

Exercise

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1. What are the 7 basic principles of object orientation? Provide a brief description of each principle.

1. Divide-and-Conquer: Break problems into small objects that interact.
2. Encapsulation & Modularity: Keep objects self-contained and reusable.
3. Public Interface: Define how objects interact.
4. Information Hiding: Hide unnecessary details of implementation.
5. Generality: Design objects to be reusable for multiple tasks.
6. Extensibility: Make it easy to extend functionality.
7. Abstraction: Focus on essential details and ignore unnecessary complexities.

2. State the benefits of OOP.

- Reusability: Save time and avoid redundancy.
- Maintainability: Easier debugging and modifications