

Classes and Objects

Introduction to Classes and Objects

Classes and objects are fundamental building blocks in object-oriented programming. A class serves as a blueprint that defines attributes and behaviors.

Objects are specific instances created from a class, each holding unique data while sharing the class-defined structure.

Attributes and Methods

Attributes describe object properties, while methods define behaviors and actions that the object can perform.

Encapsulation ensures data protection by bundling related attributes and methods together.

Creating and Using Objects

To create an object, a class is first defined, then instantiated using a constructor method.

Object interactions and method calls allow programs to simulate real-world scenarios.

Benefits of OOP

Classes and objects promote modularity, reusability, and maintainability in software development.

They allow developers to structure complex systems in manageable components.