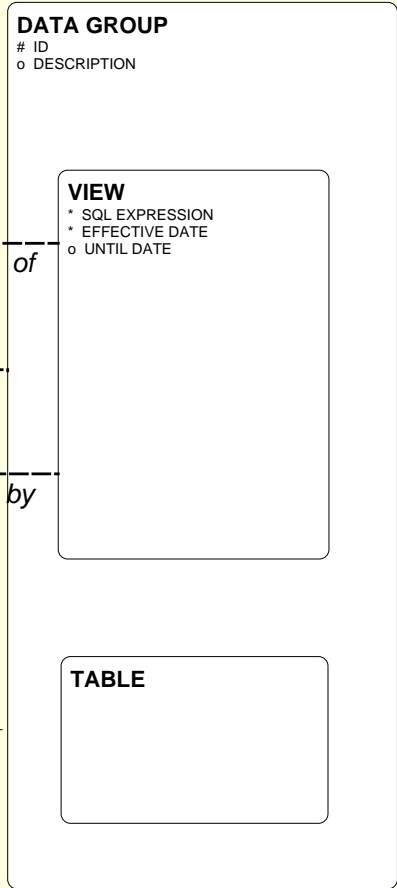
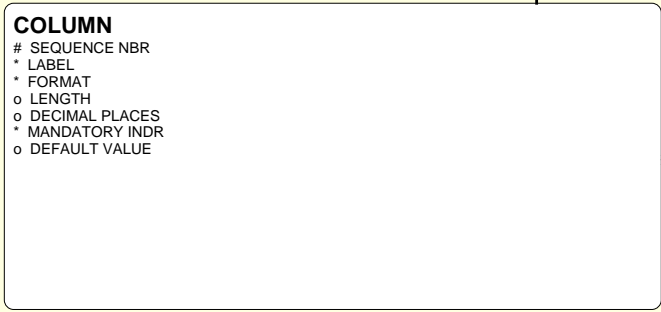
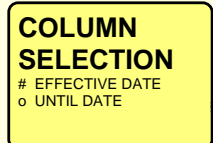
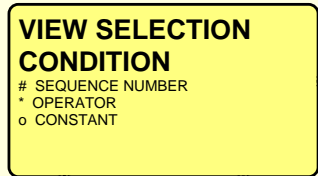


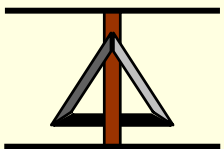
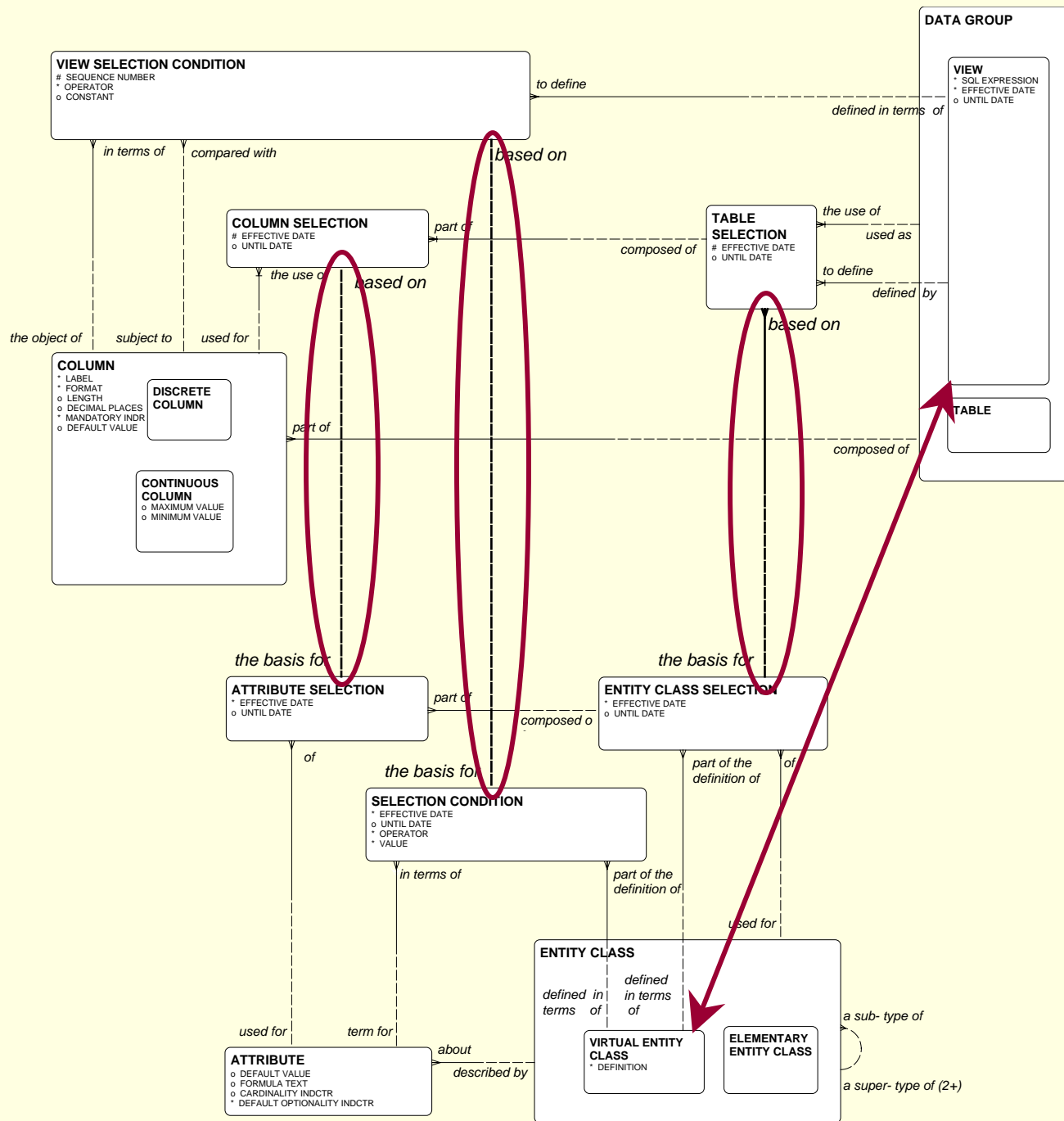


