Sum Pair closest to target

Difficulty: **Easy** Source**: geeksforgeeks**

Given an array **arr[]** and a number **target**, find a pair of elements (a, b) in **arr[],** where a<=b whose sum is closest to **target.**
Note: Return the pair in sorted order and if there are multiple such pairs return the pair with maximum absolute difference. If no such pair exists return an empty array.

Examples:

Input: arr[] = [10, 30, 20, 5], target = 25

Output: [5, 20]

Explanation: As 5 + 20 = 25 is closest to 25.

Input: arr[] = [5, 2, 7, 1, 4], target = 10

Output: [2, 7]

Explanation: As (4, 7) and (2, 7) both are closest to 10, but absolute difference of (2, 7) is 5 and (4, 7) is 3. Hence, [2, 7] has maximum absolute difference and closest to target.

Input: arr[] = [10], target = 10

Output: []

Explanation: As the input array has only 1 element, return an empty array.

Constraints:
1 <= arr.size() <= $2*10^5$
0 <= target<= $2*10^5$
0 <= arr[i] <= 10^5

Expected Time Complexity : **O(n log n)**

Auxiliary Space **: O(1)**