Objects and its internal representation in JavaScript

**Objects in JavaScript**

Objects, in JavaScript, is the most important data-type and forms the building blocks for modern JavaScript. These objects are quite different from JavaScript’s primitive data-types(Number, String, Boolean, null, undefined and symbol) in the sense that while these primitive data-types all store a single value each (depending on their types).

* Objects are more complex and each object may contain any combination of these primitive data-types as well as reference data-types.
* An object, is a reference data type. Variables that are assigned a reference value are given a reference or a pointer to that value. That reference or pointer points to the location in memory where the object is stored. The variables don’t actually store the value.
* Loosely speaking, **objects in JavaScript may be defined as an unordered collection of related data, of primitive or reference types, in the form of “key: value” pairs.** These keys can be variables or functions and are called properties and methods, respectively, in the context of an object.

An object can be created with figure brackets {…} with an optional list of properties. A property is a “key: value” pair, where a key is a string (also called a “property name”), and value can be anything. Let us visualize this with the following syntax for creating an object in JavaScript.

Types of objects

* Booleans can be objects (if defined with the new keyword)
* Numbers can be objects (if defined with the new keyword)
* Strings can be objects (if defined with the new keyword)
* Dates are always objects
* Maths are always objects
* Regular expressions are always objects
* Arrays are always objects
* Functions are always objects
* Objects are always objects

## **JavaScript Properties**

Properties are the values associated with a JavaScript object.

A JavaScript object is a collection of unordered properties.

Properties can usually be changed, added, and deleted, but some are read only.

# Internal Representation Of Objects In Java Script

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To understand this rather abstract definition, let us look at an example of a JavaScript Object :

let school = {  
name : “Vivekananda School”,  
location : “Delhi”,  
established : “1971”  
}  
In the above example “name”, “location”, “established” are all “keys” and “Vivekananda School”, “Delhi” and 1971 are values of these keys respectively.

Each of these keys is referred to as properties of the object. An object in JavaScript may also have a function as a member, in which case it will be known as a method of that object.