

## Prolog Report

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This assignment was done solely by William Setzer with the help of a the prolog example from rahulahoop on github and from Learn Prolog in One Video by derek banas on YouTube.

The first program takes English user input to establish and query relations among words given by the user. A parse predicate is given the user input as a list. Parts of the input are assigned to variables, which are then related by the relate predicate. When the user enters a query, the relation of the two words is checked by the related predicate. The related predicate is able to check for either immediate relations (Bob is a man) or for relations with one degree of separation (Bob is a man, a man is a person).

The second program mimics the classic therapist archetype. Based on user input, the therapist program looks for keywords and asks appropriate generic questions. The program splits user input into atoms and then matches based on keywords contained in the atoms.

What I liked about prolog: For me, there is not much to like about prolog. The one thing I may like is the simplicity of the typing system.

What I disliked about prolog: Everything here overlaps with what I found difficult about prolog. There is a lack of any material about prolog, so simple tasks such as string parsing where rendered difficult. The most frustrating thing was the lack of control I felt with being required to describe computation instead of the method of computation. This kind of paradigm shift has so far been impossible for me to understand because of the lack of declarative programming languages.

Examples:

is\_a.pl

```
$ prolog -s is_a.pl
Welcome to SWI-Prolog (threaded, 64 bits, version 7.6.4)
SWI-Prolog comes with ABSOLUTELY NO WARRANTY. This is free software.
Please run ?- license. for legal details.

For online help and background, visit http://www.swi-prolog.org
For built-in help, use ?- help(Topic). or ?- apropos(Word).

?- start.
|: Bob is a man
ok
|: a man is a human
```

```
ok
|: is Bob a man
yes
|: is Bob a human
yes
|: is Mary a human
unknown
|: is bob a cat
unknown
|: is Bob a cat
unknown
```

therapist.pl

```
$ prolog -s therapist.pl
Welcome to SWI-Prolog (threaded, 64 bits, version 7.6.4)
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Please run ?- license. for legal details.
```

```
For online help and background, visit http://www.swi-prolog.org
For built-in help, use ?- help(Topic). or ?- apropos(Word).
```

```
?- start.
What seems to be the issue?
|: I don't feel well
I see. Please, continue.
|: My dad is mean to me
Tell me about your family.
|: They don't understand me
Tell me more about yourself.
|: I feel depressed.
I see. Please, continue.
|: goodbye
goodbye
true .
```