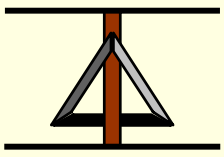
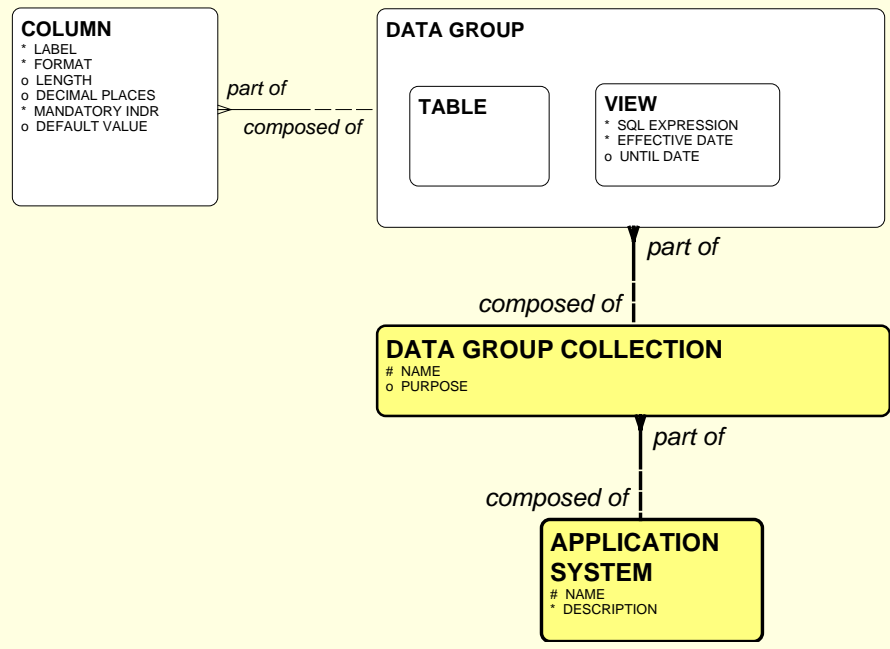
A View (in SQL) . . .

```
CREATE VIEW CUSTOMER AS
SELECT P.ID,P.PARTY_TYPE,P.ORGANIZATION_NAME,P.
      GIVEN_NAME,P.MIDDLE_INITIAL, P.SURNAME
FROM ORDERS O, PARTIES P
WHERE O.PART_ID_TO = <the 'party id' of our company>
      AND O.PART_ID_FROM = P.ID
      AND O.PART_ID_FROM <> <the 'party id' of our company>
```

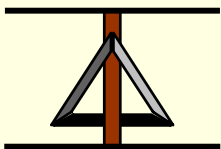
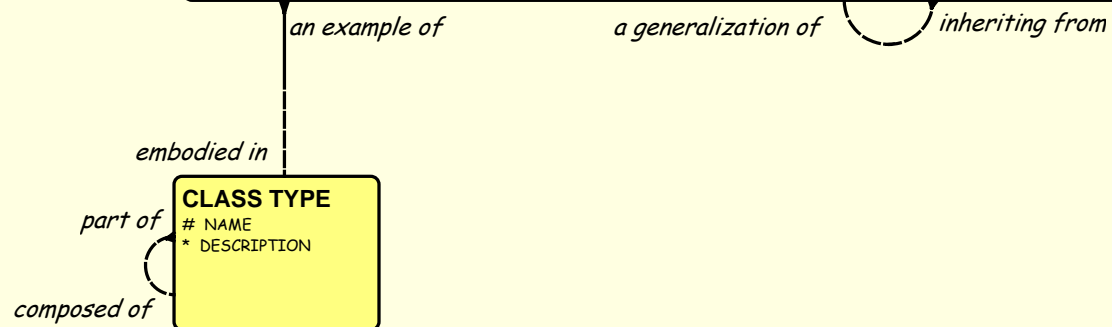
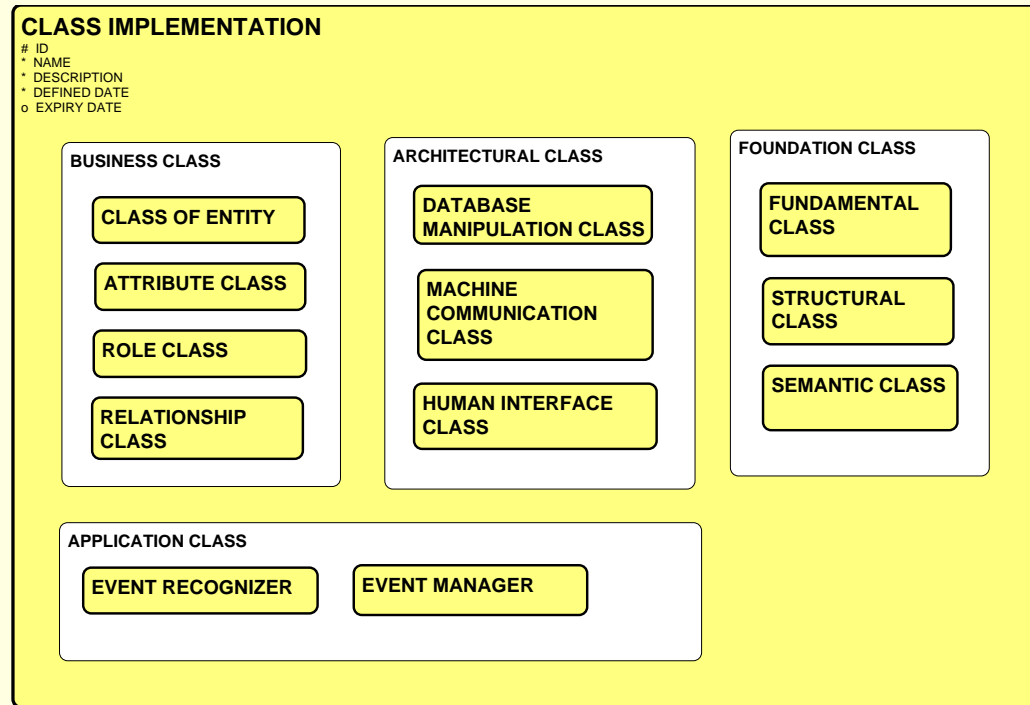


