Idea for a Θ(n) Algorithm: Let the array be represented as A[0...n-1]. Start with an empty Stack. Push the first element (element at index 0) of the array into the Stack. Now, run a loop for elements at index 1 to n-1. When you pick an element at index i in this loop, pop the elements (from the top of the Stack) that are less than A[i] and stop popping if the top of the Stack has an element that is greater than or equal to A[i]. Print A[i] is the NGE for all such popped elements and then push A[i] to the Stack. After exiting from the loop, if the Stack is still not empty, pop the elements of the Stack until it is empty and print -1 to be the NGE for all such popped elements.