Given an array of integers arr and an integer k.

A value arr[i] is said to be stronger than a value arr[j] if |arr[i] - m| > |arr[j] - m| where m is the **median** of the array.  
If |arr[i] - m| == |arr[j] - m|, then arr[i] is said to be stronger than arr[j] if arr[i] > arr[j].

Return *a list of the strongest k* values in the array. return the answer **in any arbitrary order**.

**Median** is the middle value in an ordered integer list. More formally, if the length of the list is n, the median is the element in position ((n - 1) / 2) in the sorted list **(0-indexed)**.

* For arr = [6, -3, 7, 2, 11], n = 5 and the median is obtained by sorting the array arr = [-3, 2, 6, 7, 11] and the median is arr[m] where m = ((5 - 1) / 2) = 2. The median is 6.
* For arr = [-7, 22, 17, 3], n = 4 and the median is obtained by sorting the array arr = [-7, 3, 17, 22] and the median is arr[m] where m = ((4 - 1) / 2) = 1. The median is 3.

**Example 1:**

**Input:** arr = [1,2,3,4,5], k = 2

**Output:** [5,1]

**Explanation:** Median is 3, the elements of the array sorted by the strongest are [5,1,4,2,3]. The strongest 2 elements are [5, 1]. [1, 5] is also **accepted** answer.

Please note that although |5 - 3| == |1 - 3| but 5 is stronger than 1 because 5 > 1.

**Example 2:**

**Input:** arr = [1,1,3,5,5], k = 2

**Output:** [5,5]

**Explanation:** Median is 3, the elements of the array sorted by the strongest are [5,5,1,1,3]. The strongest 2 elements are [5, 5].

**Example 3:**

**Input:** arr = [6,7,11,7,6,8], k = 5

**Output:** [11,8,6,6,7]

**Explanation:** Median is 7, the elements of the array sorted by the strongest are [11,8,6,6,7,7].

Any permutation of [11,8,6,6,7] is **accepted**.

**Example 4:**

**Input:** arr = [6,-3,7,2,11], k = 3

**Output:** [-3,11,2]

**Example 5:**

**Input:** arr = [-7,22,17,3], k = 2

**Output:** [22,17]

**Constraints:**

* 1 <= arr.length <= 10^5
* -10^5 <= arr[i] <= 10^5
* 1 <= k <= arr.length