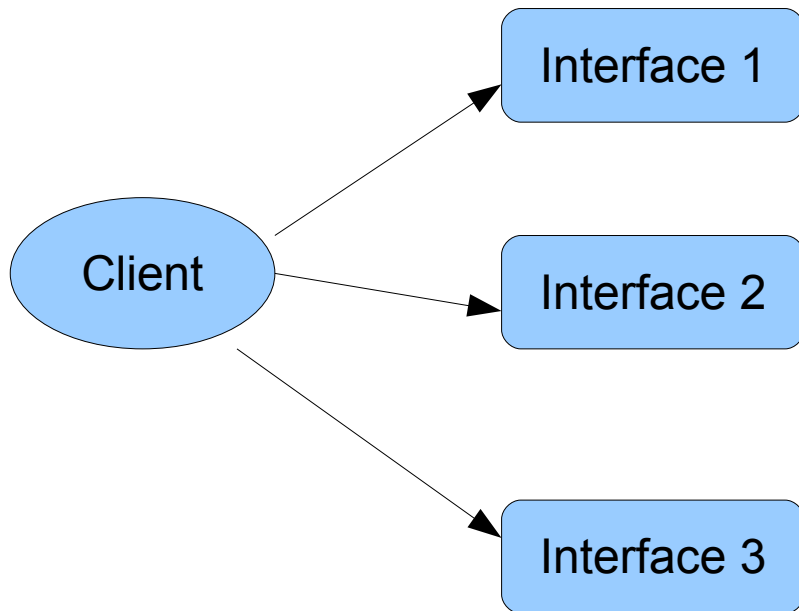# Facade Pattern

Content

- Facade use case
- Facade principle
- Facade vs Adapter
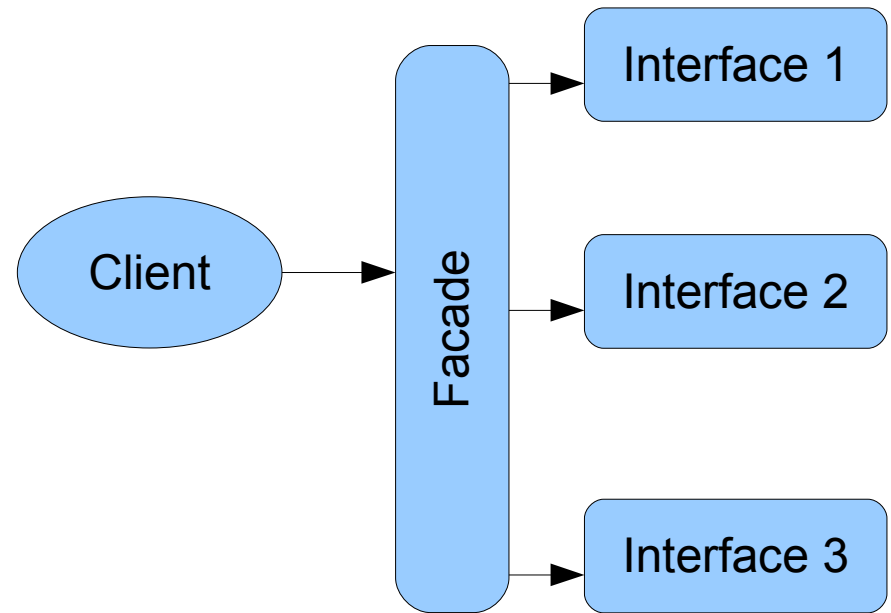- Facade vs Decorator
- Facade vs Proxy

Facade Use Case

- There is a set of complex interfaces

- Client have to use them

- We want make client's life easier

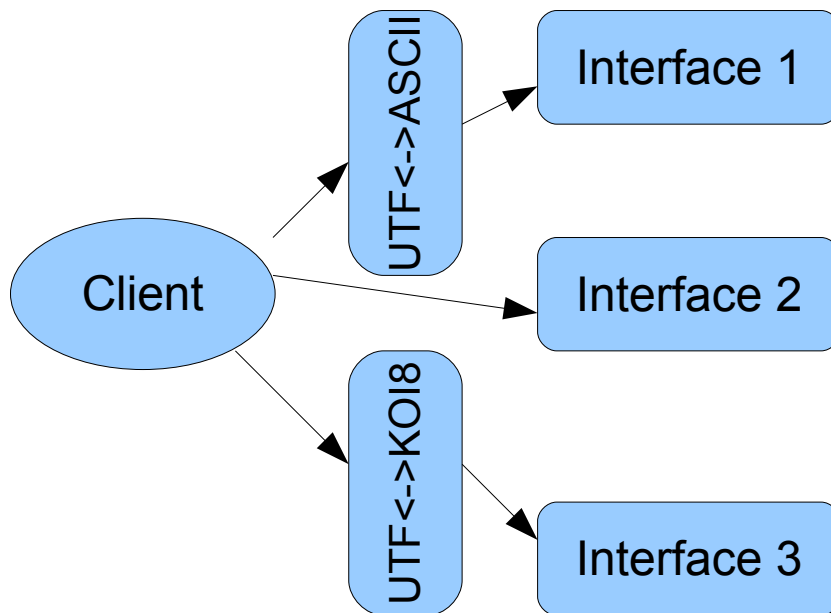- We put simple additional interface in the middle

