Design Patterns (II)

- Template Method
- Strategy
- State
- Flyweight

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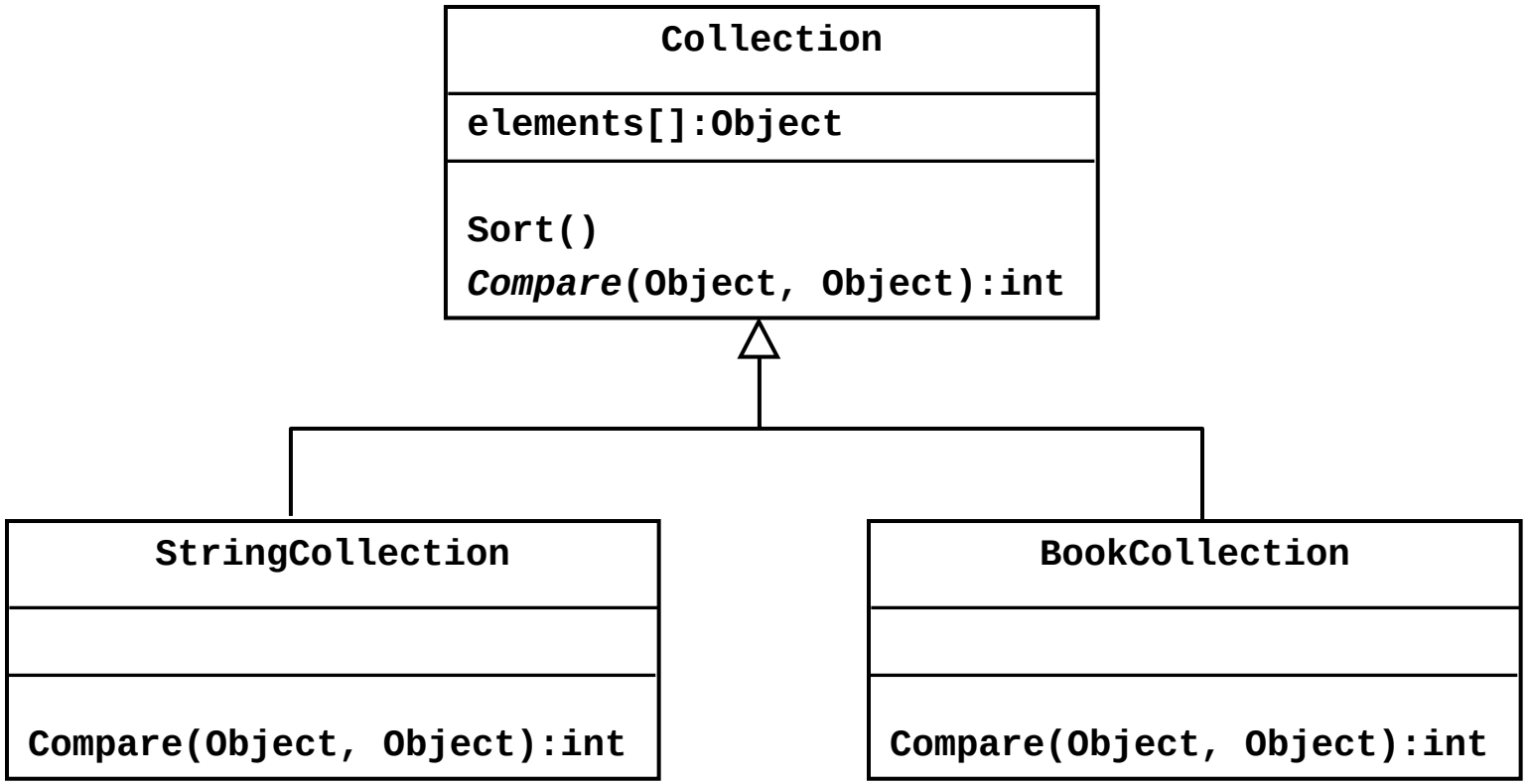
The Template Method Design Pattern: Example



