**Encapsulation (computer programming)**

From Wikipedia, the free encyclopedia

**Encapsulation** is the packing of data and functions into a single component. The features of encapsulation are supported using classes in most object-oriented programming languages, although other alternatives also exist. It allows selective hiding of properties and methods in an object by building an impenetrable wall to protect the code from accidental corruption.

In programming languages, encapsulation is used to refer to one of two related but distinct notions, and sometimes to the combination thereof:

* A language mechanism for restricting access to some of the [object](https://en.wikipedia.org/wiki/Object_%28computer_science%29)'s components.
* A language construct that facilitates the bundling of data with the [methods](https://en.wikipedia.org/wiki/Method_%28computer_programming%29) (or other functions) operating on that data.

Some programming language researchers and academics use the first meaning alone or in combination with the second as a distinguishing feature of [object-oriented programming](https://en.wikipedia.org/wiki/Object-oriented_programming), while other programming languages which provide [lexical closures](https://en.wikipedia.org/wiki/Closure_%28computer_programming%29) view encapsulation as a feature of the language [orthogonal](https://en.wikipedia.org/wiki/Orthogonal#Computer_science) to object orientation.

The second definition is motivated by the fact that in many OOP languages hiding of components is not automatic or can be overridden; thus, [information hiding](https://en.wikipedia.org/wiki/Information_hiding) is defined as a separate notion by those who prefer the second definition.