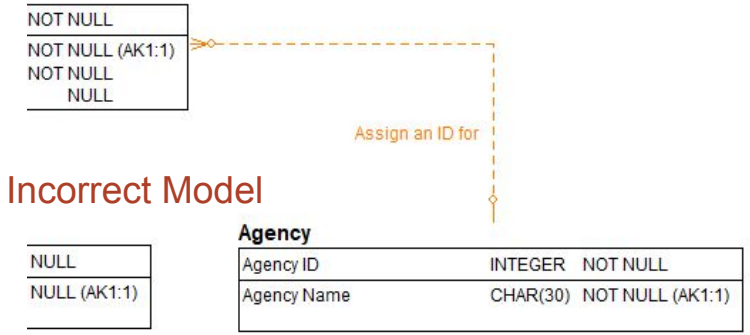
Book Reference Database

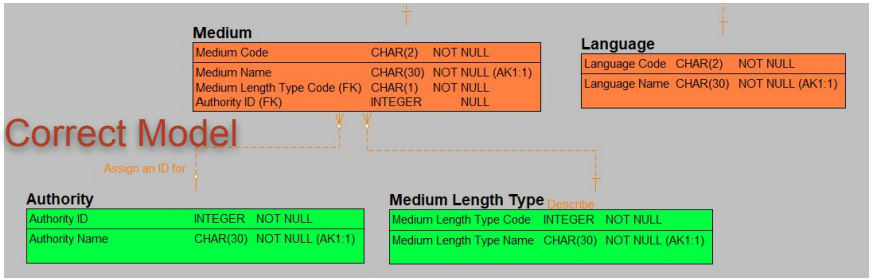
Data Model Assessment Presentation

Group 6

Chenkai Liang, Jiaxuan XU, Rui Zhao,
Sheng Luo, Zhiyuan Liu

1. How well does the model capture the requirements?





Strength: Capture the requirements and rules for storing and retrieving titles

The data model captures all key business rules and data requirements can be confirmed by reviewing the model with business analysts or key stakeholders.

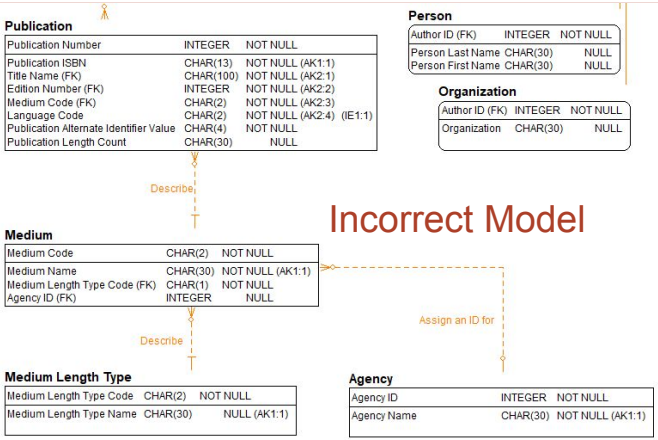
Strength: It is a logical data model

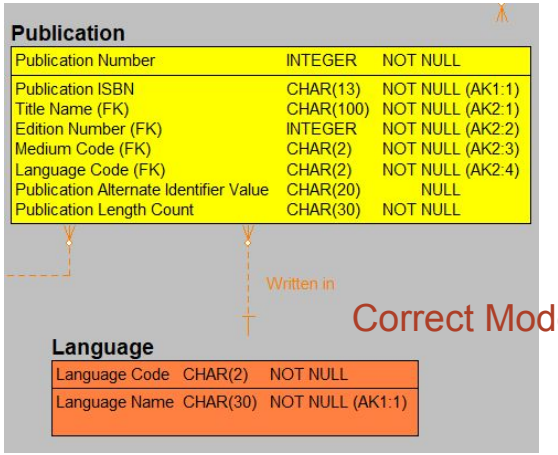
They understood the contents of the book reference design database.

Weakness: Wrong entity for Agency

They are confusing the concepts of agency and authorities. Agency should be changed to authority.

2. How complete is the model?





Weakness:

Missing Entity: A separate ENTITY for the language needs to be included here because the original entity only had the language code, not the language name.

Attribute Management: The data model mentions handling specific attributes such as HR Payroll internal number, date of birth, or social security number.

