Books Ontology

The purpose of this ontology is to observe how a bookstore service works. A bookstore must contain books, books contain various topics such as romance, biography, magazines/newspapers, science fiction, personal development and much more. Who comes for the books? Of course, readers, can make a reservation for various titles, leave reviews of various titles, and purchase a book.

But let's talk about books, they are written by the author, then the author needs a publishing house to print his creation in several copies, and the copyright. With us, they receive grades (A, B, C, D, F) depending on the feedback, recommendations, sales. Magazines and newspapers created by the publishing house are also available for reading or buying. They are grouped by size, time, cover type and content. A short description diagram of ontology presented is shown below in Figure 1, and a fully detailed UML diagram is present in the zip archive among the report an owl ontology file.

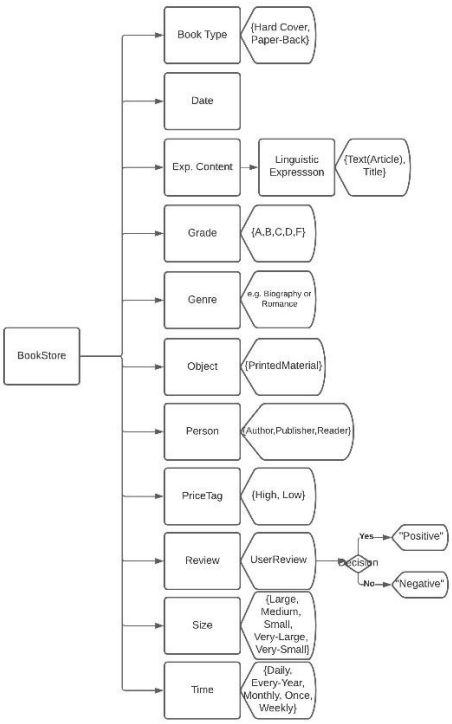

Figure 1: A general perspective of ontology

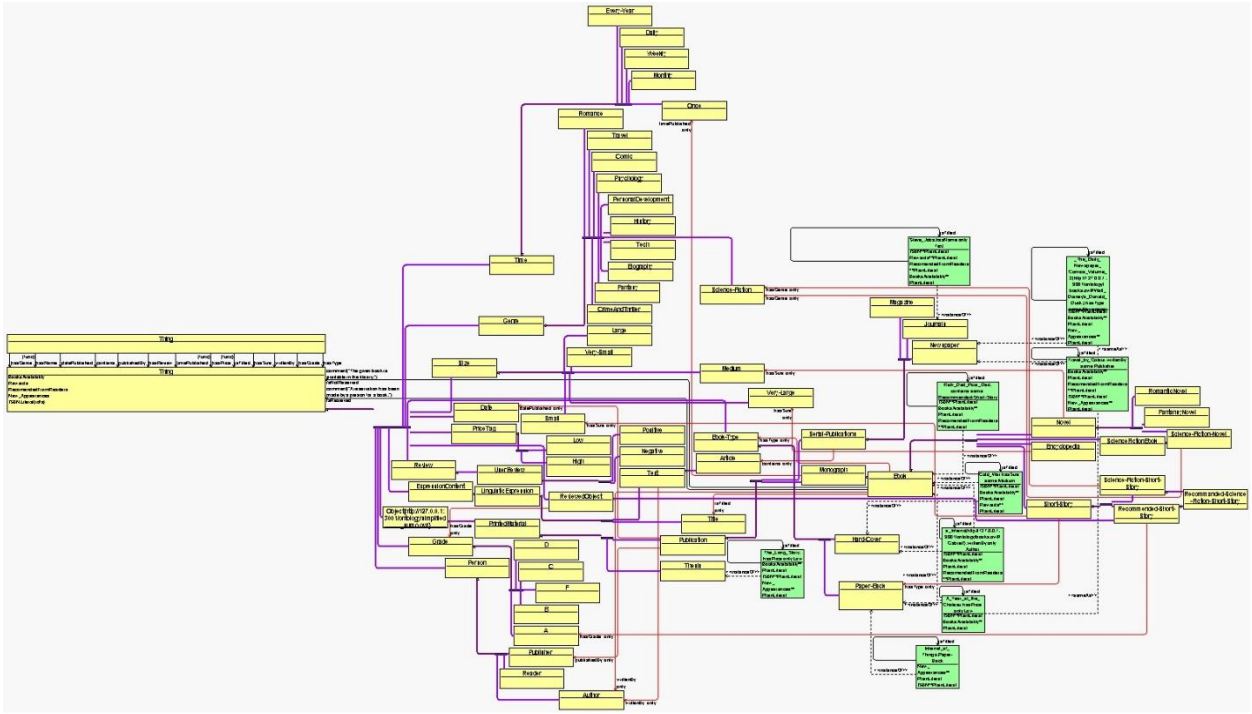

Figure 2:Detalied UML of ontology

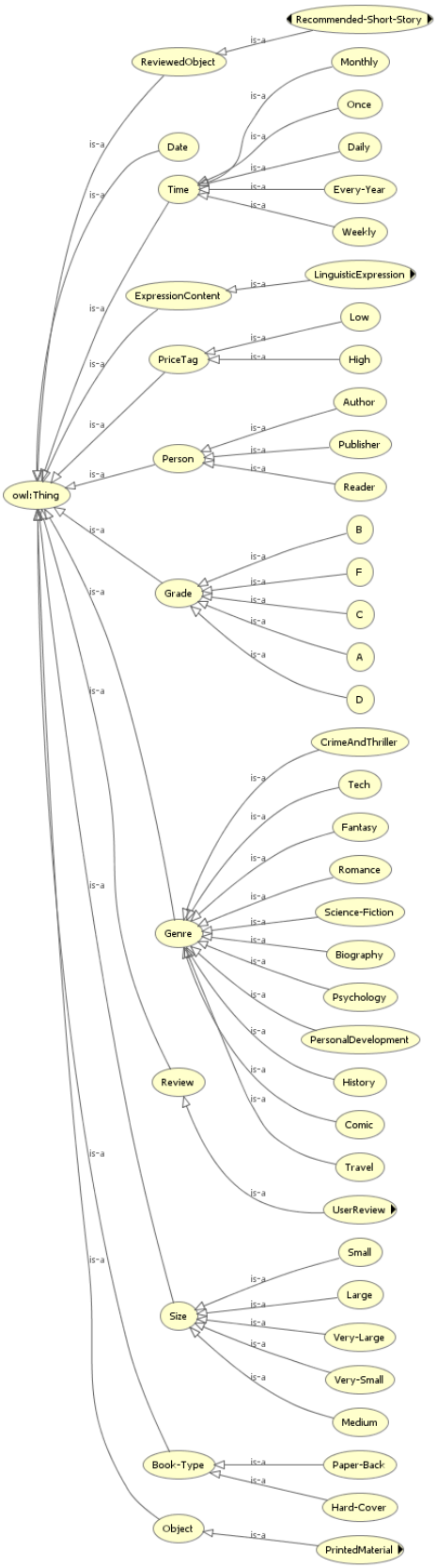
Recommended-Short-Story
ReviewedObject
Monthly
Once
Date
Daily
Time
Every-Year
Weekly
LinguisticExpression
ExpressionContent
Low
PriceTag
High
Author
Publisher
Person
Reader
owl:Thing
B
F
Grade
C
A
D
CrimeAndThriller
Tech
Fantasy
Romance
Science-Fiction
Genre
Biography
Psychology
PersonalDevelopment
History
Review
Comic
Travel
UserReview
Small
Large
Size
Very-Large
Very-Small
Medium
Book-Type
Paper-Back
Hard-Cover
Object
PrintedMaterial
is-a