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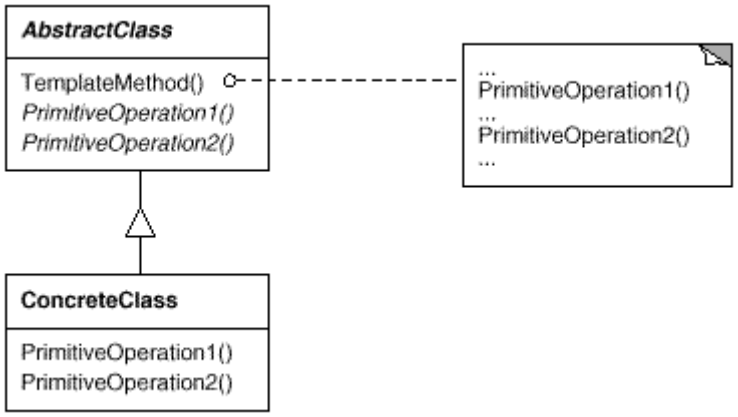
The Template Method Design Pattern: Structure



- Used to implement a generic algorithm (or an invariant part of an algorithm)
- An application of the algorithm to a concrete domain is obtained by subclassing

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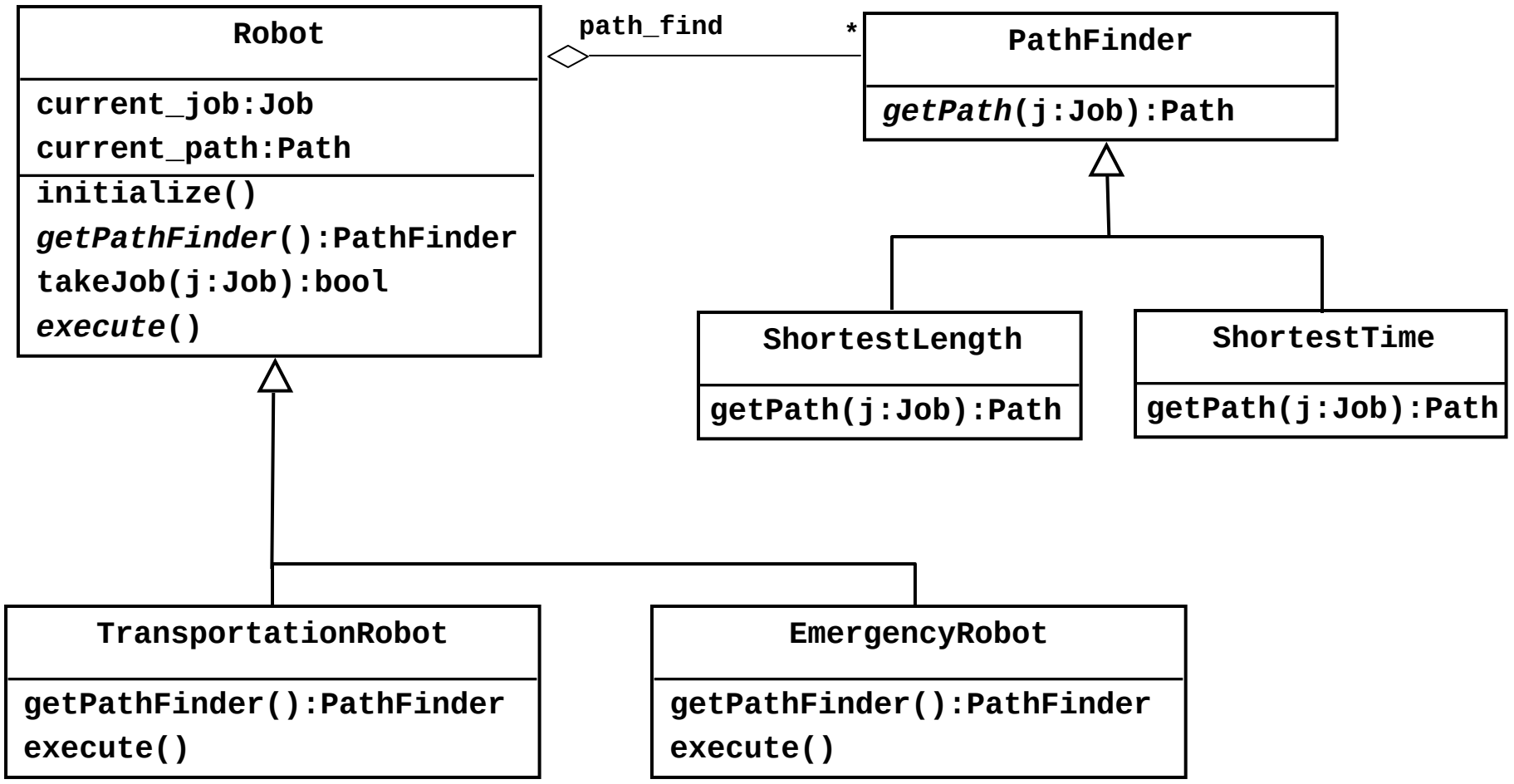
The Strategy Design Pattern: Example