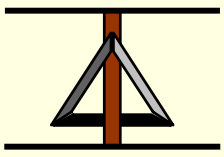
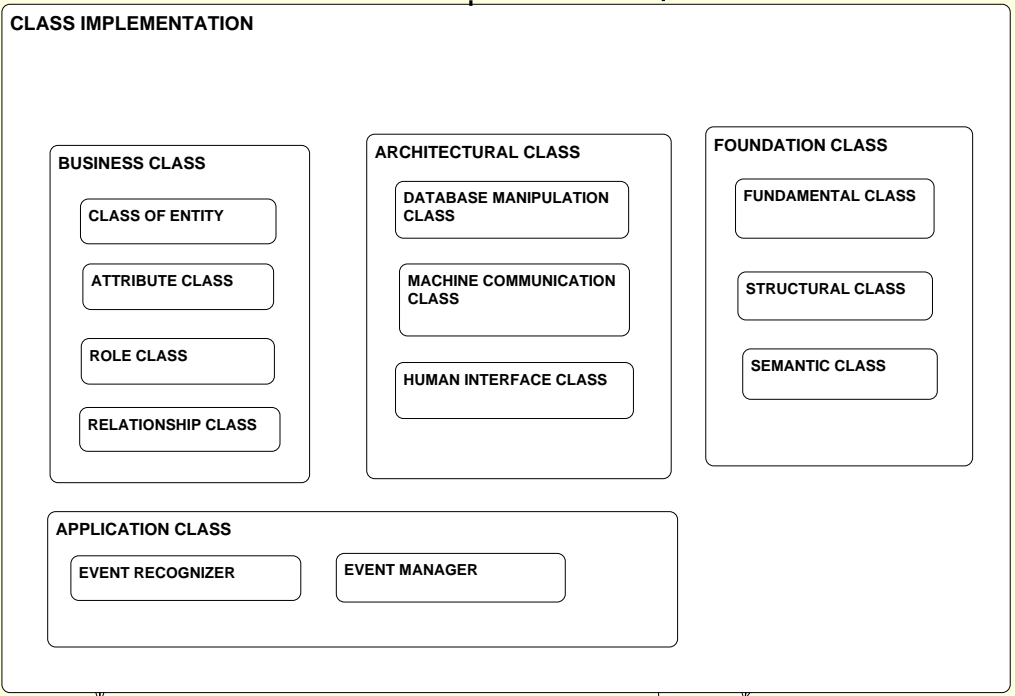
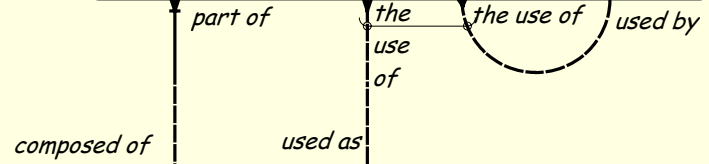
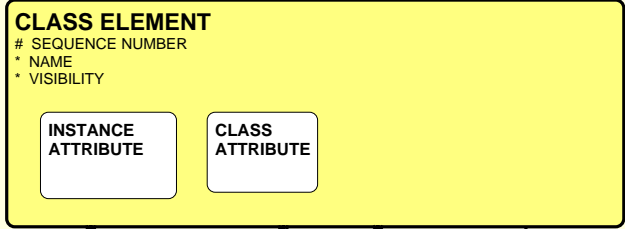






The Object-oriented Version . . .



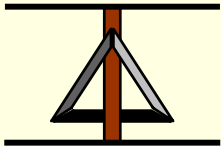


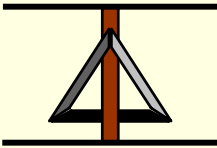
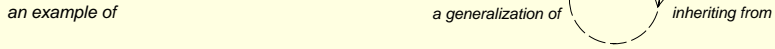
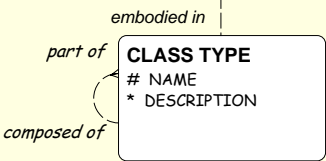
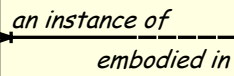
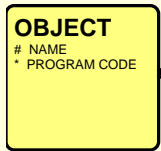
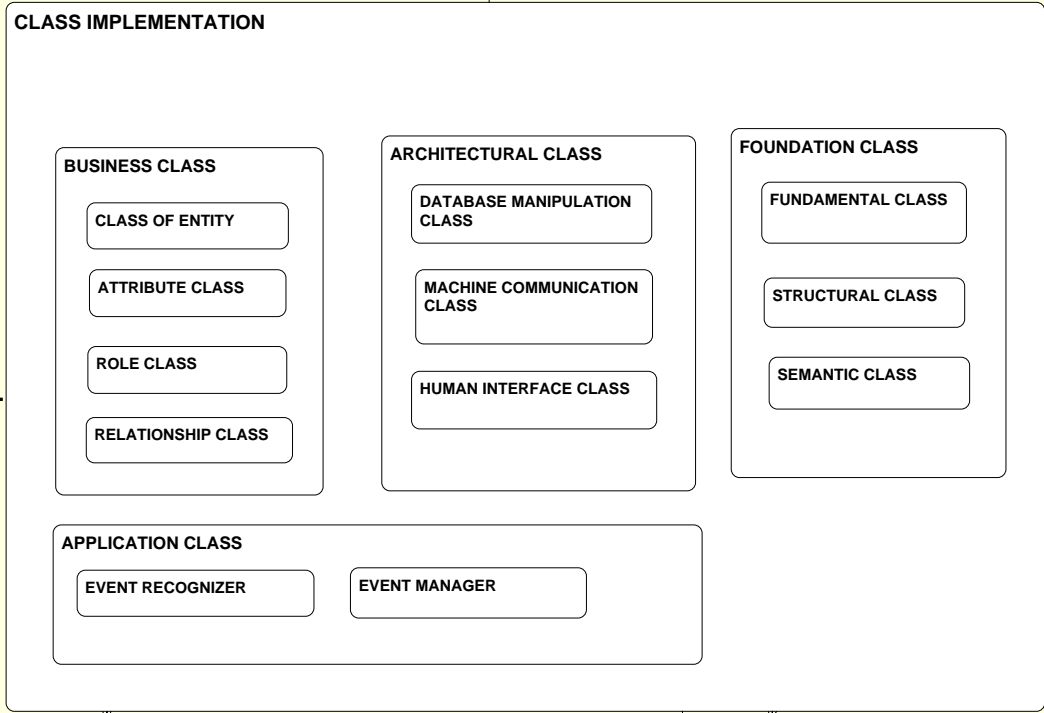
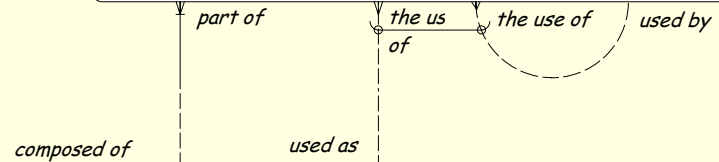
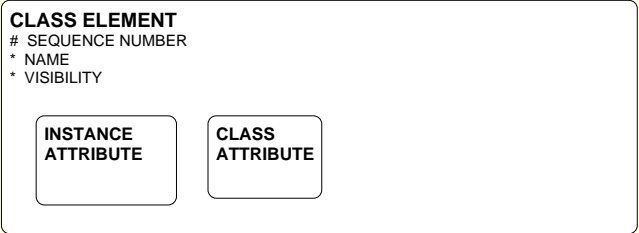
An object-oriented program . . .

