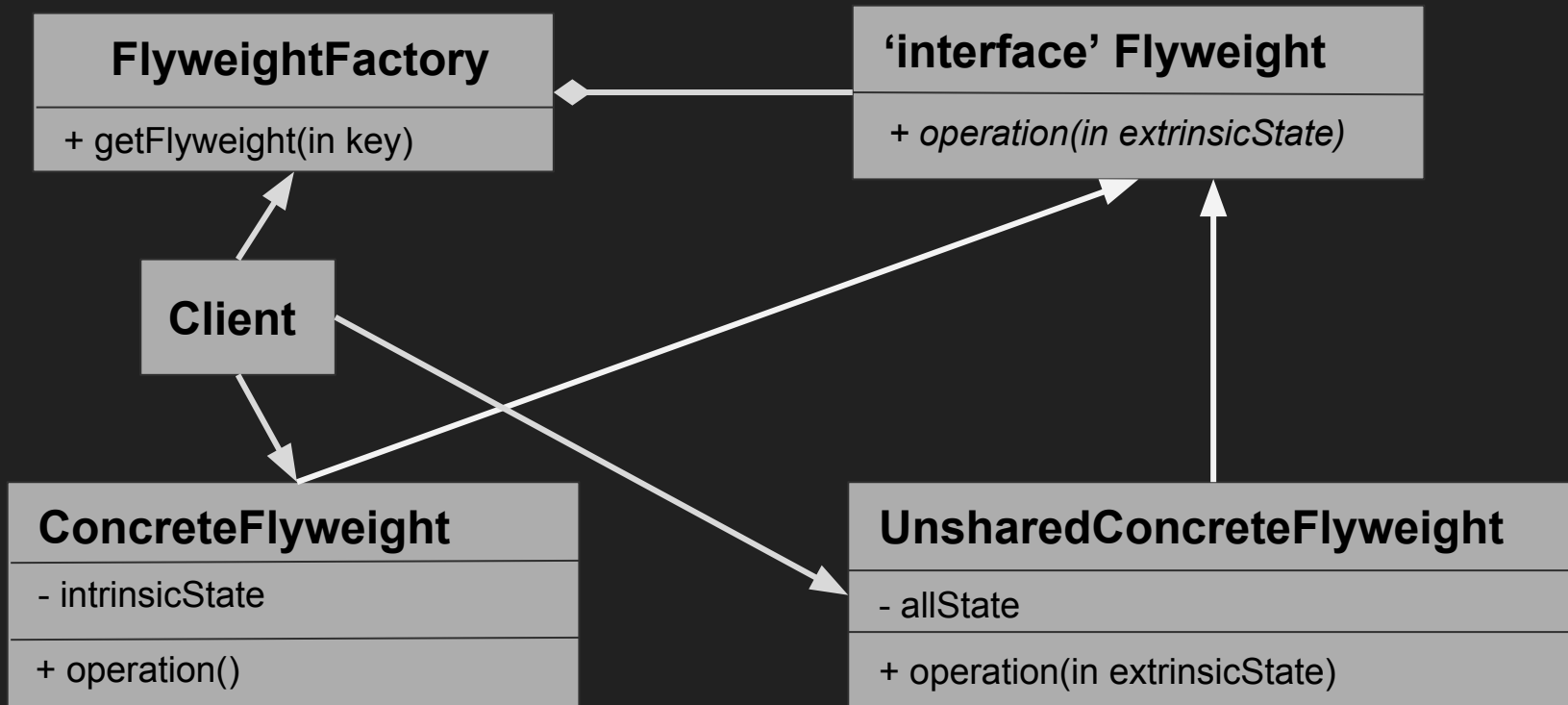


Паттерны проектирования

Структурные паттерны. Flyweight, Decorator,
Proxy

Flyweight



Flyweight example

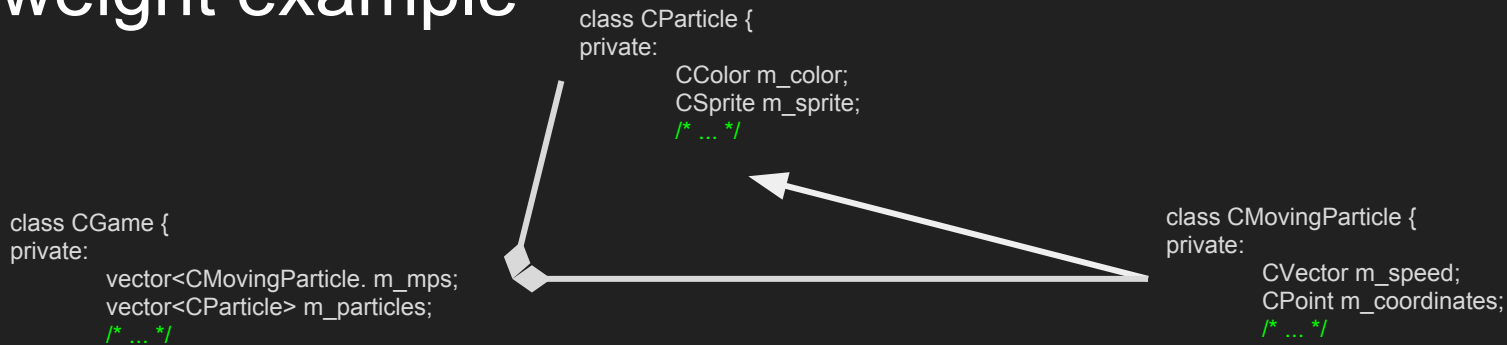
```
class CGame {  
private:  
    vector<CParticle> m_particles;  
    /* ... */  
}
```



```
class CParticle {  
private:  
    CColor m_color;  
    CSprite m_sprite;  
    CVector m_speed;  
    CPoint m_coordinates;  
    /* ... */  
}
```

m_color	4B
m_coordinates	6B
m_speed	6B
m_sprite	2048B
particle ~ 20064B * 1'000'000 = ~ 18.68 GB	

Flyweight example



m_color	4B
m_coordinates	6B
m_speed	6B
m_sprite	2048B
particle ~ 20052B * 1 + 12B * 1'000'000 = ~ 11.5 MB	

