

HW #3

Homework exercises should be done individually (You should write the solution by yourself). Solutions must be prepared in python programming language and submitted electronically before **11.59 pm on Sunday, December 18**. No credit will be given to solutions obtained verbatim from the Internet or other sources. **To get full credit for each question, you need to provide a brief explanation of your codes and the efficiency analysis with comments. Also, you need to provide the proof for the correctness of the algorithm with comments.**

3. A company wishes to buy n specific licenses for cryptographic software. The i 'th license currently costs n_i . Due to national security issues, a company is allowed to buy up to one license per month. Unfortunately, the licenses are also becoming more expensive. Every month the price of each license doubles.

Devise a greedy algorithm that decides which license to buy each month, such that the total cost is minimized.