

- **Object-Oriented Programming (OOP):** Is A Programming Paradigm That Organizes Code Around the Concept Of "Objects," Which Are Instances of Classes. A Class Defines a Blueprint for Creating Objects by Specifying Their Attributes (Data) And Methods (Functions).
- OOP Promotes Encapsulation, Where Data and The Operations on That Data Are Bundled Together into Objects, Leading to Modularity and Easier Maintenance.
- **Inheritance** Allows Classes to Inherit Attributes and Behaviors from Other Classes, Fostering Code Reuse.
- **Polymorphism** Enables Objects of Different Classes to Be Treated Uniformly Through a Shared Interface, Promoting Flexibility and Extensibility.