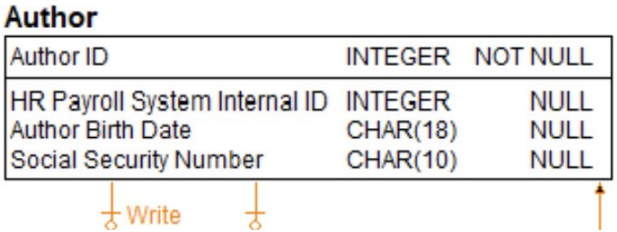
Elimination of Data: The data model suggests dropping the "Author Sequence Number" attribute because there is insufficient information to distinguish

Strength: The data model contains most of the entities, attributes, and relationships

Incorrect model partially complete the desired business process. There are just elements that are missing and relationships that are not fully defined.

3. How well does the model match its scheme?

Incorrect Model



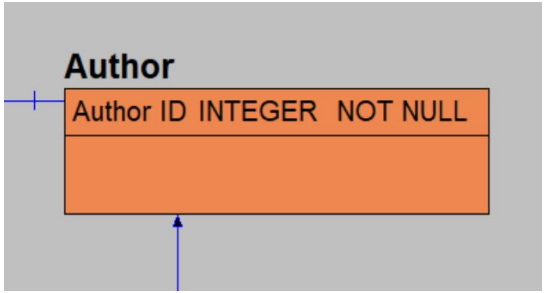
Strengths

This data model has consistency. And it accurately represents business processes, data requirements, and relationships.

Weakness

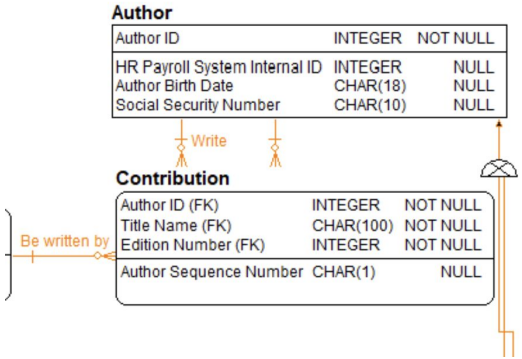
Contribution contains extra attribute "Author Sequence Number". And it affects performance, and this attribute needs to be placed in the "Author".

Correct Model



4. How structurally sound is the model?

Incorrect Model



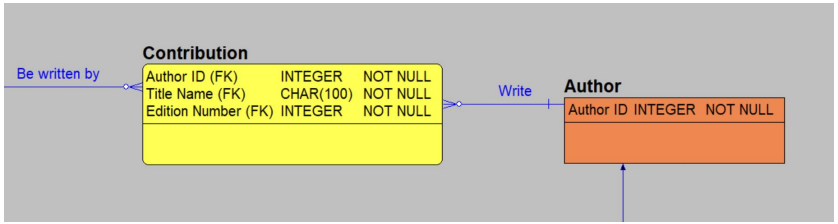
Strengths

This data model is normalized, and its well-structured model follows the principles of database normalization. And have a consistent naming convention.

Weakness

Wrong relationship between author and contribution. EDITION primary author full name is redundant; the subset of author, person, already has a first and last name inside. Alternatives could not be NULL.

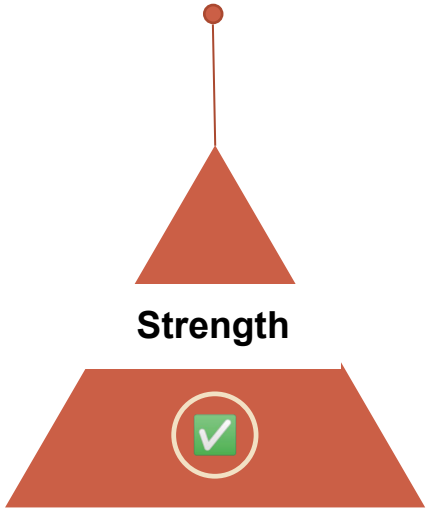
Correct Model



5. How well does the model leverage generic structures?

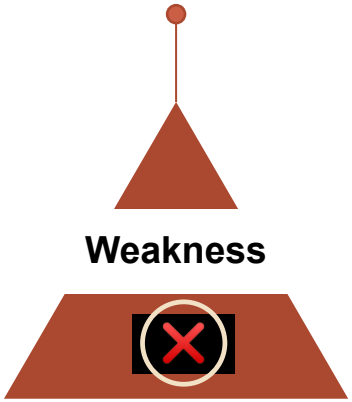
Entity-Relationship Structure

The model effectively utilizes the generic structure to represent different aspects of the book publishing domain.

