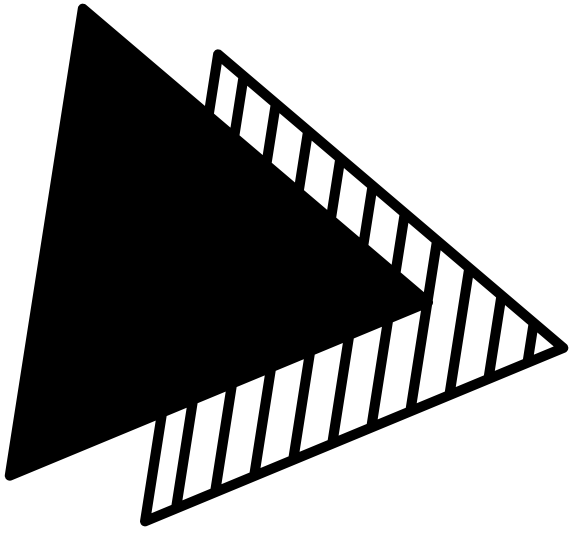
CS-SECTION-A

SCHEDULER CONCURRENCY PATTERN

Design Defects & Refactoring



CONTENT OUTLINE

A concurrency pattern is a category of design pattern, used in software engineering, to identify methods that a computer program uses to handle multi-threaded tasks.

CONCURRENCY PATTERN

These patterns help us to create and enhance an interface between objects, synchronise shared memory between threads, make data thread-safe, monitor progress and manage threads and events.

SCHEDULER PATTERN

- When there are concurrent requests for a resource, it is necessary to synchronize access.
- Explicitly control when threads may execute single-threaded code.

WHEN TO SCHEDULE

- Implement a scheduler that selects which request will be allowed to execute next.
- Scheduling policies may be first-come/first-served, priority-based, or otherwise.
- Using the StrategyPattern, one can customize the behavior of the scheduler for particular configurations or applications.
- Consider the CommandPattern for representation of queued requests.