William Daniels

CSCI 4202

Artificial Intelligence

Homework #4 02/18/15

1. The following axioms fully express the language asked for in the problem:
   (a) $\forall x : food(x) \rightarrow like(x, John)$
   (b) $food(Apples)$
   (c) $food(Chicken)$
   (d) $\forall x \forall y : eats(x, y) \wedge \neg killedBy(x, y) \rightarrow food(x)$
   (e) $eats(Peanuts, Bill) \rightarrow \neg killedBy(peanuts, Bill)$
   (f) $\forall x : eats(x, Bill) \rightarrow eats(x, Sue)$

2.

$$like(peanuts, John)$$
$$a \rightarrow food(peanuts)$$
$$d \rightarrow eats(peanuts, y) \wedge \neg killedBy(peanuts, y)$$
$$e \rightarrow eats(peanuts, Bill)$$
$$nil$$

3. Translation into clause form:

   (a) $\neg food(x) \vee like(x, John)$
   (b) $food(Apples)$
   (c) $food(Chicken)$
   (d) $eats(y, z) \wedge killedBy(y, z) \vee food(y)$
   (e) $\neg eats(Peanuts, Bill) \vee \neg killedBy(peanuts, Bill)$
   (f) $\neg eats(t, Bill) \vee eats(t, Sue)$