```
// Arrow function to calculate the square of a number
const square = (num) => num * num;
```

Example Usage:

```
const number = 5;
const result = square(number);

console.log(`The square of ${number} is ${result}`);
```

```
// Function to generate a personalized greeting message
function generateGreeting(name) {
        return `Hello, ${name}! Welcome to our website.`;
    }

// Greeting three different people
const person1 = 'Ram';
const person2 = 'Sita';
const person3 = 'Laxman';

console.log(generateGreeting(person1));
console.log(generateGreeting(person2));
console.log(generateGreeting(person3));
```

```
(function() {
        const number = 7;

        const square = number * number;

        console.log(`The square of ${number} is ${square}`);
})();
```

```
function createTaxCalculator() {
        return function(income) {
        let tax;

        if (income <= 10000) {
        tax = income * 0.1; // 10% tax for income <= 10,000
         }

         else if (income <= 30000) {
         tax = 10000 * 0.1 + (income - 10000) * 0.2;
        }

         else {
        tax = 10000 * 0.1 + (30000 - 10000) * 0.2 + (income - 30000) * 0.3;
```

```
                    }

                    return tax;
                    };
                    }


           const calculateTax = createTaxCalculator();

           const incomes = [8000, 15000, 35000, 50000];
           incomes.forEach(income => {
           console.log(`The tax for an income of ${income} is ${calculateTax(income)}`);
    });
```

```
        function factorial(n) {

                    if (n === 0 || n === 1) { return 1; }

                    return n * factorial(n - 1);

                    }
```

```
        const testValues = [0, 1, 5, 7, 10]; testValues.forEach(value => { console.log(`The
factorial of ${value} is ${factorial(value)}`); });
```

Syntax:

```
         function curry(fn) {

         function curried(...args) {   if (args.length >= fn.length) {

         return fn(...args);

         } else {


         return (...moreArgs) => curried(...args, ...moreArgs);

         }

         }

         return curried;

         }
```

```
// Example function to add two numbers
function add(a, b) {
  return a + b;
}
const curriedAdd = curry(add);
console.log(curriedAdd(5)(3)); // Output: 8
console.log(curriedAdd(10)(-2)); // Output: 8
console.log(curriedAdd(7)(8)); // Output: 15
```