Longest Increasing Subsequence.

**Description:** - In this project, I find the length of the longest subsequence of the given sequence such that all the element of the subsequence are sorted in increasing order.

**Sprint Planning: -**

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| Analysis | Day 1 |
| Design | Day 2 |
| Implementation | Day 3 |
| Test | Day 4 |
| Report | Day 5 |

**Algorithm**

To complete this project following steps are follows: -

Step1: - lis () returns the length of the longest increasing subsequence in arr[]of size n.

Step2:- Initialize LIS values for all indexes.

Step3: - Compute optimize LIS values in bottom-up manner.

**for** (i = 1; i < n; i++)

**for** (j = 0; j < i; j++)

**if** (arr[i] > arr[j] && lis[i] < lis[j] + 1)

lis[i] = lis[j] + 1;

Step4: - Pick maximum of all LIS values.

Step5: - Under a main function print “Length of LIS is\_\_”