Figure 3: Asserted Hierarchy

Figure 4: Inferred Hierarchy

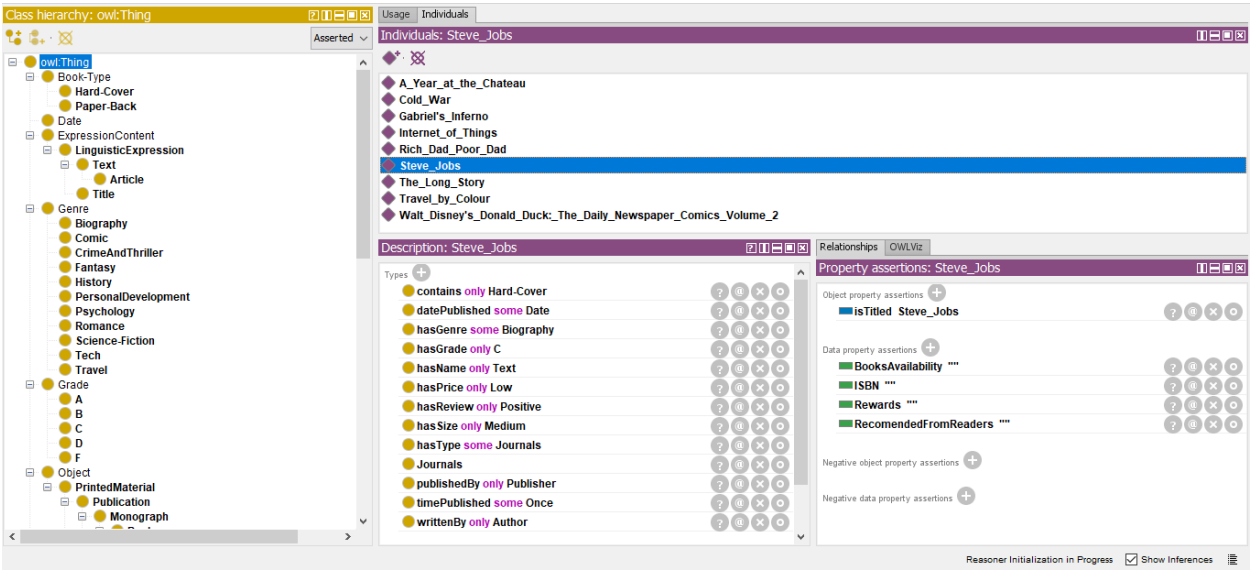

Figure 5: Individuals

SPARQL Queries:

