

## CDL JavaScript Kata

### JavaScript Coding Challenge

Hello,

*I would like to give many thanks for inviting me to have a Technical Test. I am very happy and excited to complete the technical test in JavaScript.*

To solve and implement the solution in JavaScript Programming Language, it took me about 1.5 to 2 hours. I took a break in between. Some of the key-decision made to implement the solution is such as:

- Making a Dynamic Array of Products which can be added to the cart for ordering. New Products can be added to the Array. Each Array object is a Product which has important attributes such as item-name, unit-price, offer-price-for-multi-buy etc.
- Cross-Checking while adding a product to the cart. If the given item (product name) is not the Product List Array, then this product cannot be added to the cart, because there is no information of the given named product.
- Calculation of the Sub-Total price of every product based on the Special-Price for multiple purchases. If there is no available Special-Price for multiple buying, then calculate the regular Sub-Total. Summing up all Sub-Total prices is the Total-Order value.

If there were extended time to improve the solution, I would probably do the followings:

- Object-Oriented implementation. Product, Order, Cart, and User are the basic stakeholders Classes in this situation.
- Writing test cases for:
  - Add-Product
  - Checking if the product is already in the given list
  - Adding to the cart
  - Calculating the Subtotal and Total Order Value
- Improving the Order Details visualization
- Improve the Time and Space Complexity
- Writing more appropriate and detailed Code comments

This solution is implemented to programmatically solve the Calculation of Sub-Total and Total-Order-Value. This is not ready for use in production straight away. I tried my best to keep the Data and Program Structure simple and reusable. However, for an extended time, the performance (time and space complexity) could be improved.

I would very much love to have feedback on my given solution. Thank you again for your time and consideration.

Best Regards,

**Tuba Islam**