

Object-Oriented Programming (OOP) is a programming paradigm that uses "objects" to design applications and computer programs. It utilizes several key concepts, including:

- Encapsulation: This concept restricts direct access to some of an object's components, which is a means of preventing accidental interference and misuse of the data.
- Abstraction: This is the concept of hiding the complex reality while exposing only the necessary parts. It helps in reducing programming complexity and effort.
- Inheritance: It is a way to form new classes using classes that have already been defined. It helps in reusing the code and establishing a subtype from an existing object.
- Polymorphism: It allows for using a single interface to represent different underlying forms (data types).

Together, these concepts contribute to the depth and flexibility of OOP, making it a widely used approach in software development.