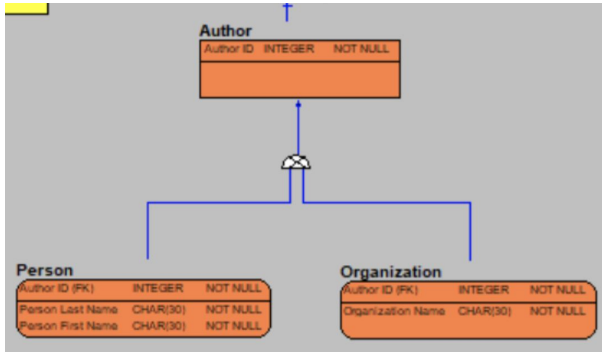


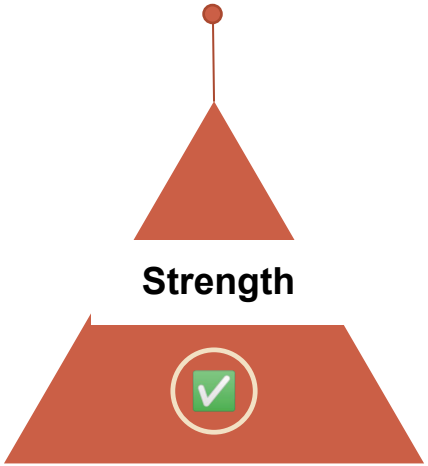
Abstractive words

The "Intellectual Unit" is Abstractive, which doesn't make any sense for our business.



Subtyping





6. How well does the model follow naming standards?

Descriptive Names

Most of the names are descriptive and indicative of their respective purposes.

Consistency

There is a certain level of consistency in naming conventions throughout the data model, which contributes to its overall clarity.

6. How well does the model follow naming standards?

Intellectual Unit

Intellectual Unit

Title Name	CHAR(100) NOT NULL
Subtitle Name	CHAR(100) NOT NULL

should be

Title

Title

Title Name	CHAR(100)	NOT NULL
Subtitle Name	CHAR(100)	NULL

Weakness

Agency

Agency

Agency ID	INTEGER NOT NULL
Agency Name	CHAR(30) NOT NULL (AK1:1)

