

Lesson:

**What was the need
for objects**

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1. What are objects?
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What are objects:

An object is an entity (properties and method) with a certain state and behavior. Examples include a car, pen, bicycle, chair, glass, keyboard, and monitor.

Take, for instance, a car. A car can have a name, manufacturer, and fuel capacity which are examples of data. A car can be started, stopped, or accelerated. These are examples of behavior.

Pictorially, you can understand it as

A simple example here can be taken as

Name: Honda City, Manufacturer: Honda, Fuel capacity: 40 l

Name: Seltos, Manufacturer: Kia, Fuel capacity: 50 l

Attribute is what distinguishes one object from another, however, the behavior for all such objects will remain the same. This is how they are grouped/identified.

Here Name, manufacturer and fuel capacity are the keys, and Honda City, Honda, 40 l are one set of values along with Seltos, Kia, and 50 l as another set of values.

Objects can contain many key-value pairs.

Object values are written as key: value pairs (key and value separated by a colon)

How are objects different from variables

Variables	Objects
A variable is a named stored location which holds a value	Object is just a name given to user-defined variables
A variable can be initialized in a usual manner.	Objects are declared and initialized as per the developer's wish
A variable can contain only one value at a time	An object contains multiple values
Eg. let name, var age, etc.	Eg. let person = {firstName:"ABC", lastName:"XYZ", age:20} Note: We will cover this in the forthcoming classes

Why do we need objects:

We can already see from the differences that objects are far more superior to variables. Variables limit us to handling only one value at a time whereas objects enable us to have multiple values of multiple data types to be stored under one name. This allows us to escape many variables for our applications and organize the code for better data handling.

Objects are a boon for developers to develop applications we see in the current web world. Objects give us the liberty to see and implement the scenarios in real-world form.