

4) The function iterates through each element in the array `arr`. It maintains a deque (`max_deque`) that stores indices of elements within the current window. In each iteration, the algorithm updates the deque by removing indices that are no longer in the window and removing elements from the back of the deque that are smaller than the current element. The index of the current element is added to the deque. If the window size `k` is reached or surpassed, the maximum element in the current window (at the front of the deque) is appended to the result list. The final result is a list containing the maximum elements in each subarray.