HW5

This homework will be a small project. In this project, you have to identify a small problem, and investigate this problem. After that, you have to submit a short report and present in the class (if we have time).

1. Potential Topics
   a. Investigate an interesting algorithm, it can be an algorithm for sorting (bubble sort, bucket sort, tournament sort...), or can be an algorithm for finding the shortest path in a graph... etc.
   b. Find a useful and interesting circuit, and implement it using the circuit construction algorithm we covered in the class. You should also investigate how to minimize the number of gates using other techniques (For example, K-map).
   c. You can also write a small survey paper regarding the history of one aspect of the computer. For example, how the CPU evolves, how the memory technique evolves in the history. However, the topic should not be too big, and you need the instructor’s approval.
   d. The project can also be an experiment you conducted which is related to this class. For example, you choose to do an experiment to test some security issues in computers. But please make sure your experiment is not against the law.
   e. There can be other interesting things I believe, so you can also discuss with me to do something else.

2. Requirements
   a. You can form a group with maximum 2 persons.
   b. After the project, submit a report with at least 2-4 pages (according to your group size and your topic).
   c. Each group will give a short presentation (using PPT slides) in class (if time allows).

3. Grading Policy
   a. The whole project is 9% of your final grade.
   b. The report and presentation will be 6%, 3% respectively.
c. For very good project with noticeable efforts, bonus point will be given directly to your final grade.