Facade principle

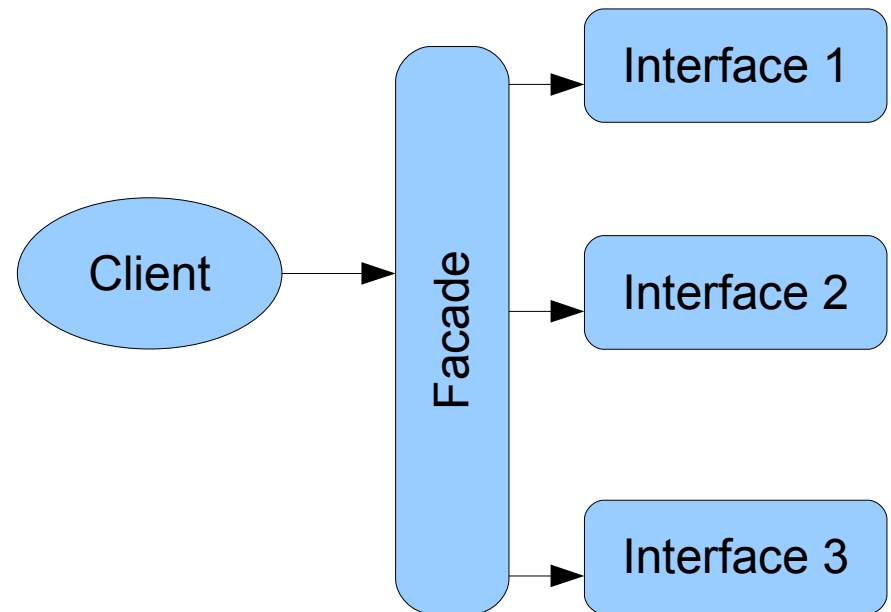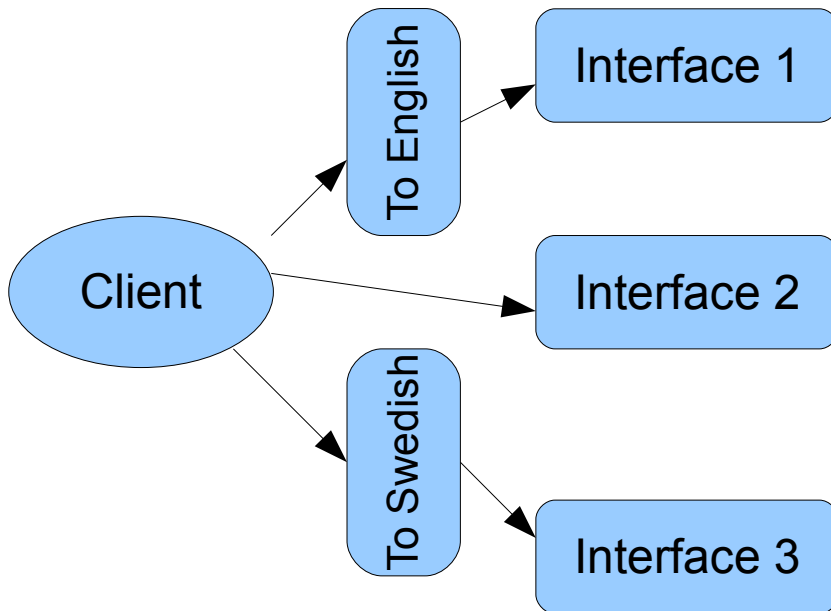# Facade vs Adapter

