University of Toronto
CSC486/2502 – Knowledge Representation and Reasoning, Fall 2006

Assignment 4

Due Date:	**Friday December 8 at 4:00 PM.**
	Note that no programming is required to complete this assignment.
	★★★ We will count the week Dec 8 – Dec 16 as one day for the purposes of computing late penalties and using Grace days, so you can hand this assignment in on Friday December 15 at 4:00 PM without penalty by using 1 grace day or with a penalty of 20% if you have no grace days left.

Assignment 4 is out of 100 marks and is worth **10%** of your final grade.

Handing in this Assignment

Complete on paper
What: Solutions to all questions
Due on: Friday December 8 on or before 4pm (but aim for noon in class).
Where: W.H. Pratt Building Room 283 (6 King's College Rd).
Details: Please place your assignment in an envelope with your name on it and also "For Sheila McIlraith".
        Please give your assignment to the admin, or if he isn't there, slip it under the door, or if
        the door is open put it in my mailslot.

TA Help
★★★ Note that Jorge Baier, our TA, will not be available to answer questions about this assignment. Instead,
★★★ you may send questions to me or to our substitute TA, Christian Fritz (fritz@cs.toronto.edu).

Silent Policy
★★★ There will be no silent policy for this assignment.

Late Policy
•   Late assignments will be handled based on a system of "grace days", as follows: Each student begins the term with 3 grace days. An assignment handed in from one minute to 24 hours late uses up one grace day. 24:01 to 48 hours late uses up two grace days, etc.
•   Once you have exhausted your grace days, the penalty is 20% of the assignment total grade for each day.
•   For this assignment only, we will count the weekend as 1 day.

Clarification Page
Important corrections (hopefully few or none) and clarifications to the assignment will be posted on the
Assignment 4 Clarification page, linked from the CSC486/2502 home page.

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Question 1 of this assignment requires you to axiomatize a domain in the situation calculus and to show some properties of your axiomatization. Question 2 is a continuation of question 1, requiring you to address questions on the topic of planning.

Three domains are described in the textbook. You are only required to answer questions with respect to the **15-puzzle domain**.

Question 1.

Chapter 14, Exercise 1 -- 4.

Question 2.

Chapter 15, Exercise 1 -- 7.

For fun, I encourage you to try out some of your solutions in Prolog, but this is *not* part of the assignment. We'll discuss this further in class next week.

Have Fun!