Tuesday 20 April 2021

CECS 342-07 Spring 2021

Assignment 5

Homework 5

1. Download and install an IDE for Prolog, e.g. SWI-Prolog at **https://www.swi-prolog.org**, or use the online Prolog REPL **SWISH** at **https://swish.swi-prolog.org**.
2. Start reading the Prolog tutorial at **http://www.learnprolognow.org/lpnpage.php?pageid=online**.

Lab Assignment 5: Logic Puzzle

Write a Prolog program to solve the logic puzzle “Star Tricked”.

You will need a way of writing facts that occurred earlier in the week. You can use simple clauses like `earlier(tuesday, wednesday)`. Or you can encode days as numbers and use arithmetic, then translate the output.

STAR TRICKED BY KEITH KING ★

Last week, four UFO enthusiasts made sightings of unidentified flying objects in their neighborhood. Each of the four reported his or her sighting on a different day, and soon the neighborhood was abuzz with rumors of little green men. By the weekend, though, the government stepped in and was able to give each person a different, plausible explanation of what he or she had "really" seen. Can you determine the day (Tuesday through Friday) each person sighted a UFO, as well as the object that it turned out to be?

Solution is on page 54.

	Ms. Barrada	Ms. Gort	Mr. Klatu	Mr. Nikto	Balloon	Clothesline	Frisbee	Water tower
Tuesday								
Wednesday								
Thursday								
Friday								
Balloon								
Clothesline								
Frisbee								
Water tower								

1. Mr. Klatu made his sighting at some point earlier in the week than the one who saw the balloon, but at some point later in the week than the one who spotted the Frisbee (who isn't Ms. Gort).
2. Friday's sighting was made by either Ms. Barrada or the one who saw a clothesline (or both).
3. Mr. Nikto did not make his sighting on Tuesday.
4. Mr. Klatu isn't the one whose object turned out to be a water tower.

Deliverable

1. You can work on this assignment in a group of up to 5 students.
2. At the due date you will take a brief quiz to test your understanding of the assignment.
3. During the lab session on the due date each group will do
    1. A brief demonstration of the running applications.
    2. A presentation explaining the source code.
4. *Due date:* **Tuesday 4 May 2021** at the beginning of lecture.