

COMP 141: Logic Programming — Part 1

Instructions: In this exercise, we are going to review FOL and Prolog.

- (1) Let's define FOL statements that are equivalent to the following English statements.
 - (a) Eric is father of James.
 - (b) James is father of Paul.
 - (c) Alice is mother of James.
 - (d) Alice is mother of Chris.
 - (e) Being a father entails being a parent.
 - (f) Being a mother entails being a parent.
 - (g) Father of parent of someone is his/her grandfather.
 - (h) Mother of parent of someone is his/her grandmother.
 - (i) Being a grandfather entails being a grandparent.
 - (j) Being a grandmother entails being a grandparent.
 - (k) Two distinct persons are siblings of each other if they have the same father.
 - (l) Two distinct persons are siblings of each other if they have the same mother.
 - (m) Sibling of parent of someone is his/her "uncle-or-aunt".
- (2) Define the the statements from the previous question in Horn Clause Logic.