- Adapter
  - Convert charsets

```
          ┌──────────┐      ┌──────────────┐
          │ UTF<->ASCII │──→ │  Interface 1 │
          └──────────┘      └──────────────┘
       ↗                    ┌──────────────┐
 ┌─────────┐         ──────→│  Interface 2 │
 │ Client  │                └──────────────┘
 └─────────┘      ┌──────────┐
       ↘          │ UTF<->KOI8 │──→ ┌──────────────┐
                  └──────────┘      │  Interface 3 │
                                    └──────────────┘
```

- Facade

```
                        ┌────────┐      ┌──────────────┐
                        │        │────→ │  Interface 1 │
 ┌─────────┐            │        │      └──────────────┘
 │ Client  │──────────→ │ Facade │────→ ┌──────────────┐
 └─────────┘            │        │      │  Interface 2 │
                        │        │      └──────────────┘
                        │        │────→ ┌──────────────┐
                        └────────┘      │  Interface 3 │
                                        └──────────────┘
```
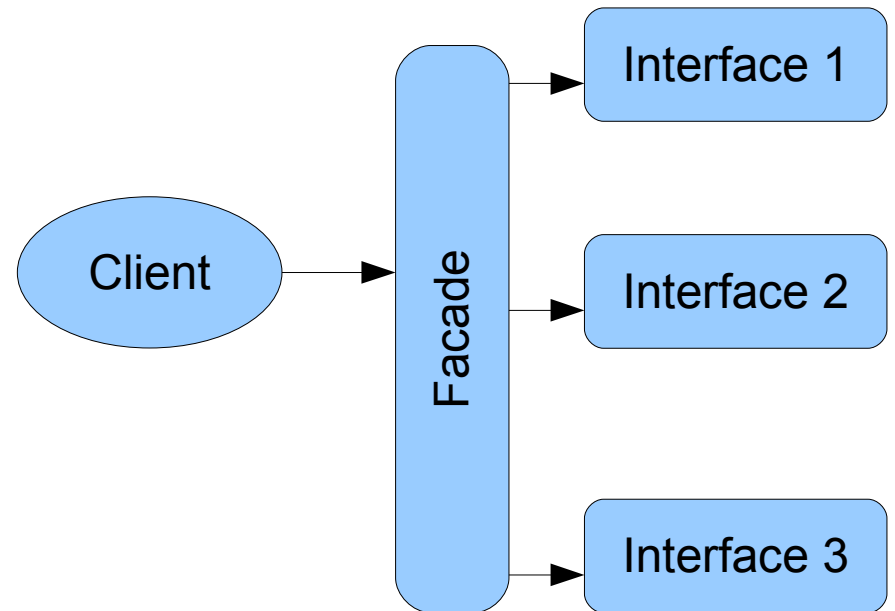
Facade vs Decorator

- ## Decorator
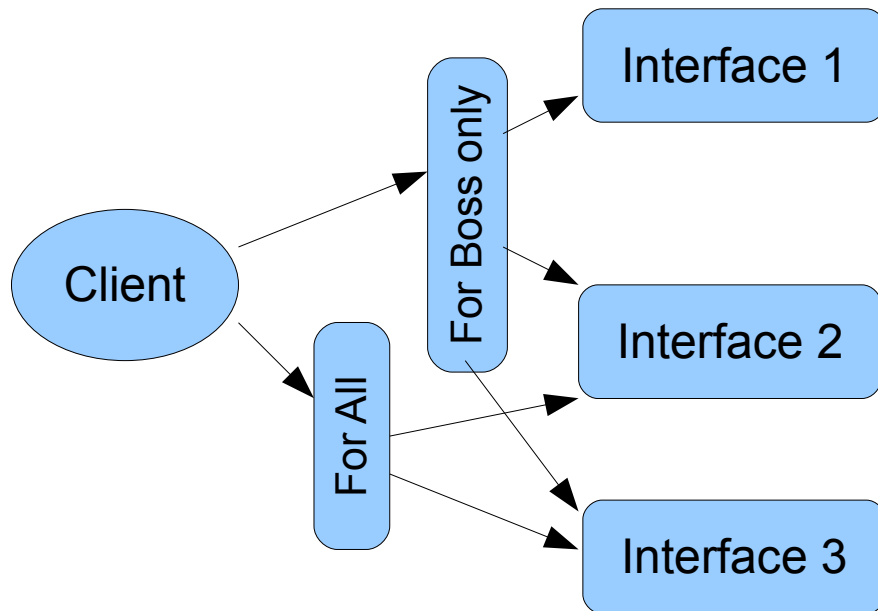 - ### Add multilanguage support

- ## Facade

Facade vs Proxy

- Proxy
  - Two different roles

- Facade