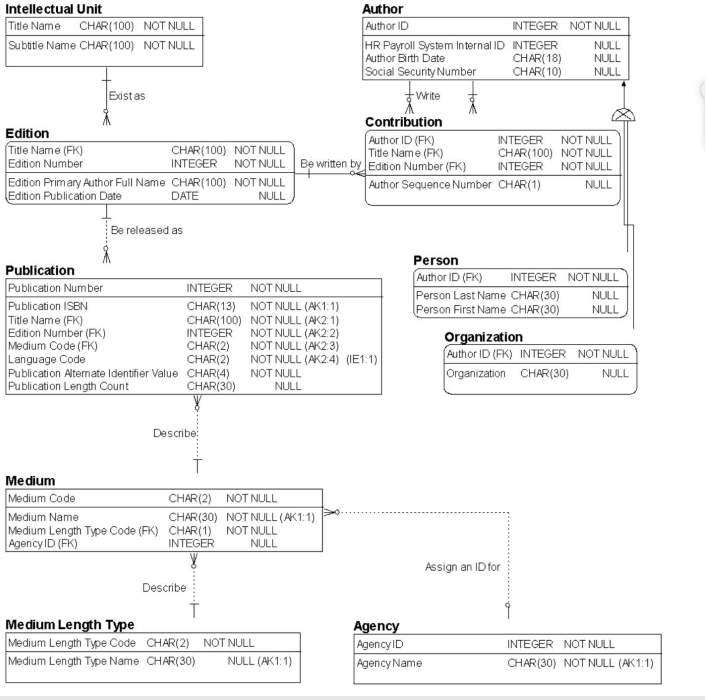
should be

Authority

Authority

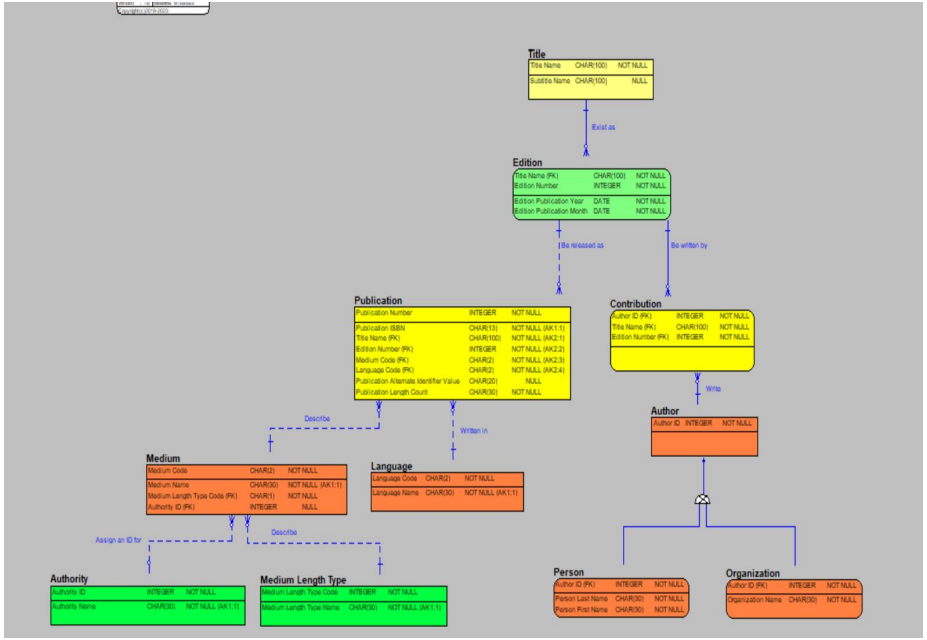
Authority ID	INTEGER	NOT NULL
Authority Name	CHAR(30)	NOT NULL (AK1:1)

7. How well has the model been arranged for readability?



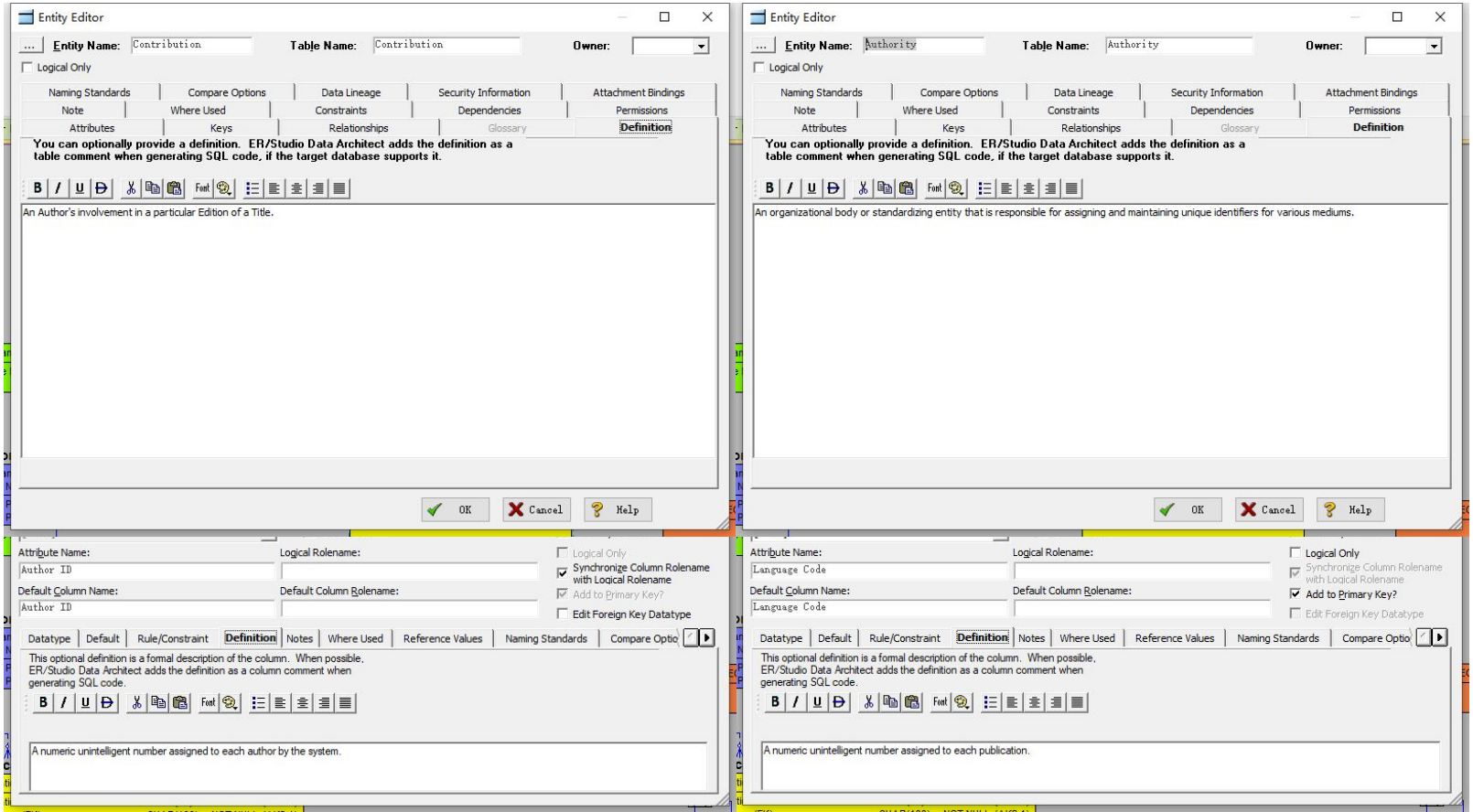
The placement of Person and Organization is not easy to read.