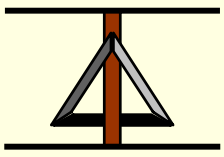
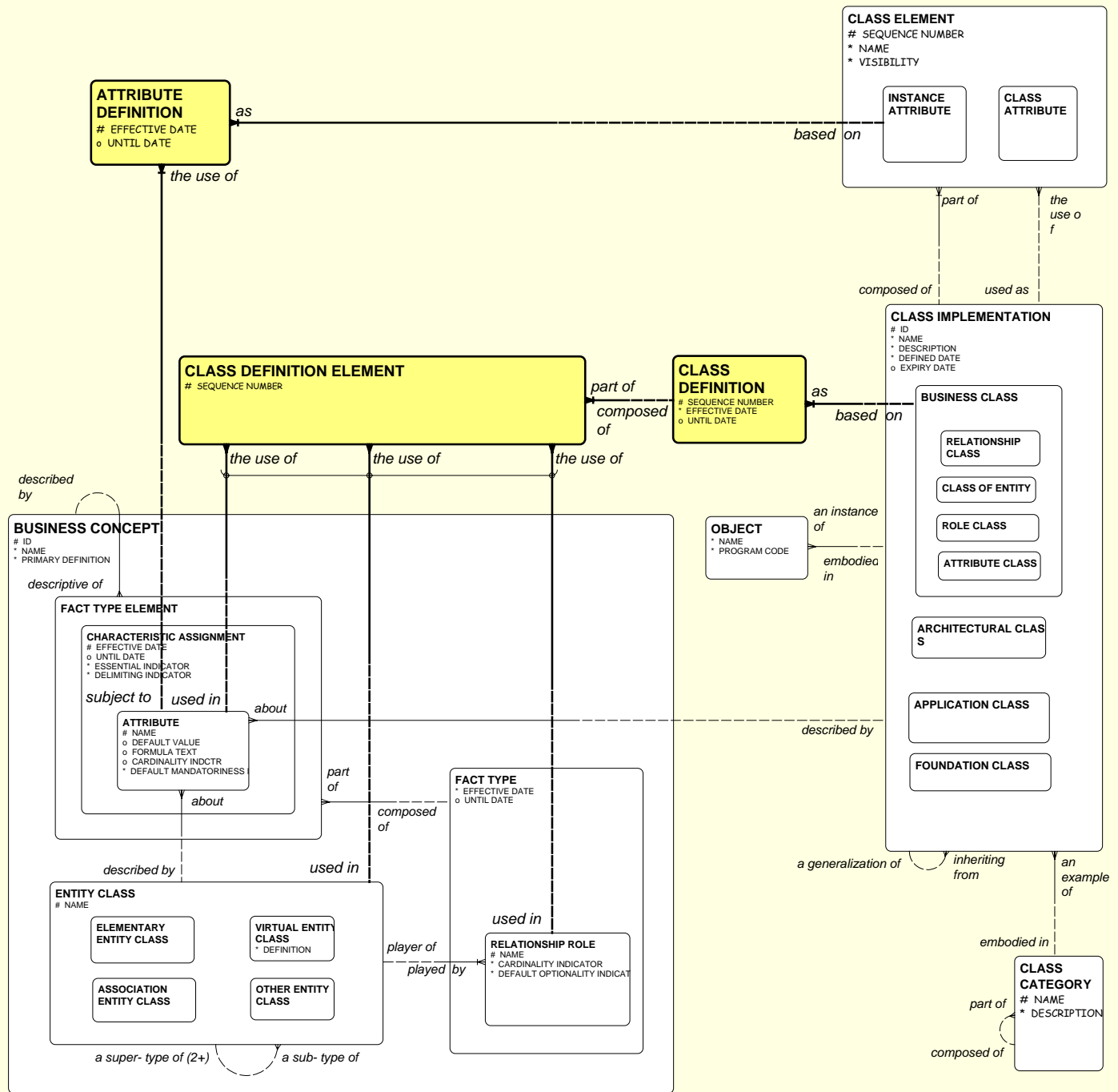
Hominoid

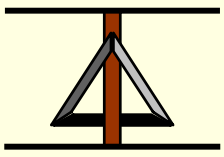
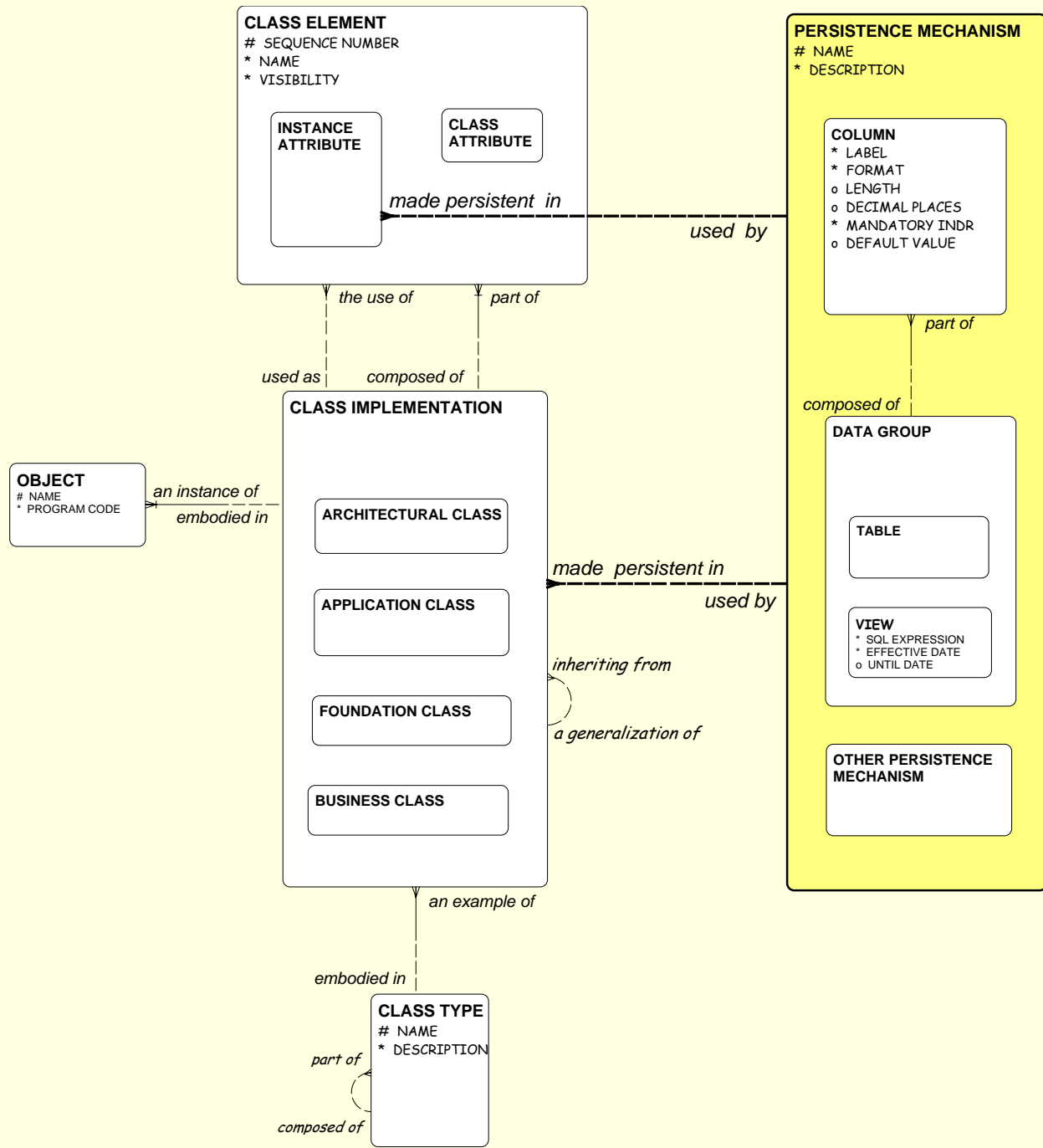
New: Hominoid

