Types of problems Design pattern solves

<mark>What is Design patterns?</mark>

Design patterns are reusable solutions to common problems that software developers face during the design and development of software systems. These patterns provide a structured and proven approach to solving specific types of problems.

Some of types of problems that design patterns:

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Structural Problems: Structural patterns focus on the composition of classes or objects to form larger structures while keeping these structures flexible and efficient.

Concurrency Problems: Concurrency patterns help manage and coordinate the execution of multiple threads or processes in a concurrent or parallel environment.

Performance and Optimization Problems: These patterns help improve the performance of software systems by addressing issues such as memory usage, execution time, and resource management.

Code Organization Problems: These patterns help structure code in a way that is modular, maintainable, and easy to understand.

Flexibility and Extensibility Problems: These patterns enable software systems to be easily extended and adapted to changing requirements without significant code changes.

Architectural Problems: These patterns provide guidelines for organizing the overall structure of a software system, ensuring that different components work together effectively.