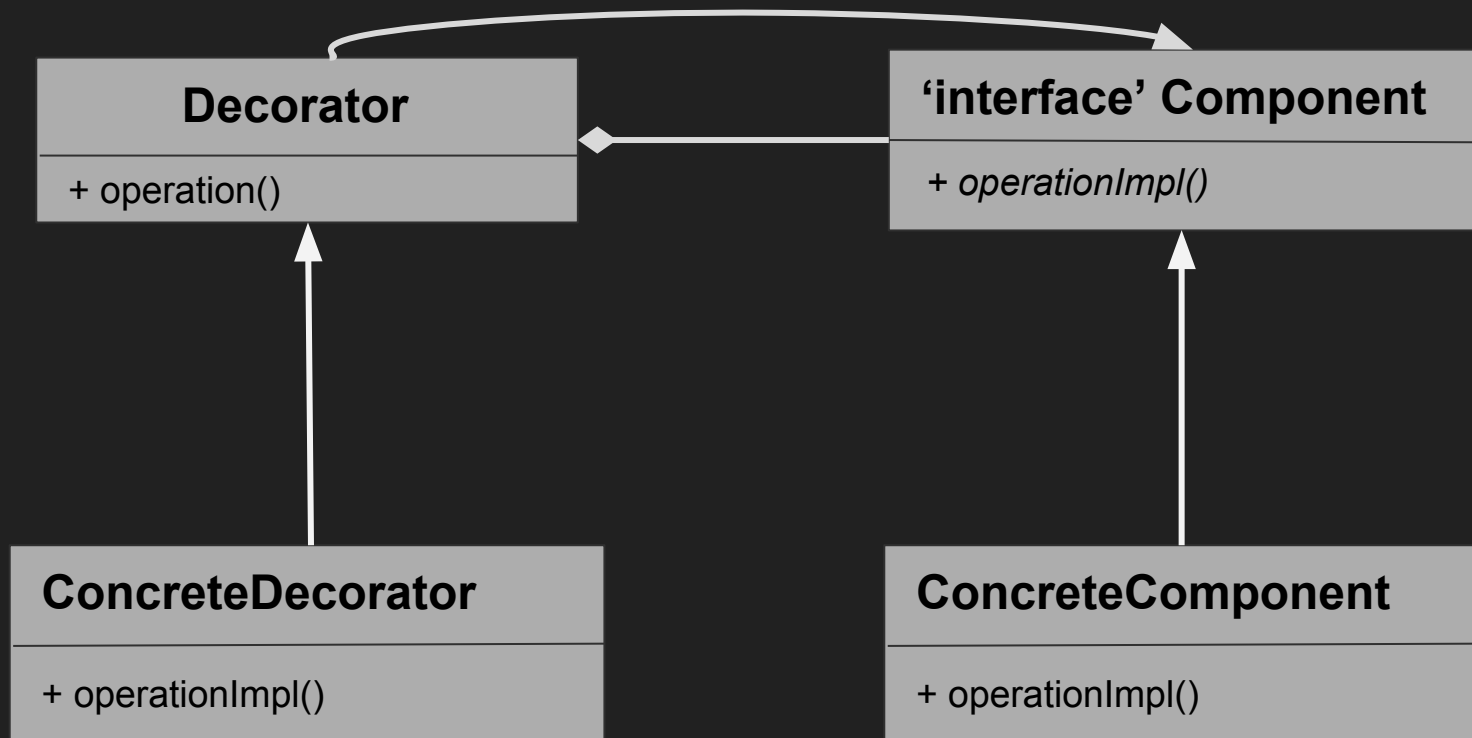
Relations

composite & flyweight

flyweight vs facade

flyweight vs singleton

Decorator



Decorator example

Decorator = обертка = расширения функционала

Шифрующая обертка, сериализующая обертка...

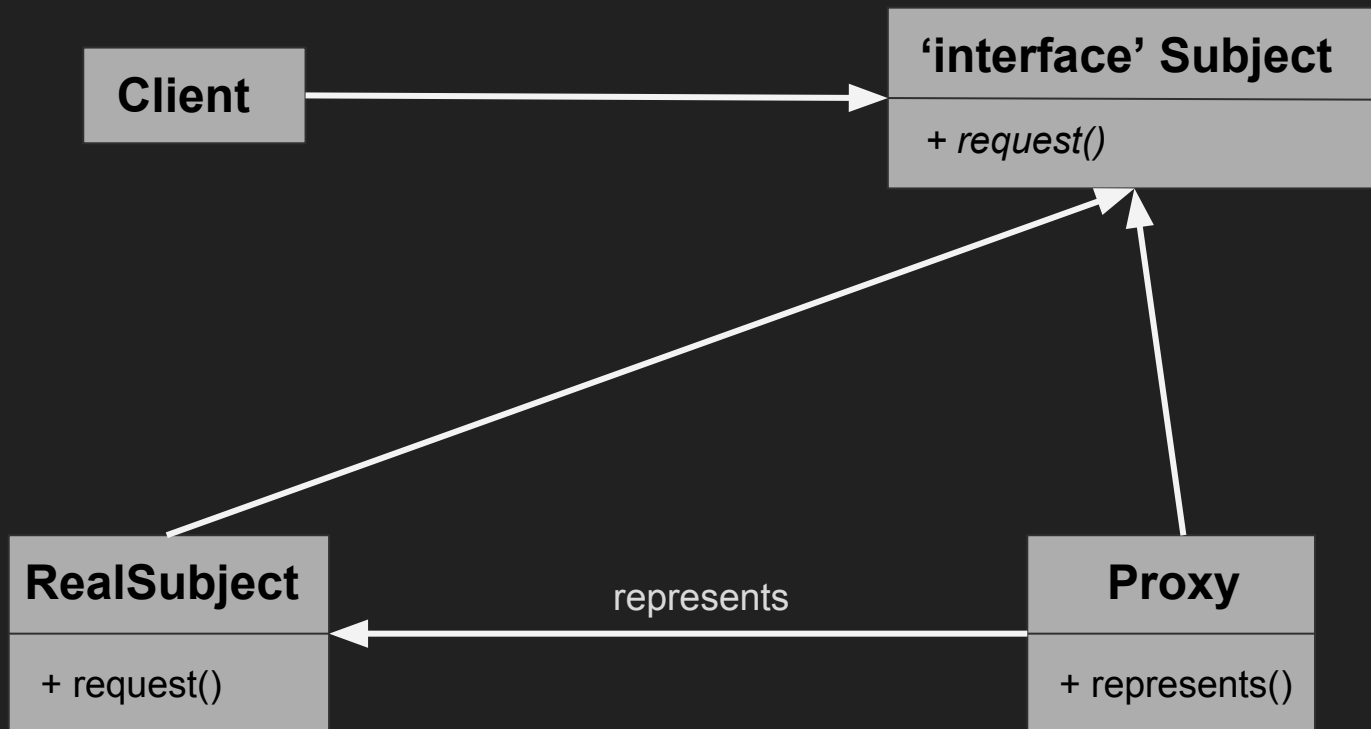
Relations

adapter vs proxy vs decorator

adapter vs decorator

composite & decorator & prototype

Proxy



Proxy example

Кеш

загружаем видео при каждом запросе

vs

отдаем закешированное

Relations

adapter vs proxy vs decorator

facade vs proxy

decorator vs proxy