**Ontology Individual Assignment**

1. **Ontology Question**
   1. **What are the subclasses of Pizza?** 
      1. NamedPizza
      2. UnclosedPizza
   2. **What are the classes that CheesyPizza is equivalent to?** 
      1. Pizza
      2. hasTopping some CheeseTopping
   3. **What are the superclasses of CheesyVegetableTopping?** 
      1. VegetableTopping
      2. CheeseTopping
   4. **What are the subclasses of SeafoodTopping** 
      1. PizzaTopping
      2. hasSpiciness some Mild
   5. **Please interpret the meaning of InterestingPizza in plain English.**

Any pizza that has at least 3 toppings. Note that this is a cardinality constraint on the hasTopping property and NOT a qualified cardinality constraint (QCR). A QCR would specify from which class the members in this relationship must be. eg has at least 3 toppings from PizzaTopping. This is currently not supported in OWL.

* 1. **Please interpret the meaning of VegetarianPizza in plain English.**

Any pizza that does not have fish topping and does not have meat topping is a VegetarianPizza. Note that instances of this class do not need to have any toppings at all.

* 1. **Please interpret the meaning of MozzarellaTopping in plain English.**

None

* 1. **Please interpret the meaning of VegetarianPizza2 in plain English.**

An alternative to VegetarianPizzaEquiv1 that does not require a definition of VegetarianTopping. Perhaps more difficult to maintain. Not equivalent to VegetarianPizza

* 1. **Please interpret the meaning of IceCream in plain English.**

A class to demonstrate mistakes made with setting a property domain. The property hasTopping has a domain of Pizza. This means that the reasoner can infer that all individuals using the hasTopping property must be of type Pizza. Because of the restriction on this class, all members of IceCream must use the hasTopping property, and therefore must also be members of Pizza. However, Pizza and IceCream are disjoint, so this causes an inconsistency. If they were not disjoint, IceCream would be inferred to be a subclass of Pizza.

* 1. **What are the classes that disjoint with ArtichokeTopping?**
     1. ArtichokeTopping
     2. AsparagusTopping
     3. CaperTopping
     4. GarlicTopping
     5. LeekTopping
     6. MushroomTopping
     7. OliveTopping
     8. OnionTopping
     9. PepperTopping
     10. PetitPoisTopping
     11. RocketTopping
     12. SpinachTopping
     13. TomatoTopping

1. **Thai Pizza Ontology**
   1. **Classes**

Text

Description automatically generatedThis class is ThaiPizza class that is a subclass of Pizza representing the 3 Thai Pizza Style including SeafoodPizza, SpicyChickenBarbecuePizza, and TomYumKungPizza as subclasses.

This class is the ChickenTopping which is a subclass of the MeatTopping; I added more subclasses including ChickenSausageTopping and NewOrleansChickenTopping.

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* 1. **Properties**

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* 1. **Individuals**

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