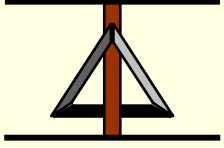
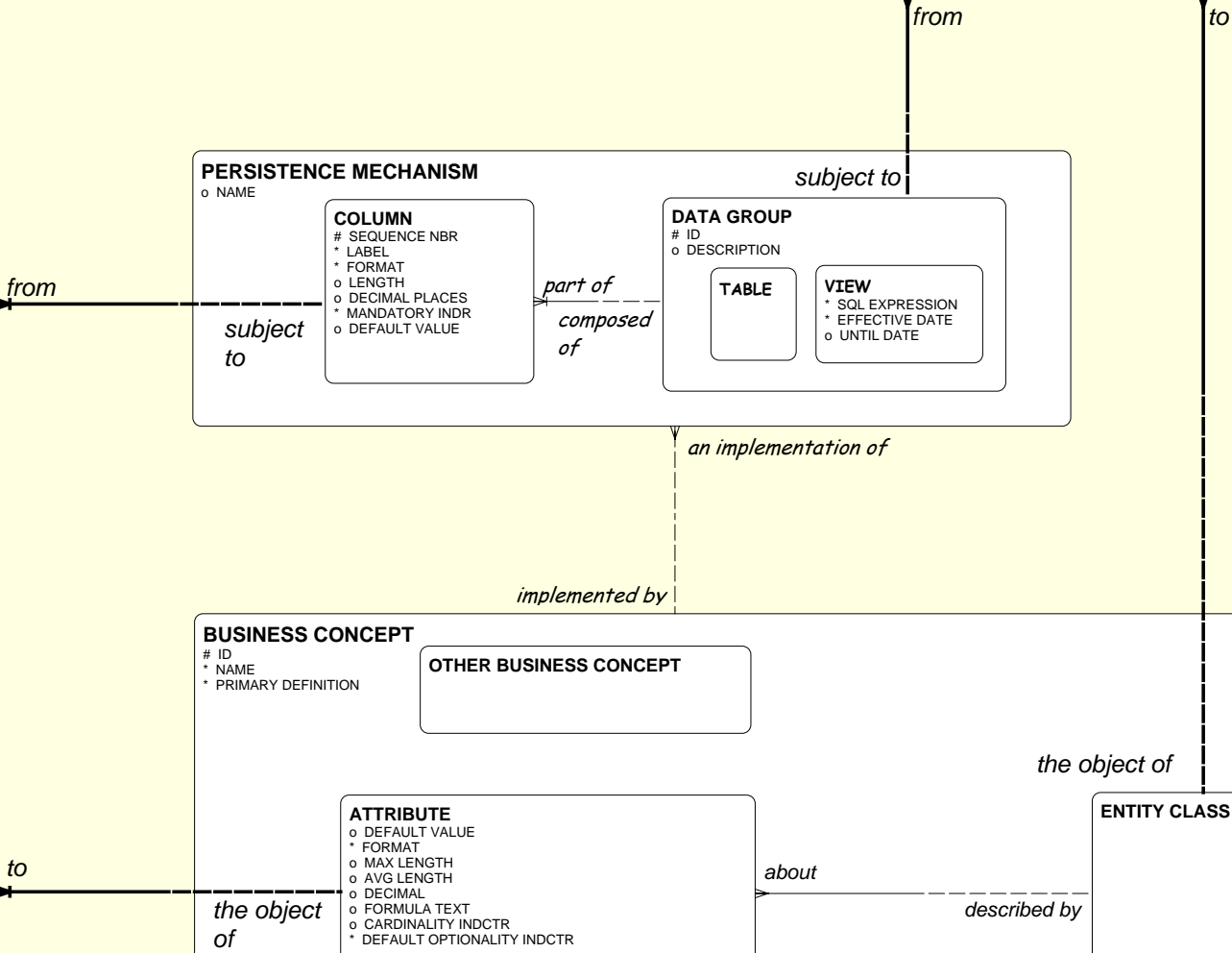
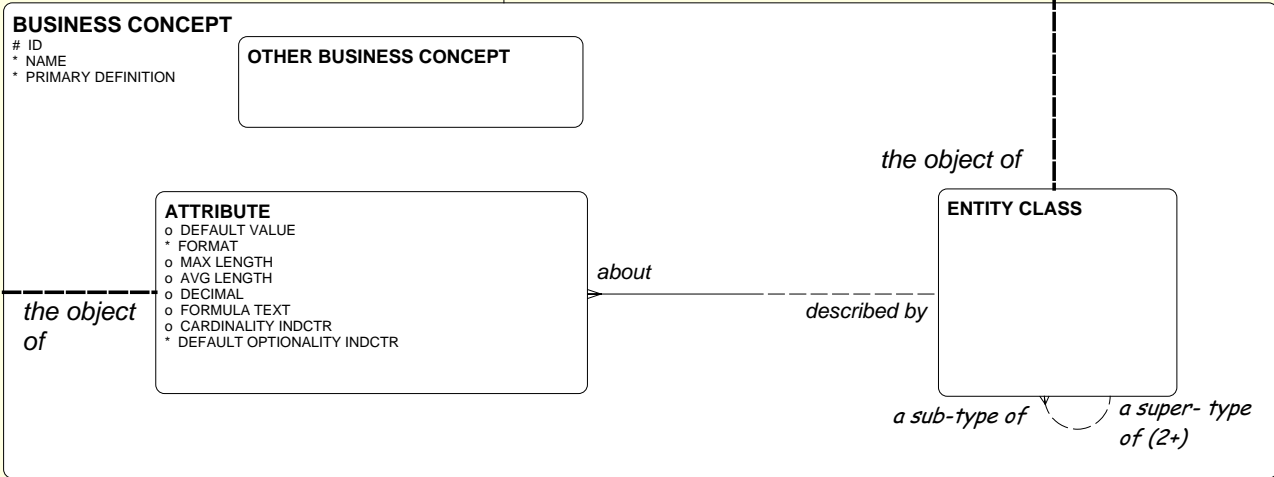
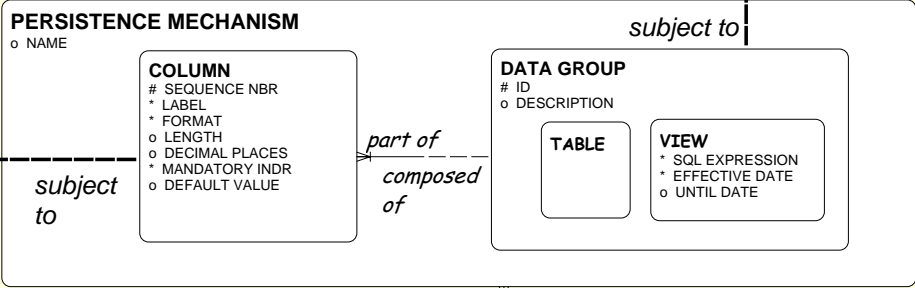
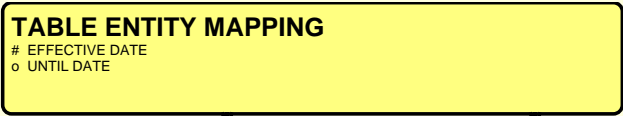
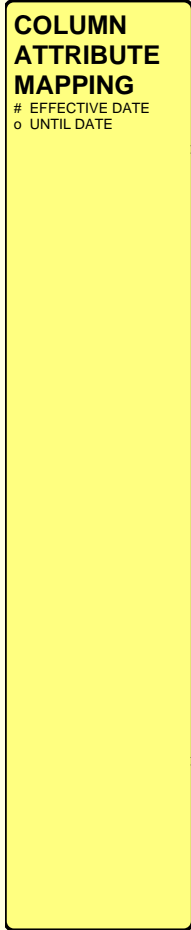
// creates and returns a new instance of Hominoid





