Scenario:

Developing for a small e-commerce site involves manipulating product data stored in arrays using Javascript array functions as part of the development process.

1. Initialize an array named ‘products’ to store product objects.
2. Each product object should have the following properties: id, name, price, and quantity.
3. Add more than 8 products to the ‘products’ array using javascript's array manipulation functions. (At least one product in the array should have a quantity of 0.)
4. Ensure each product has a unique id, and assign random values for name, price, and quantity. (The id must be a numeric value between 1 and 100.)
5. Implement a search functionality that allows users to filter products by name.
6. Write a function to generate discount.
   1. Assign the new property name as ‘finalPrice’.
   2. Calculate 10% discount from ‘price’.
   3. Finally, log the new array to the console.
7. Write the code to sort the product by finalPrice. (Low to high)
8. Find the product with a quantity of 0 in the array, then remove the product.