Assignment 4

Due date: Feb. 24th

Consider the following family tree:

1. Transcribe the above diagram into father and mother relationships as Prolog facts. Also add facts describing gender.

2. Define a rule for determining if two individuals X and Y have Z as a common ancestor.

3. Define a rule for checking if X and Y are “cousins of the same generation,” i.e., X and Y are descendents of a common person and both are same no. of links down from the common ancestor.

4. Suppose the double arrows depict the relationship “married.” Two individuals are also married if they have a common offspring. Write a rule for finding out if X is the spouse of the nephew of Y.

Note: All programs should be run using a Prolog system (SICStus, SWI). You should submit your Prolog code + sample runs of your program to show that they work correctly. To record a session, use the unix script facility.