

Assignment 2, Constraint Satisfaction For Decision Making (CE884-7-SP), 2009-10

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1. Introduction:

This assignment follows from Assignment 1. It accounts for 10% of your total marks in this course. This assignment should be submitted electronically. The deadline of this assignment is *11:59:59, Friday 26 March 2010*. You must submit a report by the above deadline.

2. Objective:

The objective of this assignment is to test your ability to program in constraint satisfaction.

3. Your task:

You should first state the formulation that you have chosen to tackle the Stable Marriage Problem, which was explained in Assignment 1. (This does not have to be the formulation that you submitted in Assignment 1.) Then your task is to write a program to solve the above problem. The program should explain the problem solving steps clearly.

If you are unable to implement a solution, you should submit a report that explains what search techniques you would consider relevant. Explain why those techniques are relevant to solving this problem.

4. Programming language and programming platform:

You may use Prolog, Lisp, C, C++, Java, C-Sharp or Basics for implementation. To enable me to run your program, it must run in our labs.

5. Submission requirements:

Write your name clearly on the first page of your submission. Underline your surname. Please submit electronically:

- a) Your programs, in both source code and compiled code if applicable;
- b) A report (preferably within one page) showing how your program should be run and output of your program. The format of the input must be clearly stated. Your program should provide information that helps others to understand how your algorithm works.

6. Assessment criteria for this assignment:

Correctness is of the highest importance. Provided that your algorithm is correct, clear explanation of the steps (through output by the program, not in the report) will be rewarded. (Imagine how you would teach constraint satisfaction techniques to someone who has never studied this subject.)

Bonus will be given to programs that can handle problems other than the one given in the assignment; to gain the bonus, you may specify the input format but the users should be allowed to input the problem.

If you are submitting a report without a program, you will be assessed by the correctness and clarity of your analysis.

7. Please refer to the Student's handbook on the Departmental Policy on Plagiarism and Late Submission