

Lab 02:

1. What is the general procedure of designing new algorithms? What is the Algorithm analysis framework? What are asymptotic notations? (give answer and discussion)
2. Given that $t(n) = 12n^2 + 17/3 n + 7/5$, what is its “big O” proper expression? Is $\log(3n + 4/n)$ belong to $O(n)$?
3. Searching for key in a list of n items. Give its algorithm in the programming style, then analyze its complexity and analyze its worst-case, best-case, and average-case..
4. Checking whether a given integer n is a prime. Give its algorithm in the programming style, then analyze its complexity.