

CS 152 / SE 152

Programming Language Paradigms

Spring Semester 2014

Department of Computer Science
San Jose State University
Prof. Ron Mak

Assignment #4

Assigned: Wednesday, March 5
Due: Friday, March 14 at 11:59 pm
Team assignment, 100 points

Prolog murder mystery

Use Prolog to create and solve a murder mystery. Construct a Prolog database that presents a good murder mystery that can be solved deductively.

Facts, rules, and questions

Your Prolog database must have at least 20 facts and 20 rules. You must be able to make at least 15 queries. At least half of your rules and half of your queries must have conjunctions (subgoals separated by commas). Query responses can be yes/no (true/false) or objects.

Example facts:

```
person(jenkins, butler).  
killed(alice, blunt_object).  
owns(john, baseball_bat).
```

Example rule:

```
having_affair(Person1, Person2) :- married(Person1, Person3),  
                                   seen_together(Person1, Person2),  
                                   Person2 \= Person3.
```

Example query:

```
?- having_affair(bill, X), killed(X, blunt_object), owns(Y, hockey_stick).
```

If you were Sherlock Holmes at the scene of the crime, what questions would you ask?

What to turn in

Email a zip file to ron.mak@sjsu.edu that contains:

- A text file containing the facts and rules that can be loaded into Prolog, for example: **SuperCoders.pl**
- A cut-and-paste text file or screen shots that show your queries and the responses.

Name the files after your team, for example: **SuperCoders.zip**

Your subject line should be: **CS 152 Assignment #4, team name**

Don't forget to CC all your team members.