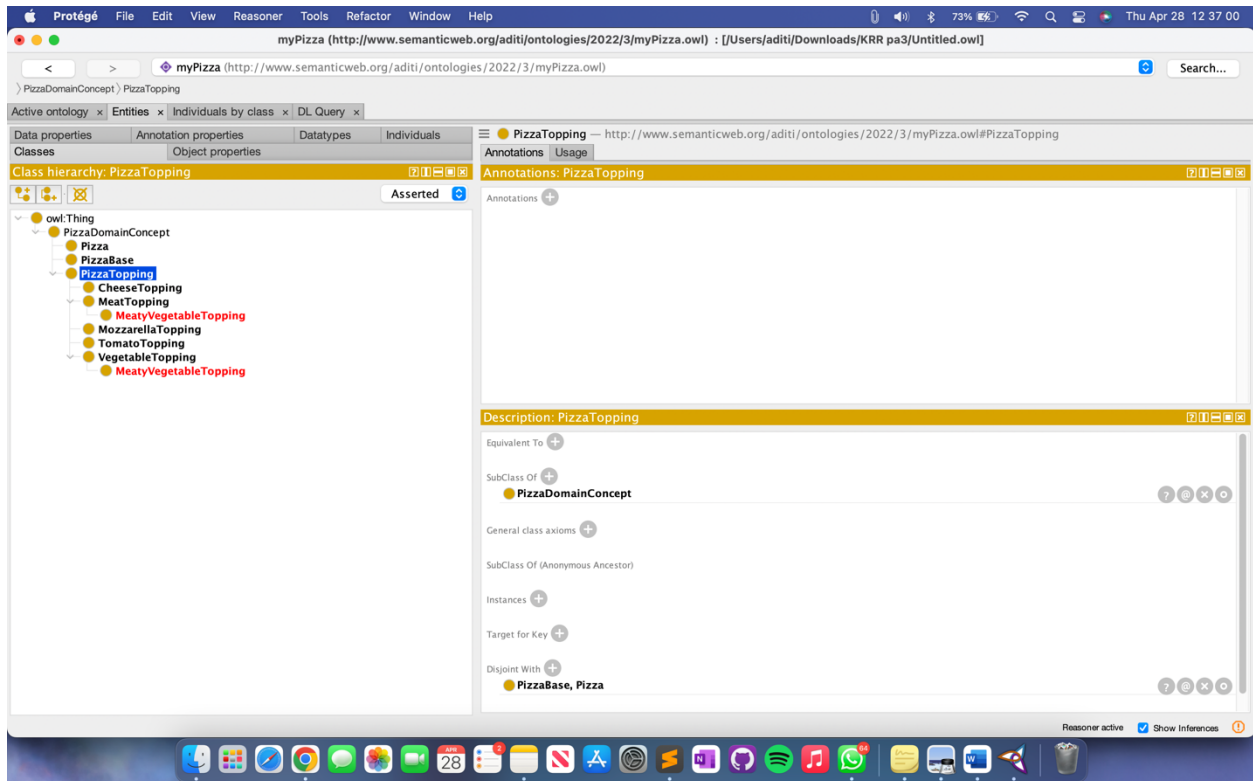


Programming Assignment 3: Building an OWL Ontology

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Q1. Do any of your classes come out as inconsistent? (They will be shown in red in the Class hierarchy tab; you may need to expand to see the red.) Explain why and describe a way to resolve the inconsistency.



Q1- Do any of your classes come out as inconsistent?

Yes, the subclass MeatyVegetableTopping under classes MeatTopping and VegetableTopping is inconsistent as it is shown in red in the above screenshot.

Q1-1-Explanation of inconsistency

It is inconsistent because VegetableTopping and MeatyTopping share the same subclass and they have been made disjoint.

Q1-2-Describe a way to resolve the inconsistency

To resolve the inconsistency, we must remove MeatyVegetableTopping. Instead, we can use the property hasTopping and add both MeatTopping and VegetableTopping.

Q2. Add two more Pizzas, two more PizzaBases, two more PizzaToppings, and add at least four more properties. (It would be fun to use ingredients from your home countries.) Explain in English what classes and properties are added.

Q2-Add two more pizza.

1. VeggiePizza – A pizza with vegetables as toppings
2. ThreeMeatPizza – A pizza with Meat, Chicken and Pepperoni toppings.

Q3-Add two more PizzaBase.

1. PanCrustBase – A thin pizza base
2. CheeseBurstBase – A cheese bursting from crust base

Q4-Add two more PizzaTopping.

