Assignments on Arrays:

1. Find the minimum and maximum sum of N-1 elements of the array. Given an unsorted array A of size N, the task is to find the minimum and maximum values that can be calculated by adding exactly N-1 elements.
   Input:
   a[] = {13, 5, 11, 9, 7}
   Output:
   32 40

   Explanation:
   Minimum sum is 5 + 7 + 9 + 11 = 32 and maximum sum is 7 + 9 + 11 + 13 = 40.

2. Find the minimum distance between two numbers. Given an unsorted array arr[] and two numbers x and y, find the minimum distance between x and y in arr[]. The array might also contain duplicates. You may assume that both x and y are different and present in arr[].
   Input:
   arr[] = {1, 2}
   x = 1
   y = 2

   Output:
   1

   Explanation: 1 is at index 0 and 2 is at index 1, so the distance is 1

3. Write a program to print all the LEADERS in the array. An element is leader if it is greater than all the elements to its right side. And the rightmost element is always a leader.
   Input:
   arr[] = {16, 7, 4, 3, 5, 2}

   Output:
   17 5 2

4. Write a function which takes an array and prints the majority element (if it exists), otherwise prints "No Majority Element". A majority element in an array A[] of size n is an element that appears more than n/2 times (and hence there is at most one such element).

   Input:
   {3, 3, 4, 2, 4, 4, 2, 4, 4}
   Output:
   4

5. Given N leaves numbered from 1 to N . A caterpillar at leaf 1, jumps from leaf to leaf in multiples of Aj (Aj, 2Aj, 3Aj). j is specific to the caterpillar. Whenever a caterpillar reaches a leaf, it eats it a little bit.. You have to find out how many leaves, from 1 to N, are left uneaten after all K caterpillars have reached the end. Each caterpillar has its own jump factor denoted by Aj, and each caterpillar starts at leaf number 1.
   Input:
   N=10
   K=3
   arr[] = {2, 3, 5}
   Output:
   2
   Explanation:
   The leaves eaten by the first caterpillar are (2, 4, 6, 8, 10). The leaves eaten by the second caterpilllar are (3, 6, 9). The leaves eaten by the third caterpilllar are (5, 10). Ultimately, the uneaten leaves are 1, 7 and their number is 2.