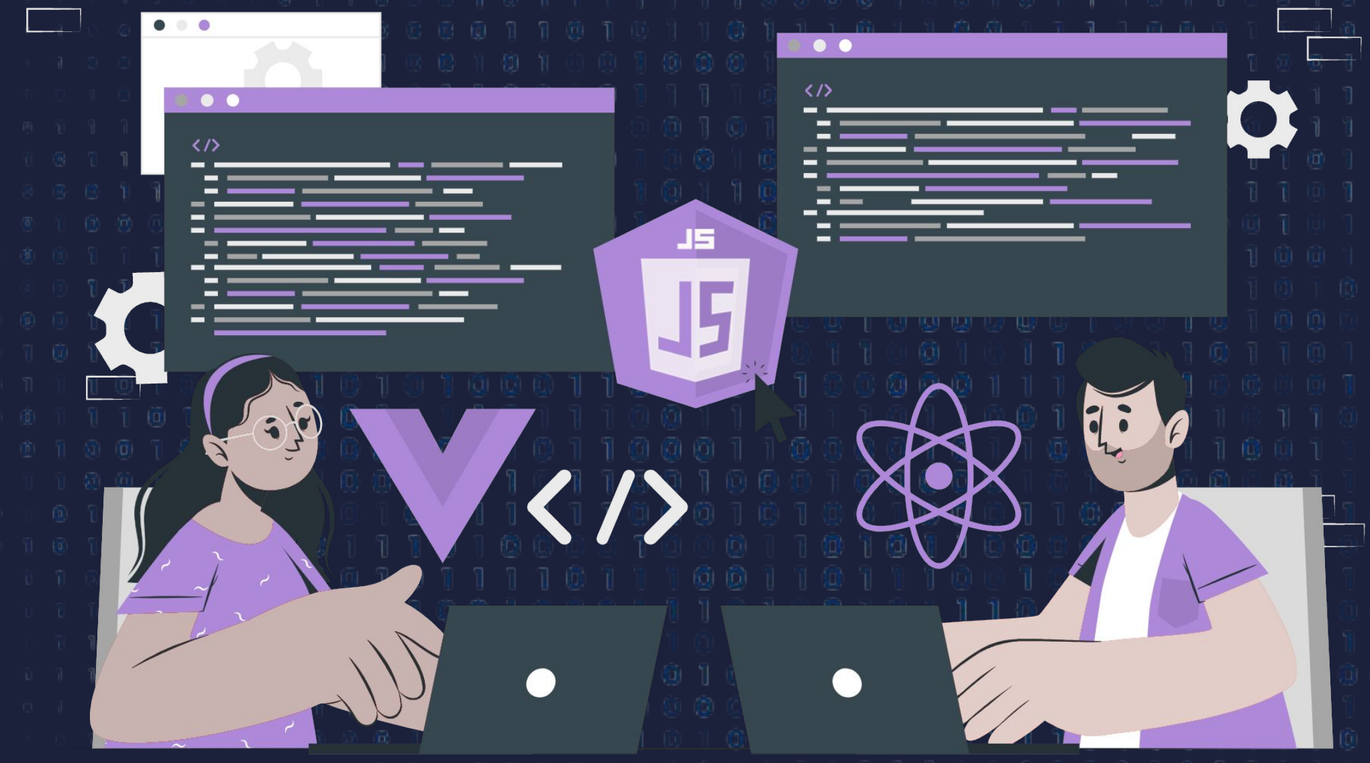
PW SKILLS

Explaining Prototypes



Topics

1. What is Prototype?
2. When to use Prototype in JavaScript?
3. How to add methods to the object using the prototype in JavaScript?
4. Key Takeaways

What is Prototype?

A prototype is an object that contains properties and methods that are shared among all instances of a particular object. Every JavaScript object has a prototype property.

How to add methods to the object using the prototype in JavaScript?

```
function Person(name) {
  this.name = name;
}

// adding a method to the Person prototype
Person.prototype.sayHello = function() {
  console.log(`Hello, my name is ${this.name}.`);
}
console.log(studentTwo.age) // 15

// adding a property to the Person prototype
Person.prototype.age = 0;

var person1 = new Person("John");
person1.sayHello(); // "Hello, my name is John."
console.log(person1.age); // 0
```

When to use Prototype in JavaScript?

- **Adding properties and methods:** You can use prototypes to add new properties and methods to existing objects. This is often done by modifying the prototype of the object.
- **Creating reusable objects:** Prototypes are a great way to create objects that can be reused throughout your code. By defining common properties and methods on a prototype object, you can easily create new instances of the object without having to repeat the same code over and over again.
- **Inheritance:** Prototypes are used to implement inheritance in JavaScript. When you define a new object, you can set its prototype to another object, and the new object will inherit all the properties and methods of the prototype.
- **Performance optimization:** Prototypes can be used to optimize the performance of JavaScript code. For example, by using prototypes, you can avoid creating multiple copies of the same function or object.

Key Takeaways

- A prototype is an object which associates with every functions and objects. Additionally, it is invisible, but all the properties inside the prototype are accessible.
- When a programmer needs to add new properties like variables and methods at a later point in time, and these properties need sharing across all the instances, then the prototype will be very handy.
- The prototype can add both variables and methods to an existing object dynamically.

THANK YOU