The colors of the overall data modeling could be more distinguishable.



8. How good are the definitions?

Some of the definitions are not detailed enough to be clear such as AGENCY and CONTRIBUTION.



9. How consistent is the model with the enterprise?

Strength: Effective Modeling

In most scenarios, the model correctly meets the company's requirements.

Weakness: Date Split Needed

'Edition Publication Date' needs to be divided into more specific segments, such as a distinct year and month.

Edition

Title Name (FK)	CHAR(100)	NOT NULL
Edition Number	INTEGER	NOT NULL
Edition Primary Author Full Name	CHAR(100)	NOT NULL
Edition Publication Date	DATE	NULL

Incorrect Model

Edition

Title Name (FK)	CHAR(100)	NOT NULL
Edition Number	INTEGER	NOT NULL
Edition Publication Year	DATE	NOT NULL
Edition Publication Month	DATE	NOT NULL

Correct Model

10. How well does the metadata match the data?

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Intellectual Unit

Title Name	CHAR(100)	NOT NULL
Subtitle Name	CHAR(100)	NOT NULL

Medium Length Type

Medium Length Type Code	CHAR(2)	NOT NULL
Medium Length Type Name	CHAR(30)	NULL (AK1:1)

Publication

Publication Number	INTEGER	NOT NULL
Publication ISBN	CHAR(13)	NOT NULL (AK1:1)
Title Name (FK)	CHAR(100)	NOT NULL (AK2:1)
Edition Number (FK)	INTEGER	NOT NULL (AK2:2)
Medium Code (FK)	CHAR(2)	NOT NULL (AK2:3)
Language Code	CHAR(2)	NOT NULL (AK2:4) (IE1:1)
Publication Alternate Identifier Value	CHAR(4)	NOT NULL
Publication Length Count	CHAR(30)	NULL

Incorrect Model

Title

Title Name	CHAR(100)	NOT NULL
Subtitle Name	CHAR(100)	NULL

Medium Length Type

Medium Length Type Code	INTEGER	NOT NULL
Medium Length Type Name	CHAR(30)	NOT NULL (AK1:1)

Publication

Publication Number	INTEGER	NOT NULL
Publication ISBN	CHAR(13)	NOT NULL (AK1:1)
Title Name (FK)	CHAR(100)	NOT NULL (AK2:1)
Edition Number (FK)	INTEGER	NOT NULL (AK2:2)
Medium Code (FK)	CHAR(2)	NOT NULL (AK2:3)
Language Code (FK)	CHAR(2)	NOT NULL (AK2:4)
Publication Alternate Identifier Value	CHAR(20)	NULL
Publication Length Count	CHAR(30)	NOT NULL

Correct Model

THANK YOU

Group 6