

Self Reflection

Haoxian Liu, Juan Montenegro, Kaize Shen, Mengqi Wang

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1 HAOXIAN LIU:

In this group assignment, I finished the following tasks completely by myself:

- **Competency Questions Design:**

I proposed 10 questions based on the dataset chosen by Kaize. However, the first question was found to be infeasible during the query process. Thus Kaize proposed a new question and designed the corresponding query statement.

- **Create OWL Ontology Design:**

Throughout the experiment, I was responsible for converting the designed UML into OWL each time. Based on the feedback, we have to modify our ontology design several times. I created the OWL file several times accordingly.

- **Design SPARQL Queries:**

I designed the SPARQL queries based on the ontology structure. Five queries need to use the relation between different classes. Other queries only need to get information from different classes.

I finished the following tasks together with MENGQI WANG:

- **Mapping and Uplifting:**

At first, Mengqi was responsible for this part. She uplifted all the data by datasets instead of by class, which means it won't have much connection between the query and ontology design. Thus we need to do this part again. Then I helped Mengqi do this part together. We wrote the mapping files and uplifted the data based on the ontology design this time.

I have completed the following sections of the report

- Description of Competency Questions
- References to Sources for People
- Explanation of Use of Transitive Properties
- Challenges (Queries & Mapping and Uplifting)
- Assumptions Made
- Group Collaboration
- Conclusions

2 JUAN MONTENEGRO:

In this group assignment, I finished the following tasks completely by myself:

- **Design the Ontology by UML:**

Most of my work was contributing to the selection of the datasets together with my classmates to use in the project, then I was in charge of modeling the classes based on the datasets, defining properties, connections, evaluating how to connect all the data sets so that everything make sense and coordination. Once this was done, feedback was requested from our tutor to try to improve our model, which I had to make modifications to our model. Once this was done, I shared the UML diagram with my classmate Haoxian Liu so that he could develop the OWL file.

- **Widoco:**

I was in charge of creating the documentation for our ontology using Widoco, which set up a Docker server locally to use the application and once this was done, I developed the documentation for our entire work scheme and also the evaluation of our ontology.

I have completed the following sections of the report:

- Project Introduction
- Description of Datasets
- Description of Ontology Design
- Challenges (Ontology Design)

3 KAIZE SHEN:

In this group assignment, I finished the following tasks completely by myself:

- **Choose the Datasets and Project Topic:**

When professor asked us to find the datasets, I didn't know much about what we should do on these. In addition to waste much time on finding fit datasets, the datasets I chose are fragmentary and very difficult to handle, which makes our task harder.

- **Design the UI:**

I learned how to use sparql in java by using Jena, it's not very hard so I completed it smoothly. Communication is very important. This project should do step by step, which means that if someone did not finish his/her part, the work cannot be pushed forward. At first, we lacked communication and we worked slowly. But then we talked more, and our efficiency improved.

I have completed the following sections of the report:

- Description of Application Query Interface
- Challenges (UI Design)

4 MENGQI WANG:

In this group assignment, I finished the following tasks together with HAOXIAN LIU:

- **Mapping and Uplifting:**

In the beginning, I was try to use D2RQ for the data mapping process. D2RQ is a system for accessing relational databases as RDF graphs using R2RML mappings. The access is provided by creating custom dumps of the database in RDF format for loading into an RDF store based on an R2RML mapping file. However the first time I imported the data into the owl file by each dataset, I found that the data could not be correlated and that the way to query it was to: search for the data in one table and then use that data to query other tables. I later learned that D2RQ was required to import the linked database, so HAOXIAN and I used the R2RML language to map the data.

I have completed the following sections of the report

- Discussion of Data Mapping Process
- Description of Queries