CS2102 Tutorial

October 15, 2018

Q1.

$$\{t|\exists P(P \in Pizza \wedge P.size = 10 \wedge T.name = P.name)\}$$

$$\{< Y > |\exists X(PizzaX, Y, 10)\}$$
$$\{< Y > |\exists X \exists Z(pizza(X, Y, Z) \wedge Z = 10\}$$

Q2.

Tuple.

$$\{T|\exists P(P \in Pizza \wedge (P.size = 10 \vee P.size = 12) \wedge T.name = P.name\}$$

Domain

$$\{< Y > |\exists X \exists Z(pizza(X, Y, Z) \wedge (Z = 10 \vee Z = 12)\}$$

Q3.

Tuple.

$T|\exists P1 \exists P2(P1 \in Pizza \wedge P2 \in Pizza \wedge P1.name = P2.name \wedge P1.code < P2.code \wedge P1.size = 10 \wedge P$

Domain

$$\{< Y > |\exists X1 \exists X2(Pizza(X1, Y, 10) \wedge Pizza(X2, Y, 12))\}$$

Q4.

Tuple

$$T|\exists T1 \exists T2(T1 \in Pizza \wedge T2 \in Pizza \wedge T1.psize = T2.psize \wedge T1.pname = T2.pname \\ T1.pcode < T2.pcode \wedge T.pcode1 = T1.pcode \wedge T.pcode2 = T2.pcode$$

Domain

$$< X1, X2 > |\exists Y1 \exists Z1 \exists Y2 \exists Z2(Pizza(X1, Y1, Z1) \\ \wedge Pizza(X2, Y2, Z2) \wedge Y1 = Y2 \wedge Z1 = Z2 \wedge X1 < X2)$$