Object Oriented JavaScript: A Comprehensive Guide to a Powerful Approach to Web Development

Object Oriented JavaScript (OOP) is a powerful approach to web development that can help you create more maintainable, scalable, and reusable code. OOP is based on the idea of organizing code into objects, which are collections of data and methods that operate on that data. This makes it easier to manage complex codebases and to create code that is easier to reuse in other projects.

Object-oriented JavaScript - Second Edition - Learn a More Powerful Approach to Web Development

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In this article, we will introduce the basics of OOP and show you how to apply them to your JavaScript code. We will cover topics such as:

- Creating and using objects
- Inheriting from other objects
- Overriding methods

- Using polymorphism

Creating and Using Objects

The first step to using OOP in JavaScript is to create objects. Objects are created using the `new` keyword. For example, the following code creates a new object called `person`:

javascript const person = new Object();

Once you have created an object, you can add data to it using the dot operator. For example, the following code adds a `name` property to the `person` object:

javascript person.name ="John Doe";

You can also add methods to objects using the dot operator. For example, the following code adds a `greet` method to the `person` object:

javascript person.greet = function(){console.log("Hello, my name is " + this.name); };

Now that you have created an object, you can use it to store data and perform operations. For example, the following code uses the `greet` method to greet the user:

javascript person.greet();

Inheriting from Other Objects

One of the most powerful features of OOP is the ability to inherit from other objects. This allows you to create new objects that share the properties and

methods of existing objects. To inherit from another object, you use the `extends` keyword. For example, the following code creates a new object called `student` that inherits from the `person` object:

javascript class Student extends Person { constructor(name, major) {super(name); this.major = major; }}

The `Student` object now has all of the properties and methods of the `Person` object, as well as its own `major` property.

Overriding Methods

In some cases, you may want to override a method from a parent object. This allows you to change the behavior of the method for a specific object. To override a method, you simply redefine the method in the child object. For example, the following code overrides the `greet` method in the `Student` object:

javascript class Student extends Person { constructor(name, major) {super(name); this.major = major; }

greet(){super.greet(); console.log("I am a student majoring in " + this.major); }}

Now, when the `greet` method is called on a `Student` object, it will first call the `greet` method from the `Person` object, and then it will call the `greet` method from the `Student` object.

Using Polymorphism

Polymorphism is the ability for objects of different types to respond to the same message in different ways. This is a powerful feature that can be used to create more flexible and reusable code. For example, the following code uses polymorphism to create a function that can greet any object that has a `greet` method:

javascript function greet(object){object.greet(); }

This function can be used to greet any object, regardless of its type. For example, the following code uses the `greet` function to greet a `Person` object and a `Student` object:

javascript const person = new Person("John Doe"); const student = new Student("Jane Doe", "Computer Science");

greet(person); greet(student);

Both the `Person` object and the `Student` object will respond to the `greet` message, but they will do so in different ways. The `Person` object will simply say "Hello, my name is John Doe", while the `Student` object will say "Hello, my name is Jane Doe and I am a student majoring in Computer Science".

OOP is a powerful approach to web development that can help you create more maintainable, scalable, and reusable code. In this article, we have introduced the basics of OOP and shown you how to apply them to your JavaScript code. We encourage you to experiment with OOP and see how it can improve your code.

Additional Resources

- JavaScript Objects
- JavaScript Object Inheritance

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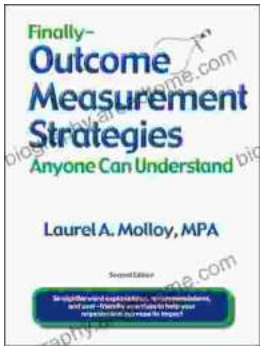

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