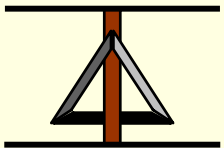






Sample XML . . .

```
<?XML version="1.0"?>
```

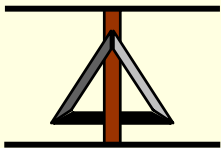


Sample XML . . .

```
<?XML version="1.0"?>
```

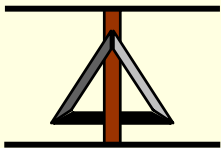
```
<!-- **** Basket **** -->
```

```
[ <PRODUCT>  
  </PRODUCT>
```



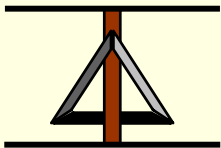
Sample XML . . .

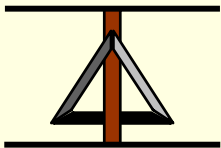
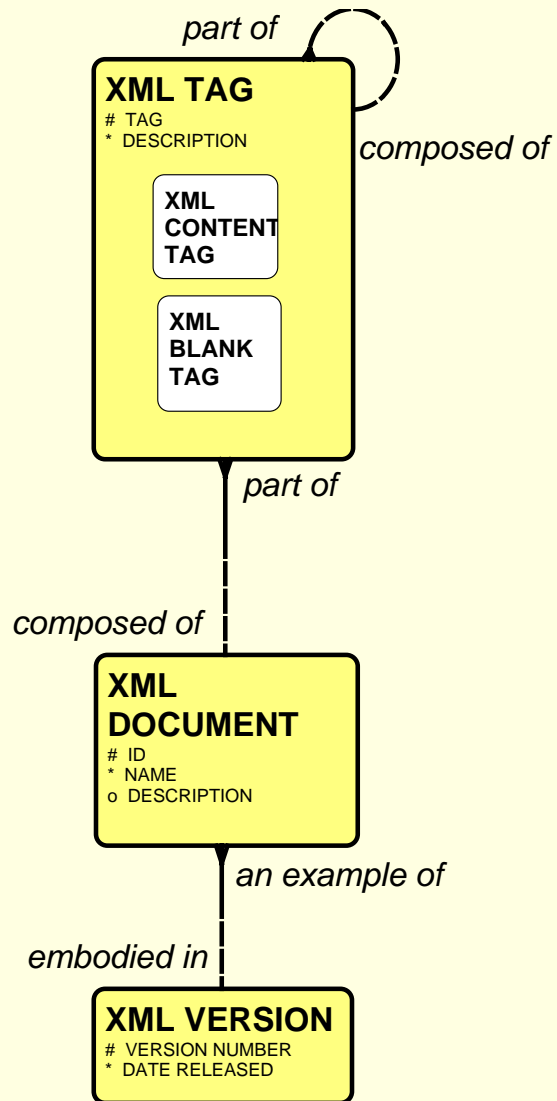
```
<?XML version="1.0"?>
<!--      **** Basket ****      -->
<PRODUCT>
  <product_id>98756</product_id>
  <product_name>basket</product_name>
  <unit_of_measure>each</unit_of_measure>
</PRODUCT>
```

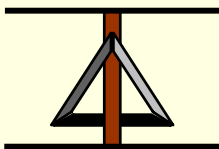
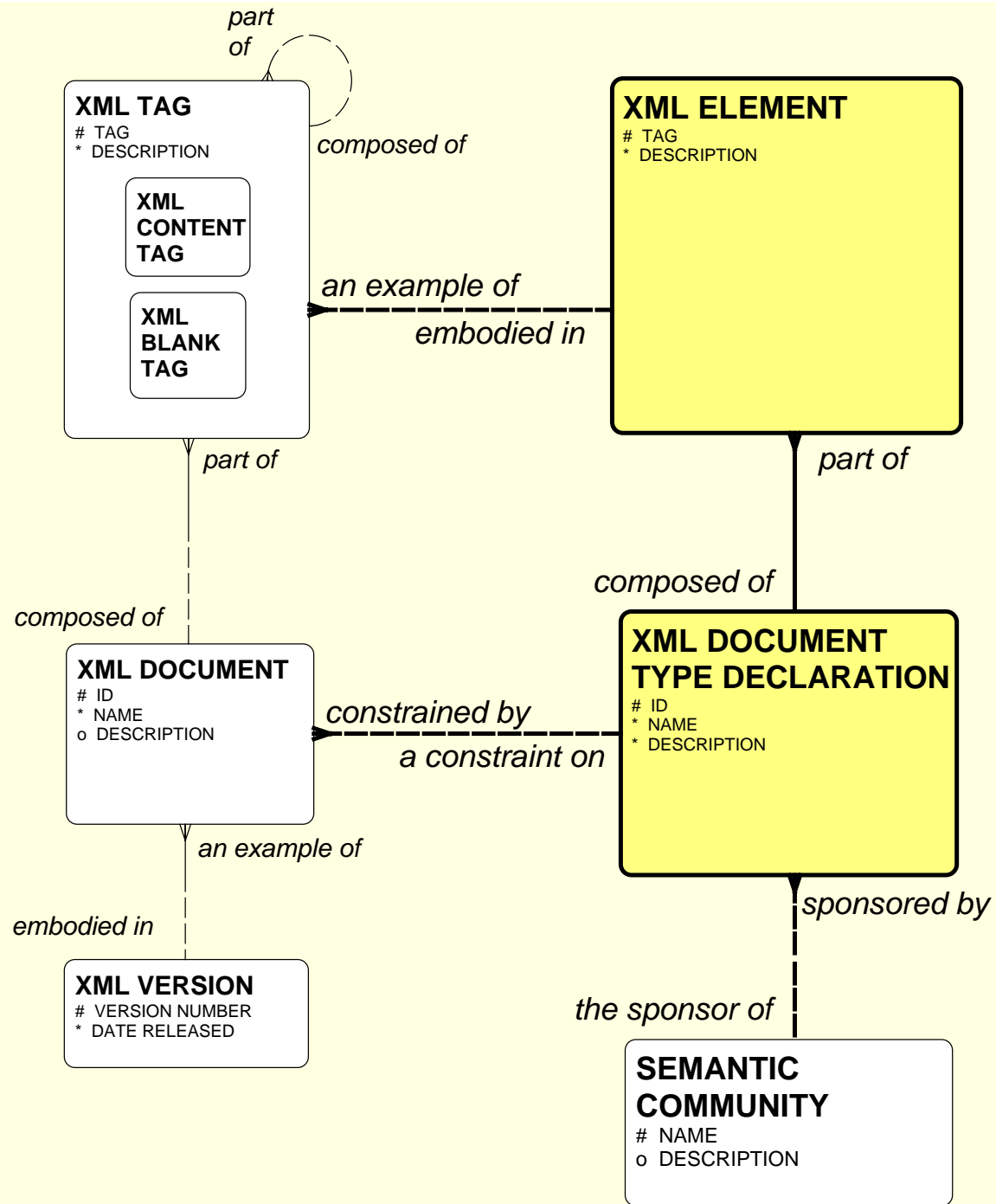


