

CompSci 260P Project #2 — LCS (Longest Common Subsequence)

- Describe and analyze the time complexity of an algorithm that, given n , determines two binary length- n strings, A and B , so as to maximize the number of distinct strings that are LCS's of A and B .
- Your algorithm should display the strings A and B and the list of their distinct LCS's.
- Implement your algorithm and execute it for each value of n in $\{4,7,10,12\}$.
- A [timing package](#) is available for your use.
- Deliverables include:
 - Description of your algorithm
 - Analysis of the asymptotic time complexity (θ -notation) as a function of n
 - Source code (C or C++) of your program
 - Output produced by the execution of your program, including (for each n in $\{4,7,10,12\}$)
 - (1) the determined binary strings A and B
 - (2) the number of distinct LCS's
 - (3) the list of those LCS's
 - (4) the number of seconds of execution time
 - NOTE: The graders will compile and run your program for verification and will terminate the program execution after 1 minute.
Therefore, your program should flush its output after each n that it processes so as to maximize your partial credit.