

Solution

What was improved:

1. The code was converted to ES6 syntax (for example, **var** keywords were replaced with **let** and **const** which gave us more control over their scope and ability to be changed);
2. Code duplications were removed (DRY principle) as well as the magic numbers (for example, function checked userType and in both cases did almost the same steps - executing the same code with slightly different values within the same conditions);
3. All data related to the users and products have been moved to the collections of objects. It made the code more readable and extendable;
4. The calculatePrice function was a bit bulky and handled too many things so I extracted some code to the separate functions. It also made the code more testable and maintainable.

Future improvements:

1. We need to add parameters validation because if we, for example, pass a wrong date type to the parameters the price wouldn't be calculated and remains 0 that couldn't be the ideal approach. We can use the Typescript library to implement this.
2. We can add some UI for data inputting and outputting the result instead of calculating the price to the console.