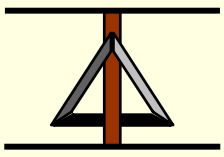
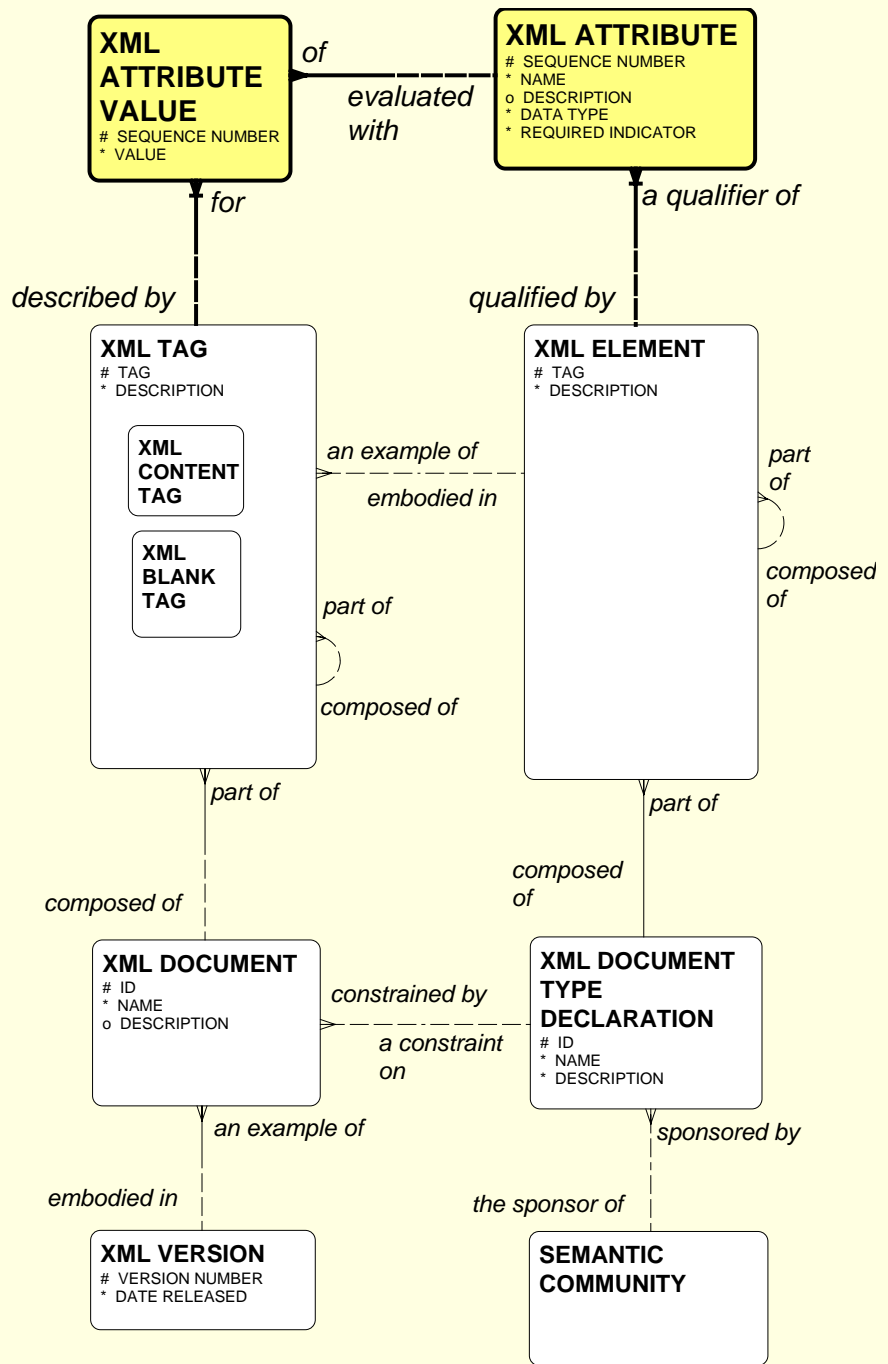
Sample XML . . .

```
<?XML version="1.0"?>
<!--      **** Basket ****      -->
<PRODUCT>
  <product_id>98756</product_id>
  <product_name>basket</product_name>
  <unit_of_measure>each</unit_of_measure>
  <specification>
    <variable>color</variable>
    <value>blue</value>
  </specification>
  <specification>
    <variable>size</variable>
    <value>large</value>
  </specification>
  <specification></specification>
  <specification/>
</PRODUCT>
```

