

SL	Overloading	Overriding
1	Method overloading is a compile-time polymorphism.	Method overriding is a run-time polymorphism.
2	It helps to increase the readability of the program.	It is used to grant the specific implementation when the method is already provided by its parent class.
3	It occurs within the class.	It is performed in two classes.
4	Method overloading may or may not require inheritance.	Method overriding always needs inheritance.
5	In method overloading, methods must have the same name and different signatures.	In method overriding, methods must have the same signature.
6	In method overloading, the return type can or can not be the same, but we just have to change the parameter.	In method overriding, the return type must be the same.

Overloading and Overriding in JavaScript

JavaScript does not support function overloading natively. If we will add functions with the same name, only the last defined function will be executed.

It is true that JavaScript supports overriding not overloading. When you define multiple functions which have the same name, the last defined will override all the previously defined ones and every time when you invoke a function, the last defined function will be executed.

Code Examples

Data Abstraction

JavaScript is a weakly typed language and does not have the classical built-in support for abstraction like Java. However, JavaScript has the capability to support OOP, and thus can achieve OOP functionalities, which is known as Object-Oriented Programming. Data abstraction can be achieved by inheritance and composition.

In JavaScript, prototypes and closures can help us accomplish data abstraction.

```
function Employee(name, age, baseSalary) {
    this.name = name;
    this.age = age;
    this.baseSalary = baseSalary;

    let monthlyBonus = 1000;

    // This is not exposed to the user
    let calculateMonthlyBonus = function () {
        let finalSalary = baseSalary + monthlyBonus;
        console.log("Final Salary is : ", finalSalary);
    };
}
```