

Project Writeup

Project Name: LIS (Longest Increasing Subsequence)

Project Description:

The Longest Increasing Subsequence (LIS) problem is to find the length of the longest subsequence of a given sequence such that all elements of the subsequence are sorted in increasing order.

To make use of recursive calls, this function must return two things:

- 1) Length of LIS ending with element $\text{arr}[n-1]$. We use `max_ending_here` for this purpose
- 2) Overall maximum as the LIS may end with an element before $\text{arr}[n-1]$ `max_ref` is used this purpose.

The value of LIS of full array of size n is stored in `max_ref` which is our result