
JAVASCRIPT

THIS

- This is a keyword used in JavaScript with special meaning depending on the context in which it is used.
- By default, this refers to a global object, which is global in the case of NodeJS and a window object in the case of a browser.
- When a function is called with the new operator, then this refers to the newly created instance.

```
var count = 5;  
function test () {  
    console.log(this.count === 5);  
}  
  
test()
```

OPERATOR NEW

- The new operator is used to create objects. The operand of this operator must be a function.
 - When you use new, four things happen:
 - It creates a new, empty object.
 - It binds this to our newly created object.
 - It adds a property onto our newly created object called “__proto__” which points to the constructor function’s prototype object.
 - It adds a return this to the end of the function, so that the object that is created is returned from the function.
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SO, WHAT HAPPENS?

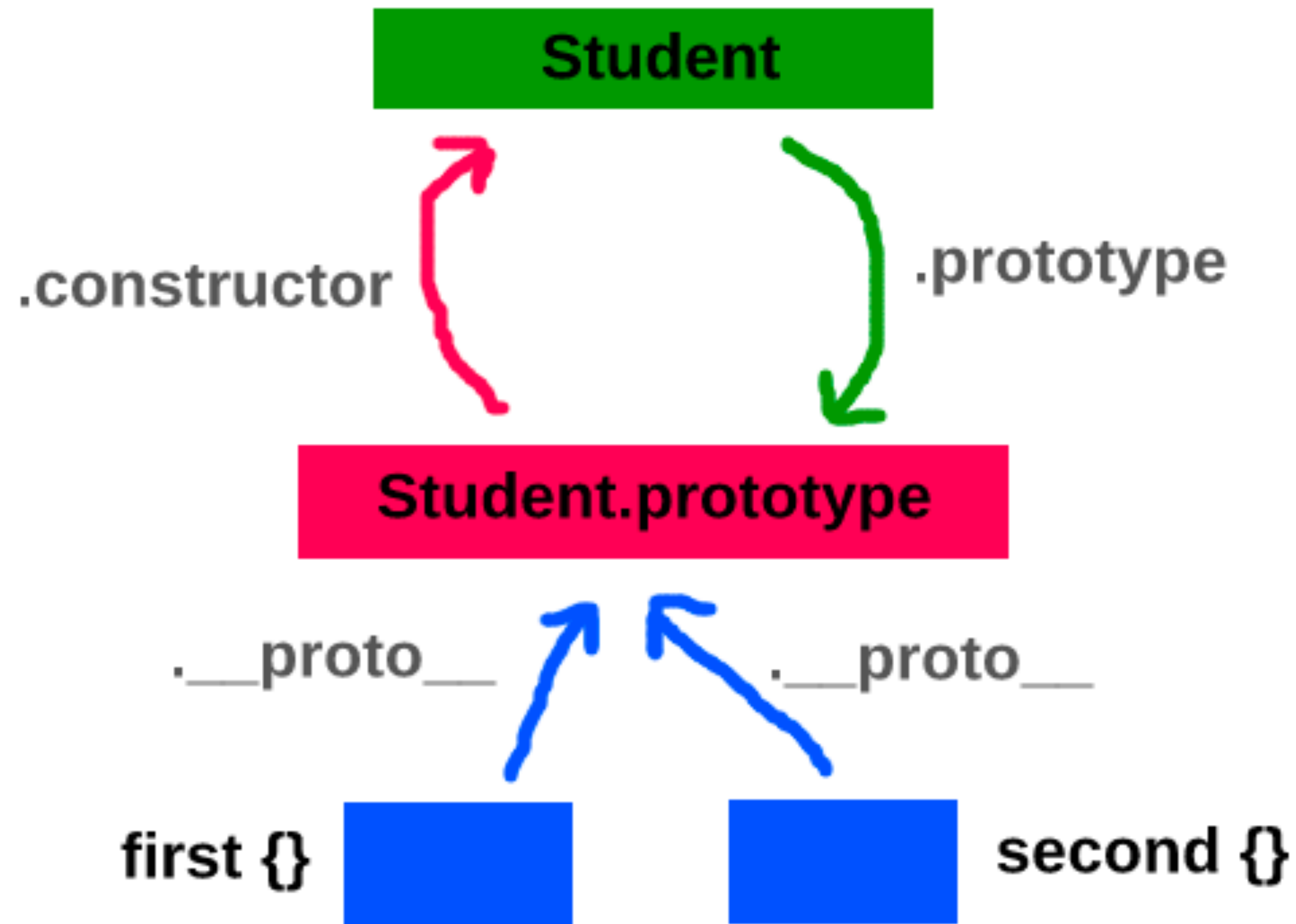
```
function Student(name, age) {  
  this.name = name;  
  this.age = age;  
}
```

```
const first = new Student('John', 26);
```

- A new object is created – the first object.
 - this is bound to our first object. So any references to this will point to first.
 - Our `__proto__` is added. `first.__proto__` will now point to `Student.prototype`.
 - After everything is done, our brand new first object is returned to our new first variable.
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PROTOTYPES

- Every JavaScript object has a prototype.
 - All objects in JavaScript inherit their methods and properties from their prototypes.
 - It's important because of inheritance. The prototype object is shared among all objects created with that constructor function. This means we can add functions and properties to the prototype that all of our objects can use.
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DATE

- Built-in object.
- Since 1 January 1970 UTC.
- It stores the date, time and provides methods for date/time management.
- Months are counted from zero (yes, January is a zero month).
- Days of week in `getDay()` are also counted from zero (that's Sunday).

```
const d = new Date();
```

```
const d = new Date(milliseconds);
```

```
const d = new Date(dateString);
```

```
const d  
= new Date(year, month, day, hours, minu  
tes, seconds, milliseconds);
```

Methods: https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Date