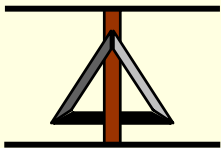


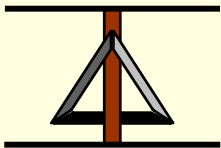
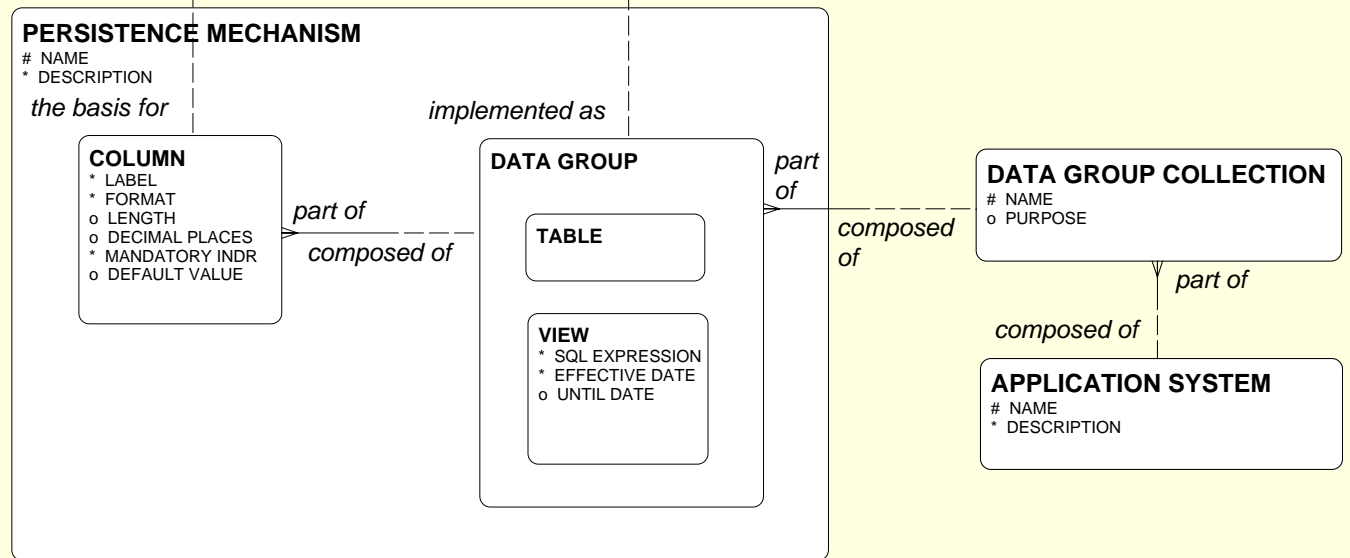
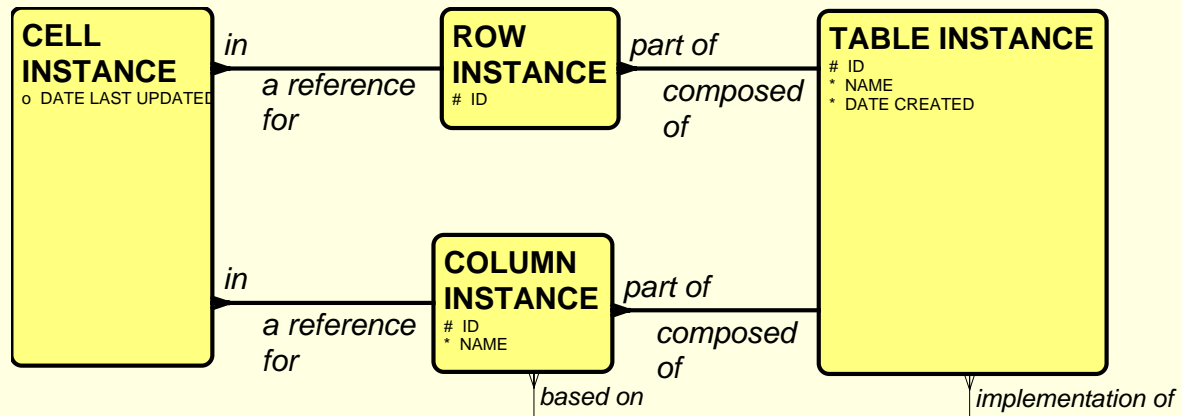


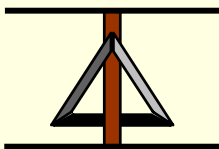
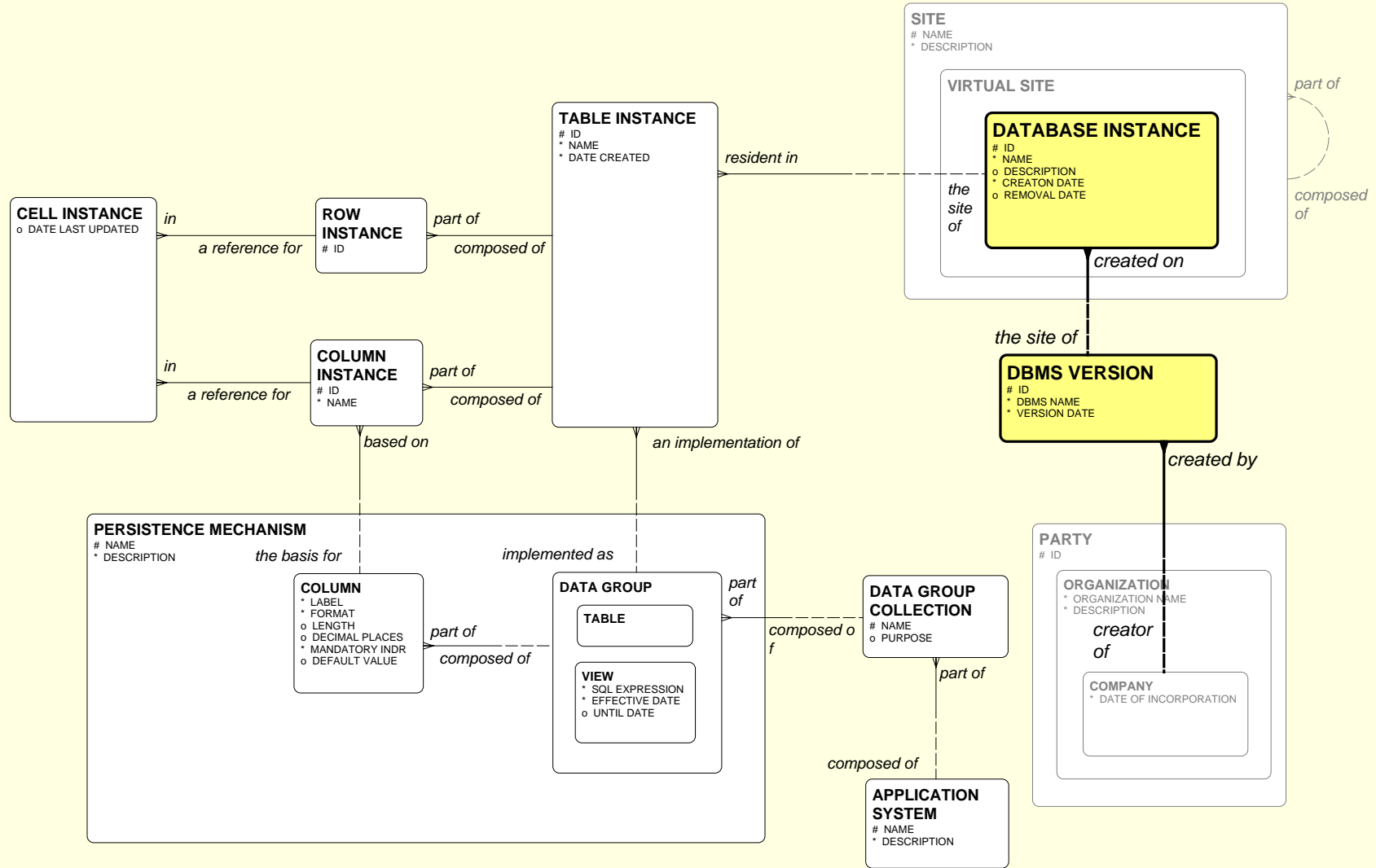




Row SIX:
The FUNCTIONING SYSTEM







... to be continued ...

