**Definition:** **Object-oriented programming** (**OOP**) is a [programming paradigm](https://en.wikipedia.org/wiki/Programming_paradigm) based on the concept of "[**objects**](https://en.wikipedia.org/wiki/Object_(computer_science))", which can contain [data](https://en.wikipedia.org/wiki/Data) and code: data in the form of [fields](https://en.wikipedia.org/wiki/Field_(computer_science)) (often known as *attributes* or *properties*), and code, in the form of procedures (often known as [*methods*](https://en.wikipedia.org/wiki/Method_(computer_science))).

Object-oriented programming combines a group of variables (properties) and functions (methods) into a unit called an "object." These objects are organized into classes where individual objects can be grouped together. OOP can help you consider objects in a program's code and the different actions that could happen in relation to the objects.

This programming style widely exists in commonly used programming languages like Java, C++ and PHP. These languages help simplify the structure and organization of software programs. Programmers often use OOP when they need to create complex programs.

**The four basics of object-oriented programming:**

Object-oriented programming has four basic concepts: encapsulation, abstraction, inheritance and polymorphism. Even if these concepts seem incredibly complex, understanding the general framework of how they work will help you understand the basics of a computer program. Here are the four basic theories and what they entail:

* Encapsulation
* Abstraction
* Inheritance
* Polymorphism

**Encapsulation:** In computer networking, encapsulation is a method of designing modular communication protocols in which logically separate functions in the network are abstracted from their underlying structures by inclusion or information hiding within higher level objects.