Project 3

The source code for this project can be found here.

1.

Queries and output of part 1:

- (a) ?- parent_of(pete, mark). true
- (b) ?- parent_of(anne, jenny).
 false
- $\begin{array}{ll} (c) \mbox{ ?- father_of(X, todd).} \\ X = matt \end{array}$
- (e) ?- brother_of(X, lilly).
 $$\begin{split} X &= \mathrm{john} \\ X &= \mathrm{frank} \end{split}$$
- (f) ?- grandparent_of(X, henry). $X = \mathrm{anne} \label{eq:constraint}$
- (g) ?- sister_of(X, alice).
 false
- (h) ?- brother_of(frank, kate). false
- $\begin{array}{ll} \text{(i) ?- mother_of(X, matt).} \\ X = \mathrm{anne} \end{array}$
- (j) ?- brother_of(mark, anne).
 true

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2.

The output (with tracing) for the first call can be found in figure 1 and the output (without tracing) for the second call can be found in figure 2.



Figure 1: First call



Figure 2: Second call

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3.

Output for the code can be found in figure 3.



Figure 3: Part 3