### **Prototype Property**

This lesson explains the prototype property of objects and what \_\_proto\_\_ is used for by using an example.



# \_\_proto\_\_ Property #

As discussed, in JavaScript, objects contain a property [[Prototype]] that is hidden. This property either points to another object or is null.

The [[Prototype]] property of objects, i.e., anObject.[[Prototype]] defines the prototype of anObject. It is defined through the \_\_proto\_\_ property which is used as a setter/getter for the [[Prototype]] property; i.e., \_\_proto\_\_ is used in order to access/set the [[Prototype]] property of an object.

## Syntax #

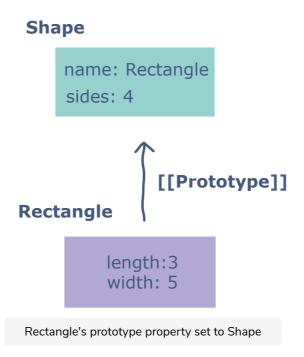
Let's take a look at the syntax for accessing and setting the [[Prototype]] property of an object.

```
1 //using __proto__ to access and
2 anObject.__proto__ = someother(
```

#### Example #

Let's take a look at an example to make this concept more clear.

```
var Shape={
                                                                              G
     name: 'Rectangle',
      sides: 4
   //Rectangle object
8 var Rectangle = {
     length: 3,
     width: 5
10
13
    //setting [[Prototype]] of Rectangle equal to Shape
14
  Rectangle.__proto__ = Shape
16 //displaying Rectangle object's properties
17 console.log("Name of shape is:",Rectangle.name)
18 console.log("Number of sides are", Rectangle.sides)
19 console.log("Length is:",Rectangle.length)
20 console.log("Width is:", Rectangle.width)
```



### **Explanation** #

As seen in the code above:

- Two objects Shape and Rectangle are created.
- Shape contains the properties:

- o sides
- At the start, Rectangle contains the properties:
  - o length
  - o width
- In **line 14**, the <u>\_\_proto\_\_</u> property sets Rectangle 's [[Prototype]] property equal to <u>Shape</u>.

#### Line 14 can translate to:

```
Shape is the prototype of Rectangle
```

or

Rectangle inherits prototypically from Shape

What do both of the above lines mean? Why does the code above display the name and sides value when accessed from Rectangle? Let's discuss the answers to these questions in the next lesson.