DESIGN PATTERN(S)

C Abstract Factory	S Facade	S Proxy
S Adapter	C Factory Method	B Observer
S Bridge	S Flyweight	C Singleton
C Builder	B Interpreter	B State
B Chain of Responsibility	B Iterator	B Strategy
B Command	B Mediator	B Template Method
S Composite	B Memento	B Visitor
S Decorator	C Prototype	

Erfinder Architekt Christopher Alexander ~1977

Design patterns are proven solution templates for recurring design problems in architecture as well as in software development.
A design pattern usually contains several classes (templates), so a single design pattern is a collection of different templates. E.g. The shape of a single step of stairs **AND** the railing (steelwork or eg woodwork) for the complete stairs **AND** for example the shape for the carpet of each step

Anwendungsfälle
Architecture, Software development, psychology (Archetypes), Sociology (Archetype-Combinations)

Observer Pattern

Subject
+observerCollection
+registerObserver(observer)
+unregisterObserver(observer)
+notifyObservers()

```
notifyObservers()
for observer in observerCollection
call observer.notify()
```
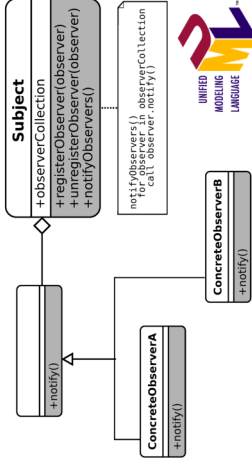
ConcreteObserverA
+notify()

ConcreteObserverB
+notify()

Erfinder Erich Gamma, Richard Helm ... ~1994

The observer pattern (also called listener pattern) is a design pattern in software development. It belongs to the category of behavior patterns. In the programming language Java it would be **public interface Observer** and it would be used with **"implements Observer"** (needs exercise)

Anwendungsfälle
To transfer changes to objects to a complete structures that dependent on this object, ev. an application with different views