1. OnionTopping – Onion on top of pizza
2. ChickenTopping – Chicken topping on pizza

Q5-Add at least four more properties.

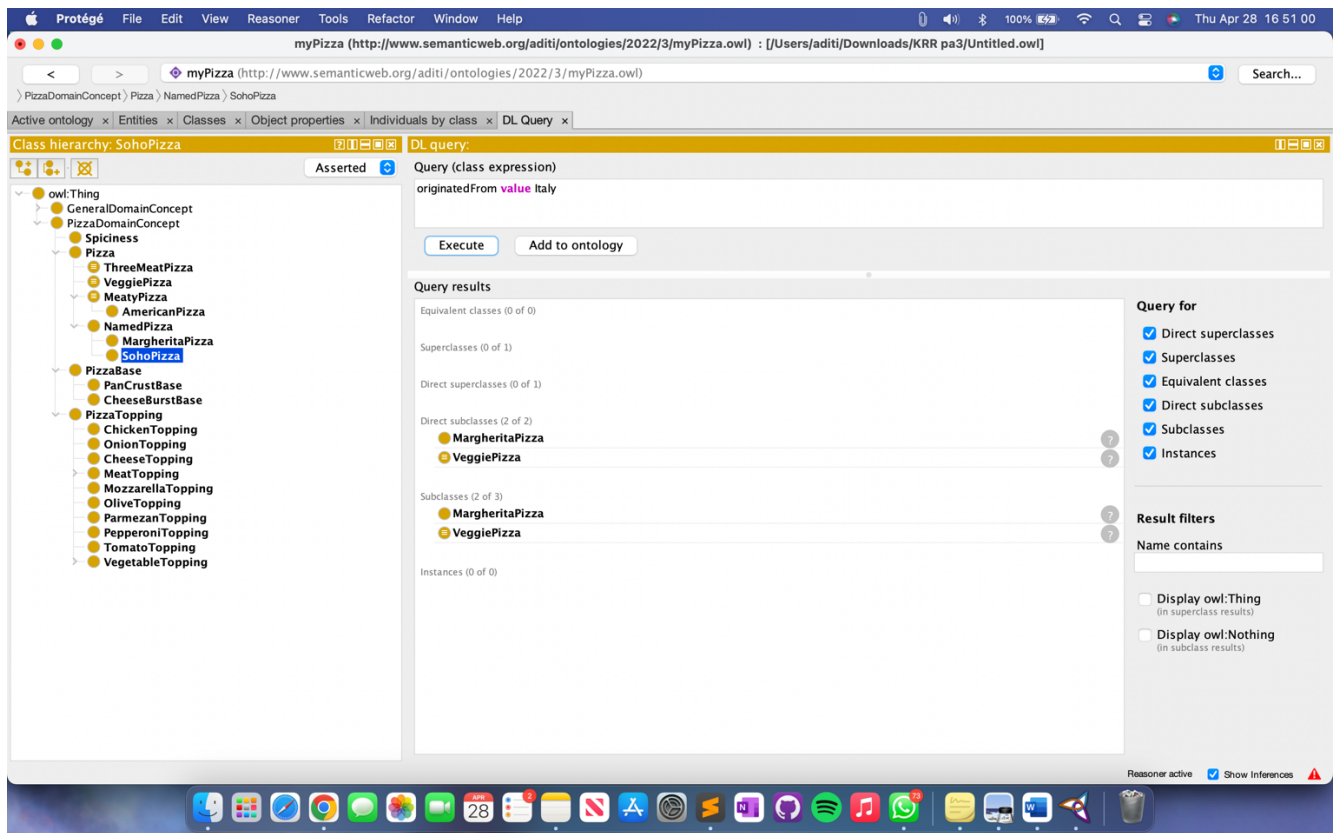
1. hasCalorieLevelOf – displays the calories in the pizza
2. originatedFrom – where the pizza has been originated
3. popularAmong – popular among which age group
4. spicyLevel – spice level of the pizza

Execute at least two (non-trivial) DL queries of your own choice, show the screenshots of your results.

Q6-The first query of your own choice.
originatedFrom value Italy

Q6-1-Explanation of the first query.
The query returns MargheritaPizza and VeggiePizza as these two pizzas are from Italy.

Q6-2-Screen shot for the first query.



Q7-The second query of your own choice.
spicyLevel value Mild

Q7-1-Explanation of the second first query.

Explanation - The query returns AmericanPizza, ThreeMeatPizza, MargheritaPizza, VeggiePizza as these two pizzas are mildly spicy.

Q7-2-Screen shot for the second query.

