© 2010 Sudarshan S. Chawathe

The goals of this exercise are: (1) to gain some more experience in designing, describing, implementing, and analyzing algorithms, using a very simple problem as an example and (2) to practice describing project work concisely.

- 1. List the members of your group below:
- 2. Describe clearly, in English, an efficient algorithm for finding the median of a set of n integers. Your description should be detailed enough to permit easy implementation by inexperienced programmers with no specialized knowledge of this problem. Hint: Well-known linear-time algorithms exist.

2

3. . Provide a complete C or Java implementation of the algorithm of Question 2. Include suitable assertions and comments to enable easy understanding of your code by others.

4. Analyze the space and time complexity of the code of Question 3, both asymptotically and concretely (bytes and seconds). Be as accurate as you can, given the constraints. (If you have a computer handy, you are welcome to run a few quick experiments, but you do not have to.)

5.	Describe your Capstone project to others in your group. Then, have each person write down, in their own words, a description of the project of someone else in the group, using at most 50 words per description.