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.

We would like you to share your response with us on codeshare.io.

Good luck.

Question 1:

Write a program that takes as input an array of positive and negative numbers (0 excluded). The objective is to return those items from the array whose sum is 0. If no such items exist return "No Elements found"

Example: For an input array `[-4, 1, 3, -2, -1]`,
one of the possible results would be `3, -2, -1` since their sum is 0.

Note: If there are more than 1 combination of such items, you can return any 1 of them.

Please share your code response on codeshare.io. In addition to this, please also specify the Time complexity (Big O notation) and Space complexity (Big O notation) for your solution as well as all possible test cases.

Question 2:

Please implement a software for a car service station 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:

The car service station caters to different types of cars – Hatchback, Sedan, SUV.

It provides different types of services like Basic Service, Engine Fixing, Clutch Fixing, Gear Fixing and Brake Fixing. Each service has a service code associated with it and different prices for different types of cars.

Service Code	Service	Hatchback	Sedan	SUV
BS01	Basic Servicing	₹ 2000	₹ 4000	₹ 5000
EF01	Engine Fixing	₹ 5000	₹ 8000	₹ 10000
CF01	Clutch Fixing	₹ 2000	₹ 4000	₹ 6000
BF01	Brake Fixing	₹ 1000	₹ 1500	₹ 2500
GF01	Gear Fixing	₹ 3000	₹ 6000	₹ 8000

The software should generate a detailed bill with the total amount for each service request based on the Type of Car specified and the requested Service Codes.

Example:
Type of Car – Hatchback
Service Codes – BS01, EF01

Charges for Basic Servicing – ₹ 2000
Charges for Engine Fixing – ₹ 5000
Total Bill – ₹ 7000

In addition, if the total service bill is more than ₹ 10000, a complimentary cleaning should be provided and specified in the bill.

Please share your code response on [codeshare.io.](codeshare.io)