Let x = x1... xm and y = y1... yn, n ≥ m, be two strings over an alphabet Σ of size s.

A subsequence of x is a sequence of symbols obtained by deleting zero or more characters from x. The Longest Common Subsequence (LCS) Problem is to ﬁnd a common subsequence of x and y which is of greatest possible length.

An ordered pair (i, j) [1 ≤ i ≤ m, 1 ≤ j ≤ n] is called a match if xi = yj.

A chain C ⊆ M is a set of ordered pairs which are pairwise comparable, i.e., for any two distinct p1, p2 ∈ C, either p1 << p2 or p2 << p1.

The LCS problem can be viewed as ﬁnding a chain of maximal cardinality in M.