

CS 161: Discussion 6

Friday, May 5, 2011

1. First-Order Logic Examples

Convert the following from English to first-order logic:

- (a) Everybody loves somebody sometime. (Note: $Loves(x, y, t)$ means x loves y at time t .)
- (b) Optimus Prime likes trucks.
- (c) Optimus Prime likes all big trucks.
- (d) Optimus Prime doesn't like any (type of) airplane.
- (e) Not all robots can transform into both a truck and an airplane.
- (f) Some students at Hogwarts took Potions in the winter.
- (g) There is a person who sells lightsabers only to people who are not Jedis.
- (h) There is a Jedi who defends all Wookiees who do not defend themselves.
- (i) Politicians can fool some of the people all of the time, and they can fool all of the people some of the time, but they can't fool all of the people all of the time.