



Exercise Solutions

for TDWI Data Modeling

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Exercise One

Modeling Business Domains

OVERVIEW

This exercise asks questions specific to your organization, making it impractical to provide a single “correct” solution. The three examples shown in the course book also make it clear that no “one right answer exists for domain modeling. The correct answer is a model that:

- Effectively communicates the mission or purpose of your organization.
- Identifies the major categories of resources needed to carry out the mission.
- Is expressed in language that is used by the business.

TESTING YOUR SOLUTION

The following questions help to test the utility of a domain model. Ideally you can answer “yes” to each of these questions.

1. Does the model contain fewer than seven mission domains?
2. Does the model contain fewer than seven resource domains?
3. Is the total number of domains – both mission and resource – fewer than ten?
4. Does each mission domain represent segment of the business that is recognizable to your customers?
5. Does every domain remain true and correct even if organizations or business processes change?
6. If you removed any one of the mission domains would the remaining set still represent a viable and sustainable enterprise?
7. Is every domain expressed in language that is meaningful to the senior officers of your organization?

STAKE-HOLDERS

The exercise also asked you to identify a list of stakeholders needed to develop a domain model for your organization. Does that list include both business and technical stakeholders? Have you identified more business than technical stakeholders? Do they represent a broad cross-section of the organization? Do they represent multiple levels in the organization (executive, line management, etc.)?

REVIEW OF YOUR SOLUTION

You may submit your questions and your solution to this exercise for review and comment from TDWI by emailing it to exercises@tdwi.org.

Exercise Two

Modeling Business Subjects ---

OVERVIEW

Similar to domain modeling, this exercise asks questions specific to your organization. It is impractical to provide a single “correct” solution.

TESTING YOUR SOLUTION

The following questions help to test the utility of a subject model. Ideally you can answer “yes” to each of these questions.

1. Does each subject represent a group of entities about which data needs to be collected and managed?
2. Does every subject align with a domain in the domain model?
3. Is the total number of subjects fewer than twenty?
4. Are important subjects from the generic model represented in some form in your subject model?
5. Can you identify the differences between the generic model and your model and explain the reasons for each?
6. Is every subject named using language that makes sense to the business?
7. Is every subject named using a singular noun?

REVIEW OF YOUR SOLUTION

You may submit your questions and your solution to this exercise for review and comment from TDWI by emailing it to exercises@tdwi.org.

Exercise Three

Mapping Business Questions

<i>Facts</i> →												
← <i>Qualifiers</i>	simple loss ratio	agent	auto loss frequency	reason for claim	residential loss frequency	book of business value	earned premium value	loaded loss ratio				
underwriter	24							32				
agent	24		26				31	32				
line of business	24			28		30	31	32				
year	24	25	26,27	28	29	30	31	32				
loss ratio		25										
quarter	24		26									
rating factor			27									
region			27			30	31					
claim reason					29							
month					29	30	31	32				
agency						30						

Exercise Four

Logical Dimensional Modeling

NAME THE METER • **product profitability**

NAME THE MEASURES • **simple loss ratio**
• **loaded loss ratio**

IDENTIFY THE
DIMENSIONS AND
HIERARCHIES

**sales organization
dimension**

- underwriting team has underwriters
- underwriter has agencies
- agency has agents

**time
dimension**

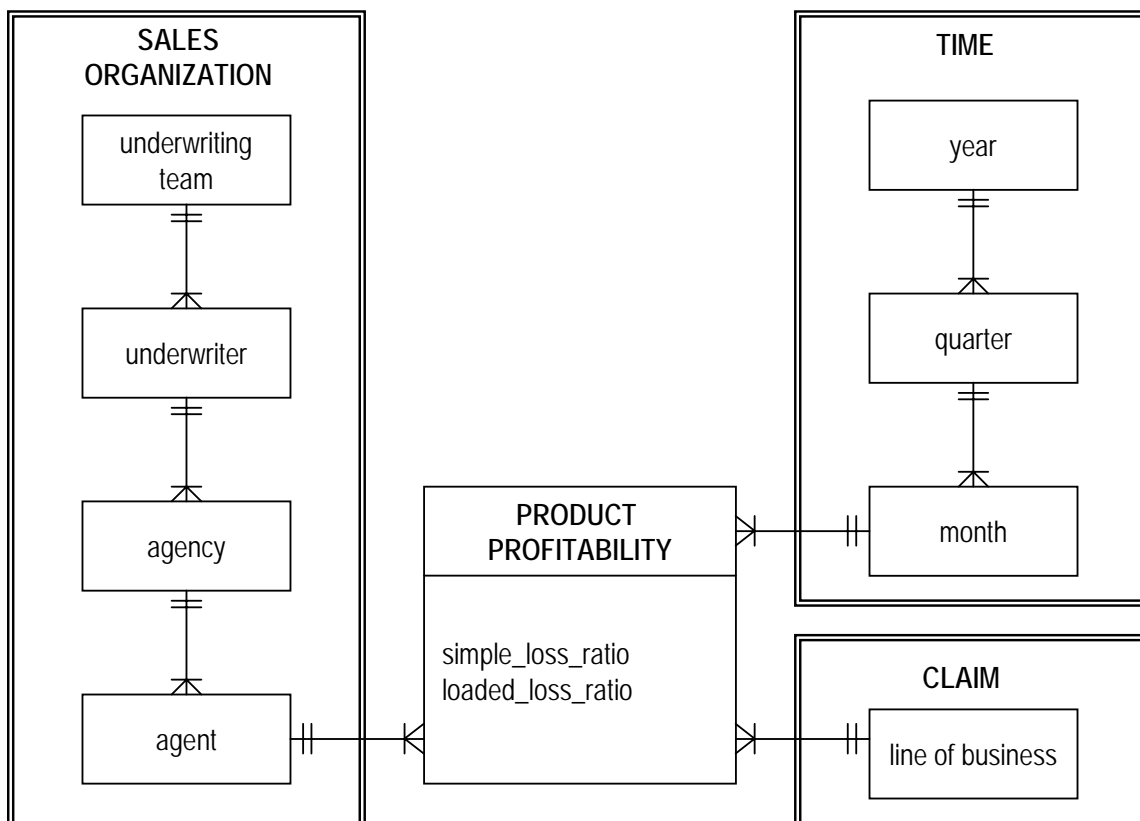
- year has quarters
- quarter has months

**claim
dimension**

line of business

(has no subordinates
of
interest to these
business questions)

DRAW THE LOGICAL DIMENSIONAL MODEL



Exercise Five

Star Schema Design