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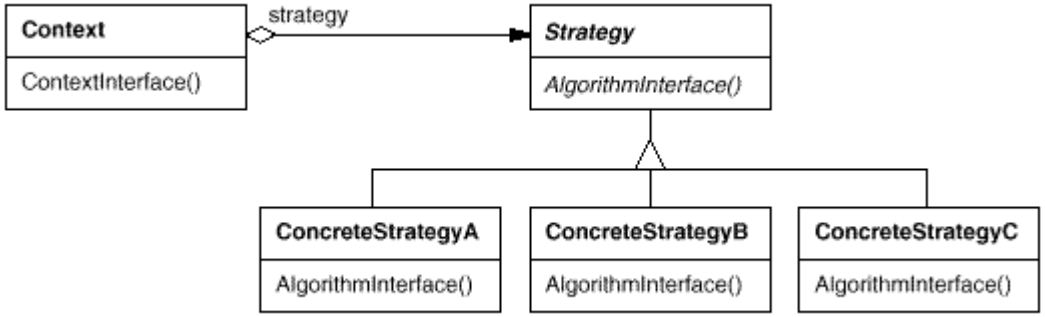
The Strategy Design Pattern: Structure



Used when

- A family of algorithms is needed
- A behavior is selected from a given set of behaviors by multiple conditional statements

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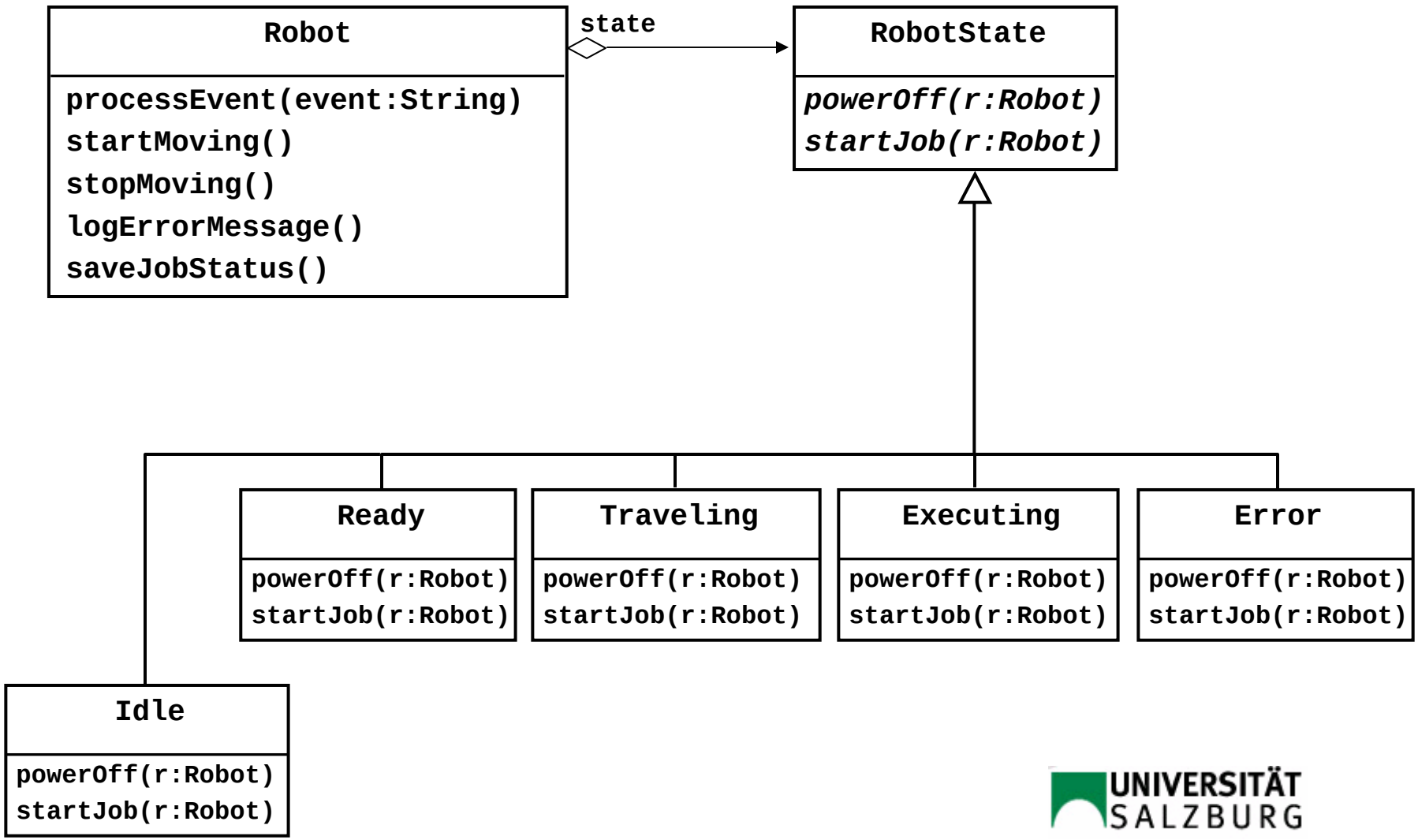
The State Design Pattern: Example