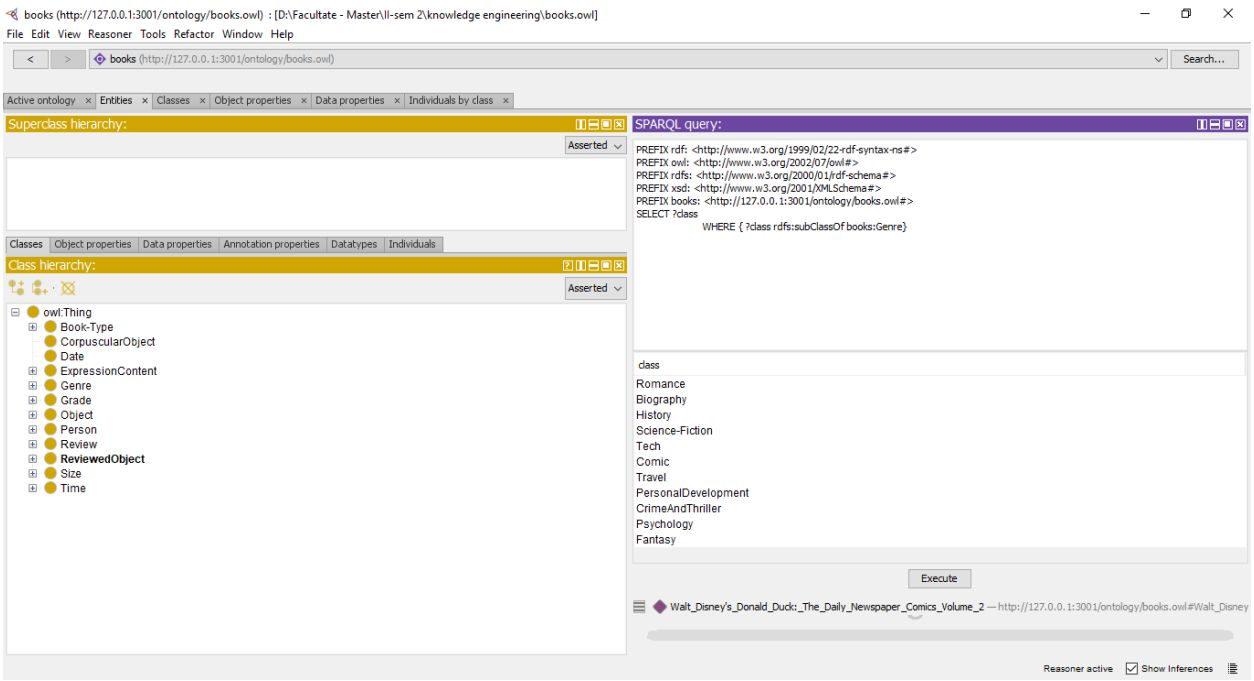

Figure 6:Shows all books topics

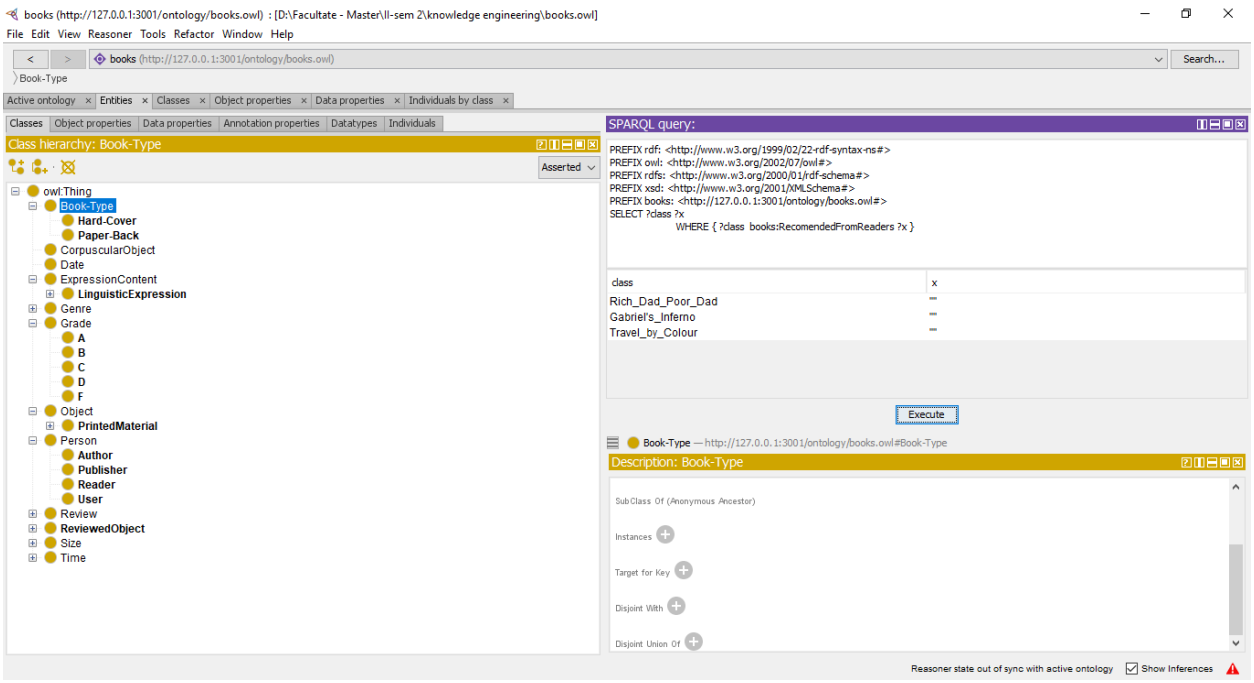

Figure 7: Show books recommended by readers

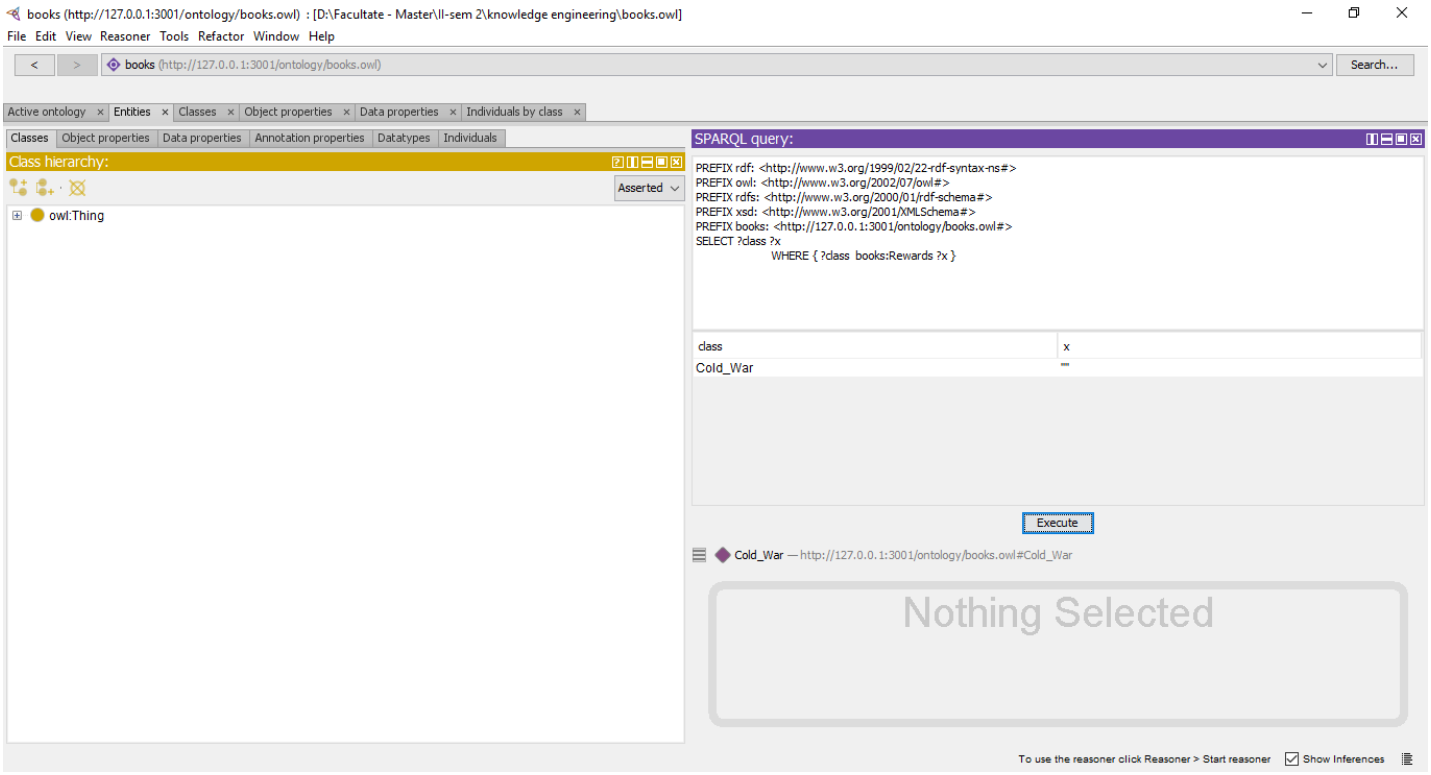

Figure 8: Show book(s) with rewards

SPARQL query:

```
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX owl: <http://www.w3.org/2002/07/owl#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
PREFIX books: <http://127.0.0.1:3001/ontology/books.owl#>
SELECT ?class ?x
                WHERE { ?class  books:New_Appearances ?x }
```

class	x
The_Long_Story	""
Internet_of_Things	""
Travel_by_Colour	""
Walt_Disney's_Donald_Duck:_The_Daily_Newspaper_Comics_Volume_2	""

Figure 9: Show last books arrived in the library

SPARQL query:

```
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX owl: <http://www.w3.org/2002/07/owl#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
PREFIX books: <http://127.0.0.1:3001/ontology/books.owl#>
SELECT ?class ?x
                WHERE { ?class  books:ISBN ?x }
```

class
Travel_by_Colour
Rich_Dad_Poor_Dad
Walt_Disney's_Donald_Duck:_The_Daily_Newspaper_Comics_Volume_2
Gabriel's_Inferno
Steve_Jobs
The_Long_Story
Cold_War
A_Year_at_the_Chateau
Internet_of_Things

Figure 10: Show the books that have ISBN