JALAN TECHNOLOGIES

This document contains two programming questions that you can solve with a programming language of your choice. We expect you to spend no more than 90 minutes on this assessment. Though we do not have any real way to measure that, we trust that you will honour our request.

If you have any question around any of the problem, please make reasonable assumptions and call out those assumptions in your response.

Once you are done, please email the response to your talent advisor.

Good luck.

Question 1:

Write a program that takes as input a sorted array of numbers. The objective is to return the array arranged in an alternate order such that max value is followed by min value in a descending fashion, so that the 1st element is the max value, 2nd element is the min value, 3rd element is the second max value, 4th element is the second min value & so on.

Example: For an input array `[2, 4, 6, 8, 10]`,
the expected result would be `[10, 2, 8, 4, 6]`

Note: The solution should modify the original array itself.

Please respond back with the following:

Description	Response
URL that contains the solution in programming language of your choice (recommended: Typescript or JavaScript)	
Time complexity (Big O notation) of your solution	
Space complexity (Big O notation) of your solution	
List all possible test cases	

Question 2:

Please implement a software for a Coffee House using Object Oriented Programming. **I**f you are not familiar or comfortable with object-oriented programming, we suggest you give this article a quick read to ensure you understand it before you attempt it.

 It should have the following features:

- Allow users to order a coffee from Espresso, Cappuccino, Latte.
- Allow users to specify add-ons: Milk, Cream, Latte

Prices for the available options are as follows

Product/Add-on	Milk	Cream	Latte
Espresso	60	75	100
Cappuccino	80	90	125
Latte	100	125	150

We need to define the solution as follows:

1. Display the combination of coffees that can be ordered
2. Allow users to choose their coffee type with the preferred add-on.
3. Generate the detailed bill/receipt with the amount to be paid.
4. Allow users to order more than 1 cup and more than 1 variety.

Please respond back with the following:

Description	Response
URL that contains the solution in programming language of your choice (recommended: Typescript or JavaScript)	