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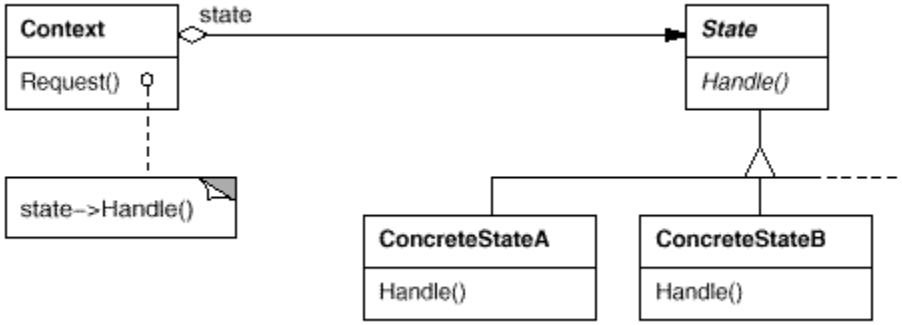
The State Design Pattern: Structure



Use:

- To implement state transition logic of the type *event[condition]/action* without large conditional statements
- When the same event may occur in different states with different conditions or actions

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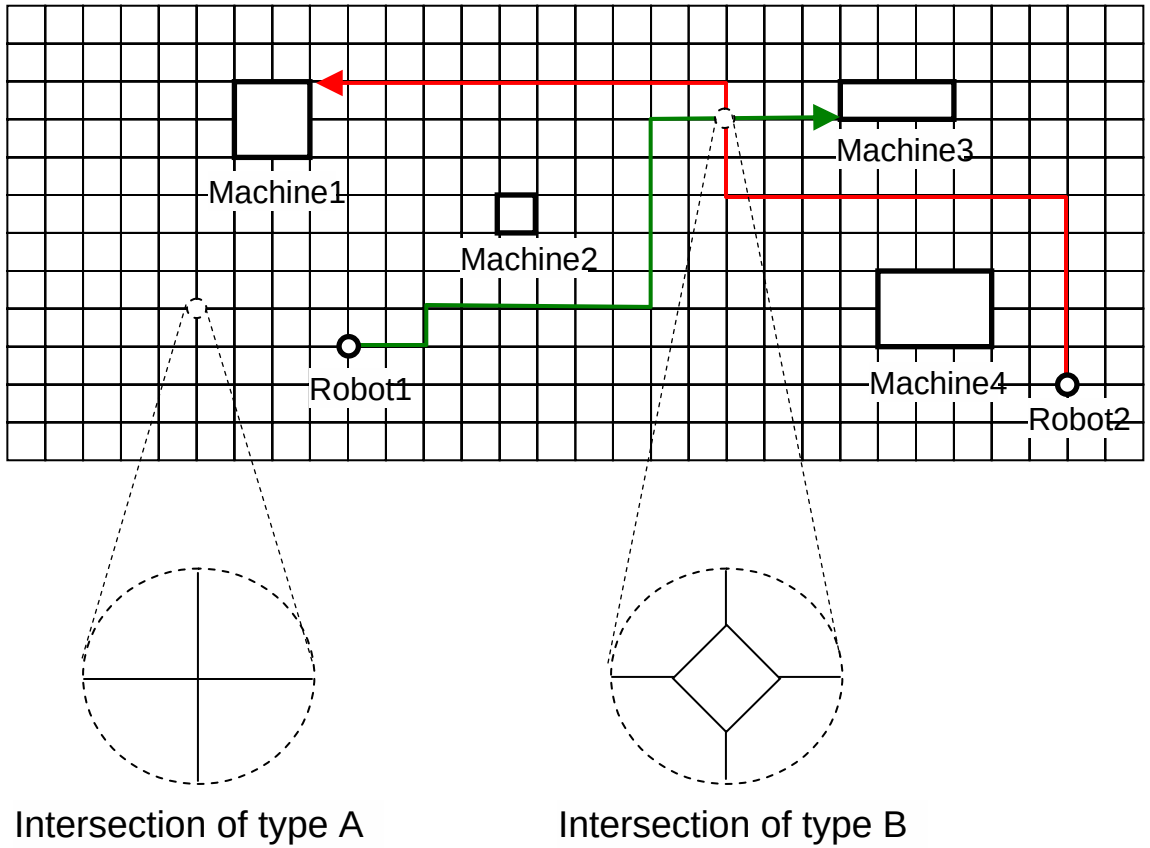
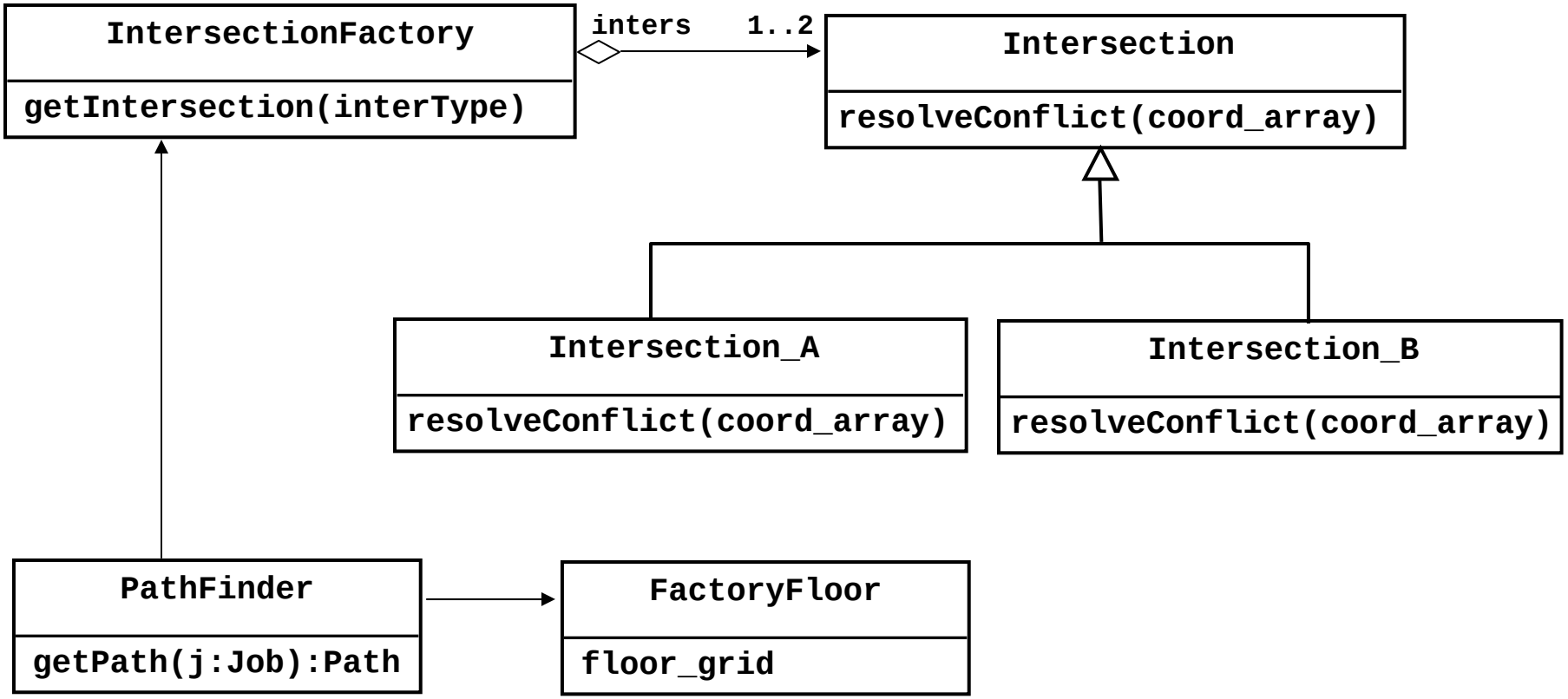
The Flyweight Design Pattern: Example(I)



