Sort an array in waveform

Problem

Given an unsorted array of integers, sort the array into a wave like array. An array ‘arr[0..n-1]’ is sorted in wave form if arr[0] >= arr[1] <= arr[2] >= arr[3] <= arr[4] >= …..

Input: arr[] = {10, 5, 6, 3, 2, 20, 100, 80}

Output: arr[] = {10, 5, 6, 2, 20, 3, 100, 80} OR

{20, 5, 10, 2, 80, 6, 100, 3} OR

any other array that is in wave form

Input: arr[] = {20, 10, 8, 6, 4, 2}

Output: arr[] = {20, 8, 10, 4, 6, 2} OR

{10, 8, 20, 2, 6, 4} OR

any other array that is in wave form

Input: arr[] = {2, 4, 6, 8, 10, 20}

Output: arr[] = {4, 2, 8, 6, 20, 10} OR

any other array that is in wave form

Input: arr[] = {3, 6, 5, 10, 7, 20}

Output: arr[] = {6, 3, 10, 5, 20, 7} OR

any other array that is in wave form

## Solution

<https://replit.com/@rohitbhardwaj/Arrays-Problems#SortWave.java>