Questions on Arrays

Question1:

Given an integer array nums, find the subarraywith the largest sum, and return *its sum*.

**Example 1:**

**Input:** nums = [-2,1,-3,4,-1,2,1,-5,4]

**Output:** 6

**Explanation:** The subarray [4,-1,2,1] has the largest sum 6.

**Example 2:**

**Input:** nums = [1]

**Output:** 1

**Explanation:** The subarray [1] has the largest sum 1.

**Example 3:**

**Input:** nums = [5,4,-1,7,8]

**Output:** 23

**Explanation:** The subarray [5,4,-1,7,8] has the largest sum 23.

Question2:

Given an unsorted array of integers nums, return *the length of the longest consecutive elements sequence.*

You must write an algorithm that runs in O(n) time.

**Example 1:**

**Input:** nums = [100,4,200,1,3,2]

**Output:** 4

**Explanation:** The longest consecutive elements sequence is [1, 2, 3, 4]. Therefore its length is 4.

**Example 2:**

**Input:** nums = [0,3,7,2,5,8,4,6,0,1]

**Output:** 9