Annotated Statement of Work Example

Statement of work for the lab project needs to identify

* The database purpose
* The entities and their attributes
* The relationships between entities, including the cardinalities.
* List any assumptions that apply
* List the software and database languages that you will use

Annotated Example

1. This database supports the Book Inventory application and keeps track of books, their prices, authors, publishers, and the available number of copies of every book at each store. The purpose of the database is to support the customers with buying a book at the most convenient location and at the best price, and to support the managers with book orders for the store.

Store attributes are marked with double line

Book attributes are underlined

The entities are highlighted in yellow.

Database Purpose

The book information includes the title, publisher, author, edition, hard cover, and ISBN. The store information includes the store name, street address, zip code, and manager’s name. For each author, the database keeps track of first, last name, nickname, and date of birth. Each zip codes table includes city and state. An inventory tracks the book price and the number of available copies at each store.

**Relationship between author and book.**

An author is mandatory. The cardinality is one.

A book is optional. The cardinality is many

Author attributes are marked with a dash line

For this application, each book must have an author. If there is more than one author, the database stores only the first author’s name. Each author could have written zero or more books. A book can be available at zero or many stores, and each store could sell zero or more books. A zipcode location may have zero or more stores, and each store must have a location.

Assumptions: This application tracks the stores located in the United States only. The prices for each book vary among the stores.

1. Database: Oracle 11g on UNIX platform.

Software and database

1. Software: Oracle data modeler, Oracle SQL developer, and Putty.
2. DDL – drop and create the database objects including tables, views, triggers, and sequences. DML – populate and query data.

Note that the relationship between book and store is many-to-many. (A book is available at **zero or more** stores, and each store has **zero or more** books.) The sample lab project ERD has an associative entity Inventory to resolve the many-to-many relationship.