Difference Between Object-Oriented Programming (OOP) and Procedural Programming

Feature	Object-Oriented Programming (OOP)	Procedural Programming
Basic Unit	Object (Instance of a Class)	Procedure or Function
Data and Functions	Bundled together in Objects (Encapsulation)	Separated – Data in Structures, Functions outside
Program Structure	Organized around Objects and Classes	Organized around Procedures and Functions
Data Abstraction	Emphasizes abstraction through Classes and Objects	Less emphasis on abstraction, data may be exposed
Code Reusability	Promotes code reuse through Inheritance	Code reuse is achieved through functions and procedures
Inheritance	Hierarchical structure, allows for class hierarchy	Typically not supported, or achieved through functions
Polymorphism	Supports polymorphism, allows objects to be treated uniformly	Limited or no support for polymorphism
Encapsulation	Enforces encapsulation, hides internal details	Limited encapsulation, data may be directly accessed
Flexibility	Offers greater flexibility and adaptability	May be less flexible and modular
Example Languages	Java, C++, Python, etc.	C, Pascal, Fortran, etc.

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