The Flyweight Design Pattern: Example(II)



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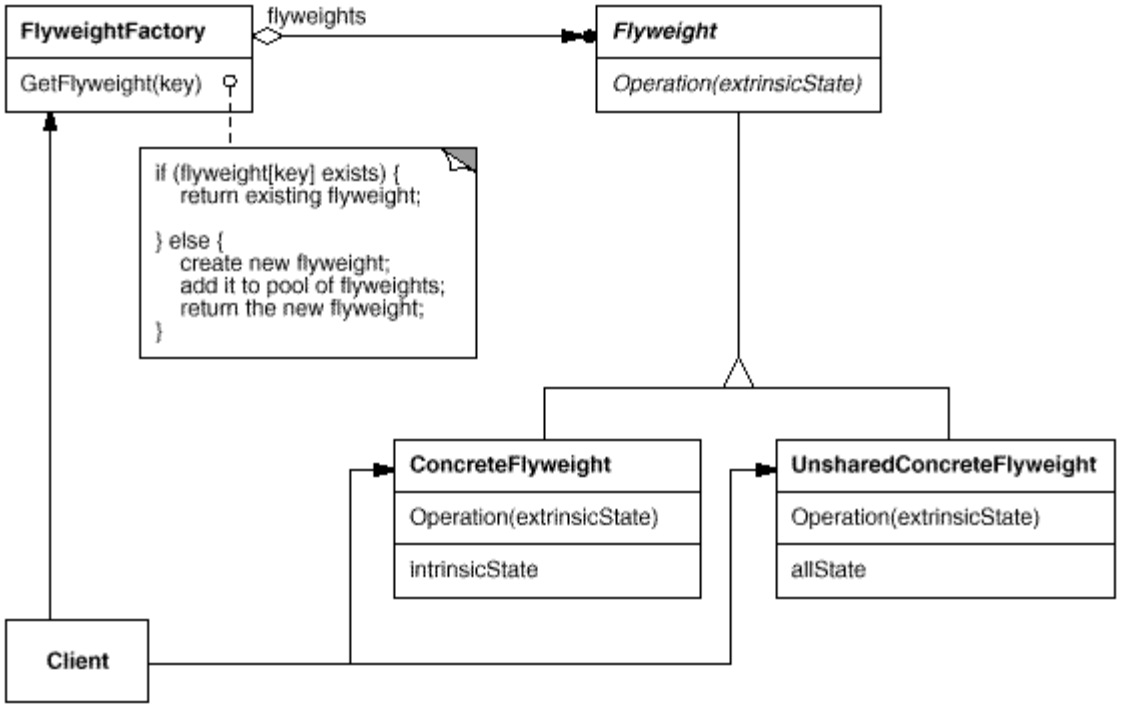
The Flyweight Design Pattern: Structure



Use:

- To avoid employing a large number of objects with similar state
- When objects with intrinsic state can be re-used by different clients

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