Programming Assignment 3: Building an OWL Ontology

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Ans1

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.)If yes, give an example.	The inconsistencies exist within the classes MeatTopping and VegetableTopping, both of which are subclasses of MeatyVegetableTopping.
Explain why your example is inconsistent	The inconsistencies occur because VegetableTopping and MeatTopping are fundamentally separate, yet they share the same subclass.
Describe a way to resolve the inconsistency	One way to categorize toppings is by using the property "hasTopping" and creating two subcategories: "MeatTopping" and "VegetableTopping". We can then select toppings from each category as desired.

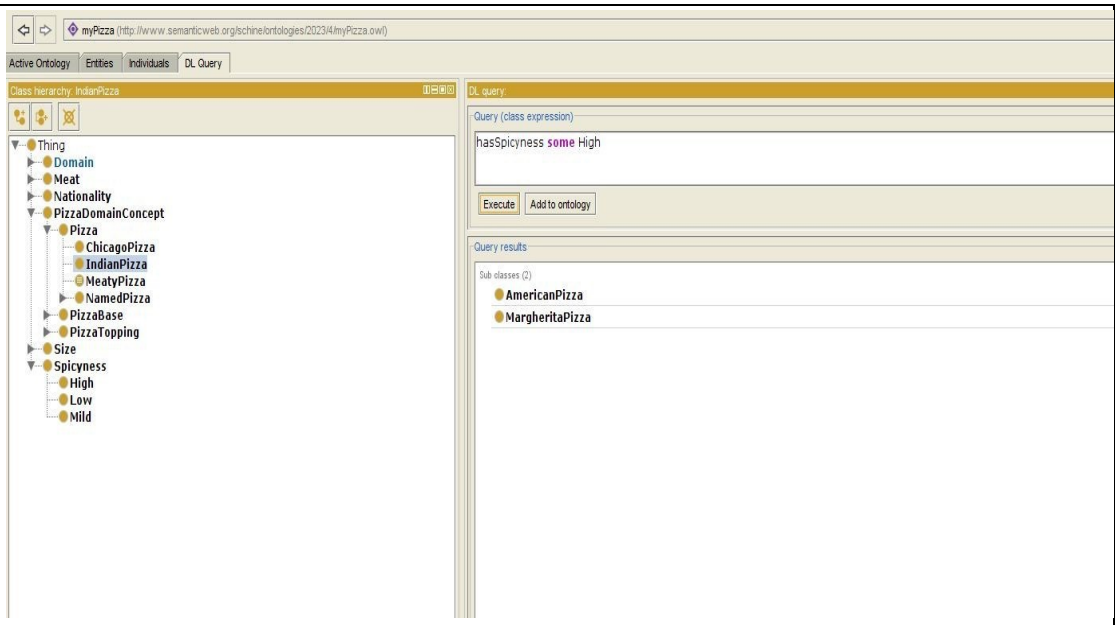
Ans2

Classes with explanation	1) **ChicagoPizza** – This pizza has its origins in the USA, and it is characterized by a mild level of spiciness. Its toppings include ingredients such as mozzarella cheese, mushrooms, tofu, and tomato. 2) **IndianPizza** – It is a pizza with origins from India , mild spicynessand has toppings like Mozarella,mushroom, tofu and tomato 3) **Milletbase** – It is the pizza base made up of Millets 4) **MixGrainBase** – It is the pizza base made up with mix grains 5) **MushroomTopping** – This is the commonly found vegetable topping 6) **TofuTopping** – This is topping made from Tofu which is of organic origin.
Properties with explanation	1) **hasNationality** – This property tells about the nation from where the pizza originated. 2) **hasSize**- This indicates the size of the pizza whether it is medium,small or large .

	3) **hasSpicyness** – This property indicates whether a pizza is spicy or not and the level of spiciness. 4) **hasTopping** – This property indicates what toppings a pizza has.

Ans3.

Query 1	**hasSpicyness some High**
Explanation	This query returns any pizza that has spicyness level high.

Screenshot for query 1	

Query 2	**hasNationality value USA**
Explanation of query 2	The query returns all pizzas whose Nationality is USA.

Screenshot for query 2