

Algorithms Programming Assignment #2

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I. Data structures

主要使用兩個 arrays 來做為 dynamic programming 的紀錄。

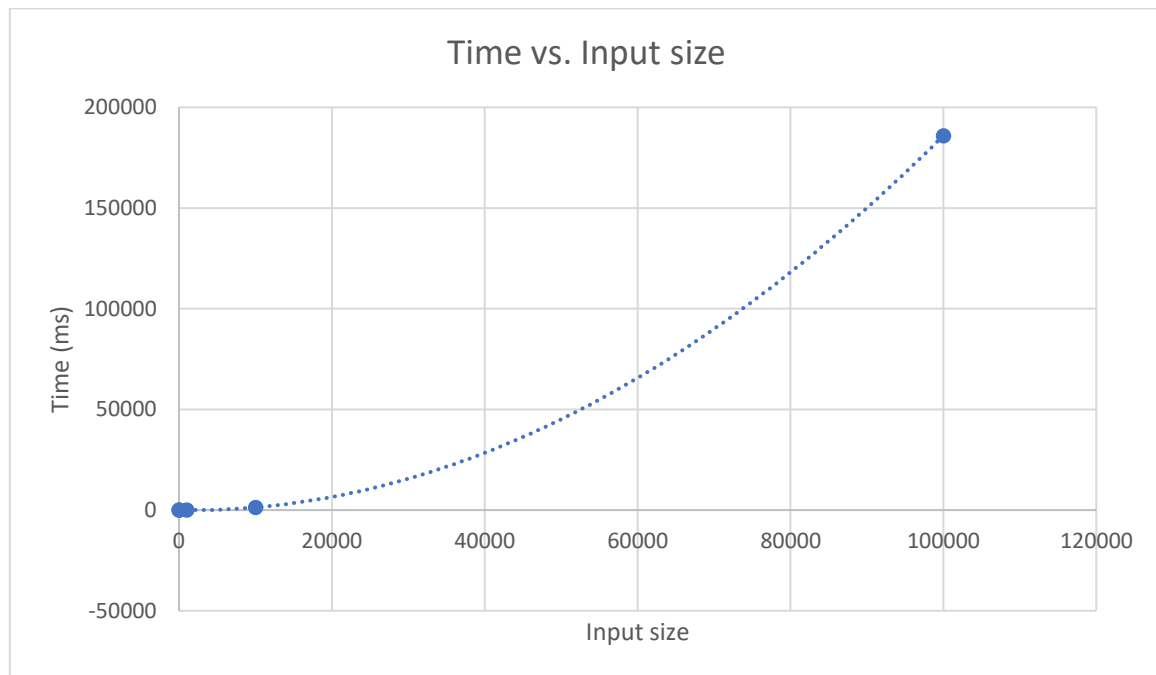
1. M: table to record maximum planar subset.
2. chosen_chord: table to record node k of optimal chord jk.

II. Running time and memory usage of four different input sizes

Input size	12	1000	10000	100000
Time (ms)	0.797	12.812	1370.21	285973
Memory (KB)	5900	13820	788092	78229440

III. Figures to show the growth of running time as a function of input size

(Time unit is in ms)



IV. Findings in this programming assignment

可以依圖表見得，對圓周上的任一兩點 i, j (一組)，都做一次 bottom-up algorithm，time complexity 是 $O(N^2)$ ；而 Array 產生的 space complexity 也是 $O(N^2)$ 。