CS 440 Project 2 Algorithms in the Real World

Objective
Relate the theory of algorithms to the real-world problems to appreciate the importance and contributions of algorithms in our daily life.

Description
Traditionally the course of Theory of Algorithms is regarded by students as boring, intimidating, or non-practical, which is absolutely a misconception. What students might not be aware of is that computer algorithms have been applied to solving problems in our daily life. To break the myth of this regard, this project is for students to explore how algorithms are applied in the real-world problems such as technology, life science, entertainment and puzzles, and consequently appreciate the importance of algorithms. Students will then give a presentation to share their discovery with their fellow students and the instructor.

Requirements
1. Identify a real-world problem that relies on a neat/interesting algorithm to solve.
2. The algorithm should not be one you have studied in this class or other classes. It does not have to be complicated, but it cannot be too simple, either.
3. Propose the problem and the algorithm, including initial source of references, to the instructor. One or two paragraphs will be sufficient.
4. Study the algorithm after receiving feedback from the instructor. Classify the algorithm into an algorithmic design technique studied in the class. If it does not belong to any we have studied, find out what kind of technique is that.
5. Give a presentation to the class. The guideline of the presentation will be provided soon.

Part I (Mini Project for October 25)
1. You should post your choice to the user group as soon as you make it, and the posting time will be used to resolve conflicts if the same topic is chosen by more than one student. The instructor will also use the user group to approve or disprove your choice.
2. Email your proposal to the instructor by October 27, 2010.

Part II

Excellent Reference Websites
The undergraduate version of the above course 15-499: Algorithms and Applications s03 (URL: http://www.cs.cmu.edu/afs/cs/project/pscico-guyb/realworld/www/indexS03.html)