Object-Oriented Programming (OOP)

What is Object-Oriented Programming? Object-Oriented Programming (OOP) is a coding paradigm organized around objects rather than actions and data rather than logic. It facilitates improved software design and maintenance by organizing properties and behaviors into individual objects.

Why Use Object-Oriented Programming?

1. **Encapsulation:** Groups data and the operations on them together, restricting direct data access.
2. **Code Reusability:** Enables new objects to be created with small differences from existing ones.
3. **Scalability:** Simplifies the modification and addition of properties or methods over time.
4. **Maintenance:** Makes it easier to fix bugs and add new features.