CS471- Homework 4

Due date: Feb 26th at 11:59pm EST

Introduction

The objective of this assignment is to get familiar with PDDL, Situation Calculus, SAT and SATPLAN.

Submission

Your homework must be typed and must contain your name and Purdue ID. To submit your assignment, log into `data.cs.purdue.edu` (physically go to the lab or use ssh remotely) and follow these steps:

1. To ssh use the command: `ssh username@data.cs.purdue.edu`
2. Make a directory named `username-hw4` (all letters in lower case)
3. Copy your PDF and code inside it. To do it remotely use the comand from your computer:
   `scp ./path/to/your-file.pdf username@data.cs.purdue.edu:./remote/path/from-home-dir/`
4. Go to the directory containing `username-hw4` (e.g., if the files are in /homes/aporco/aporco-hw4, go to /homes/aporco), and execute the following command:

   ```
   turnin -c cs471 -p hw4 username-hw4
   ```

   (e.g. Aldo would use: `turnin -c cs471 -p hw4 aporco-hw4` to submit his work)
5. To overwrite an old submission, simply execute this command again.
6. To verify the contents of your submission, execute the following command:

   ```
   turnin -v -c cs471 -p hw4
   ```

Required files

You will need to submit 1 file:

- The PDF containing your typed answers.

Problem Set

Problem 1: PDDL vs. Situation Calculus

a. Convert the cake problem and the cargo problem from PDDL to situation calculus.

b. Discuss one advantage of each planning language for each problem.

Problem 2: Inference in Propositional Logic

a. Explain how to modify SATPLAN (Fig. 7.22) so that it only calls the SAT solver once.

b. Are there any new spurious solutions?