

What are objects?

This lesson introduces objects and explains in detail what object properties are by using an example.

We'll cover the following ^

- Introduction
- What Is an Object?
- Example

Introduction

In order to understand OOP in JavaScript, it's crucial to get familiarized with the concept of *objects*.

Objects are a primary part of JavaScript, as almost everything in it is an object. For example, *functions*, *arrays*, *regular expressions*, *dates*, and even data types like *boolean* and *strings*, if declared with the keyword `new`, can be considered an object.

What Is an Object?

In real life, *objects* are found everywhere, so these real-life scenarios can also be mapped into object-oriented code.



Example

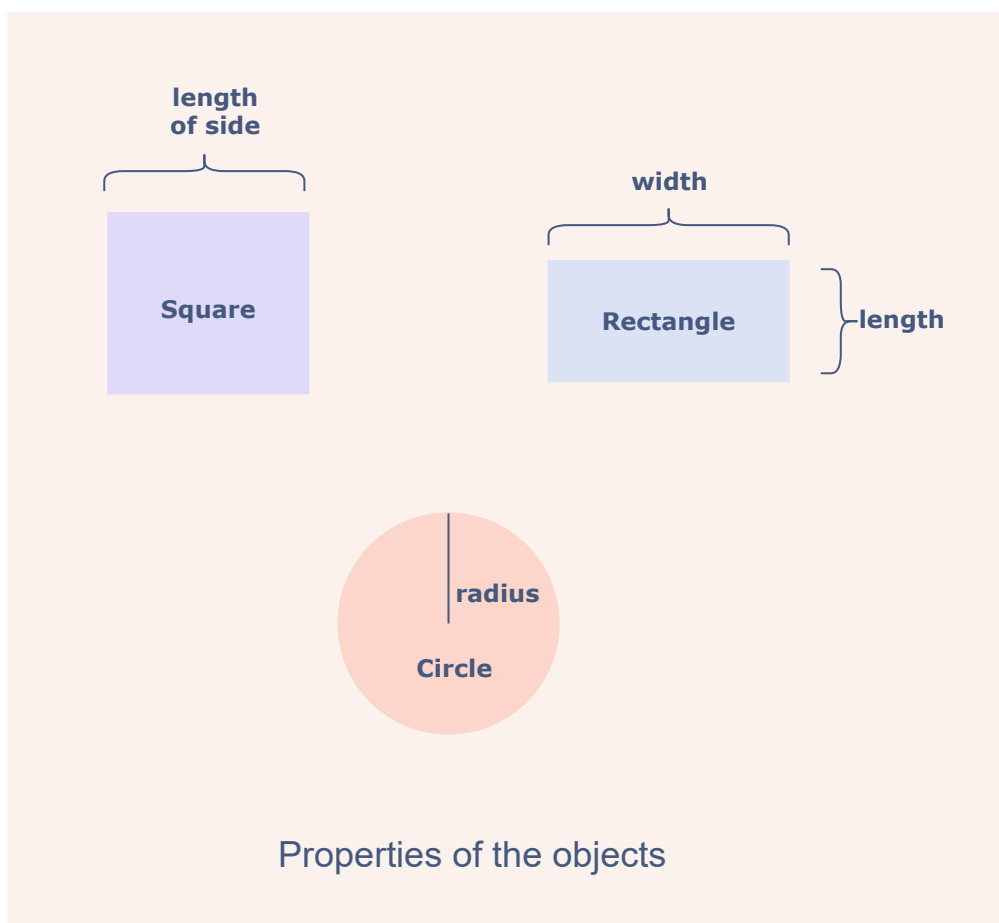
Let's discuss this by looking at an example. Assume you have three shapes: *square*, *rectangle* and *circle*. Now, you want to calculate the areas of all three shapes.

If you had to write a piece of code that would calculate the areas of these three shapes, what would you do? A common approach would be to write functions for all three shapes to compute the respective areas.

Another approach would be to convert our code to the object-oriented paradigm by creating *objects* for each shape: square, rectangle, and circle. Here, each object has its own set of properties which include:

- **data values**
- **functions**

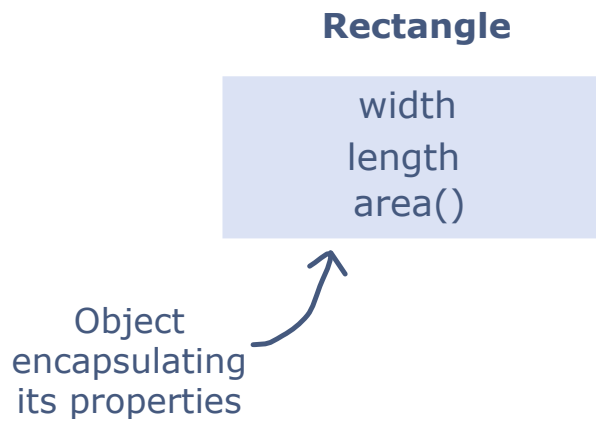
In our example, what values would we need to calculate the areas of the three shapes?



We need the *length*, *width*, and *radius*. These values will be encapsulated in

the *object* of that particular shape.

Similarly, we also require a *function* to calculate the *area*. This will be encapsulated in the object as a part of its *properties*.



Now that you know what objects are, in the next lesson let's discuss what object literals are and how to create them.