

CSC 351L – Comparative Programming Languages Lab

Project 4 – Processing Sentences

Due: March 11, 2021 at 11:59 pm

Description:

You will be writing a program that understands simple English sentences of the form:

_____ is a _____.

A _____ is a _____.

Is _____ a _____?

Sentences of the first form will cause you to assert a new fact, sentences of the second form will cause you to assert a new rule, and sentences of the third form will cause you to execute a query. Your program will need to build the facts and rules to assert or the queries to execute. You can set your program up to read the sentences from a file so that you don't have to retype them each time you test your program, but your program should output the sentence before giving the reply. You can use all lower case words and names to make this project easier.

A sample "dialog" is:

```
apple is a fruit.
ok
broccoli is a vegetable.
ok
a fruit is a food.
ok
is apple a food?
yes
is broccoli a food?
unknown
```

These sentences would translate to (the last two are queries):

```
fruit(apple).
vegetable(broccoli).
food(X) :- fruit(X).
food(apple).
food(broccoli).
```

We will have a special sentence **stop.** that ends the program. The main predicate for this program is provided to the students, as well as the predicates to read sentences and convert them to a list of atoms.

Steps:

- 1) Copy the main program file found at: `~mcconnel/CSC351/Prolog/Project4/main.pl`
- 2) Write the predicates necessary to recognize which type of sentence was read and then respond to that sentence.

Deliverables:

When you complete the program, you will prepare two things: a project report and a zip file containing all of your code.

The project report must use the format given in the sample file on D2L. This report can be prepared as a text file, MS Word document, or PDF. The project report should not be included in the zip file.

The zip file should include all prolog files. You can create the zip file in one of two ways – using zip on brahe or on your own computer.

The two items must be uploaded to the Project 4 drop box on D2L. No other form of submission will be accepted.