**Pseudocode for Longest Increasing Subsequence**

* The function takes an array as input and returns the longest increasing subsequence.
* We initialize an array of the same length as with all elements set . This array will store the length of the longest increasing subsequence ending at each index.
* We use a looping statements /if\_else /nested\_if \_ to iterate through each pair of indices . We compare the elements at these indices, and if is greater than and the length of the subsequence ending at is less than the length of the subsequence ending at plus 1, we update to the new maximum length
* After the loop, will contain the length of the longest increasing subsequence ending at each index.
* We find the maximum value in its index. This represents the length of the longest increasing subsequence and the index where it ends.
* We initialize an empty array to store the actual subsequence
* We continue this process by finding the index of the maximum value in that is less than the current . This ensures we get the longest increasing subsequence in the correct order.
* Finally, we reverse and return it as the longest increasing subsequence.