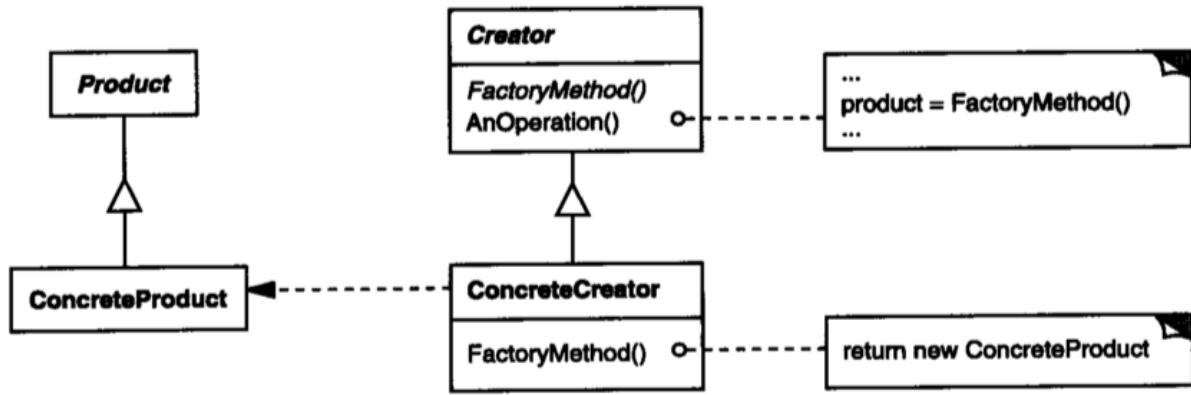
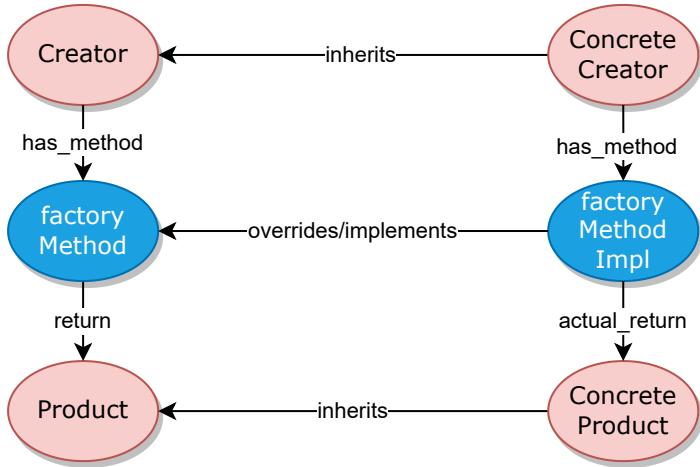


Factory Method



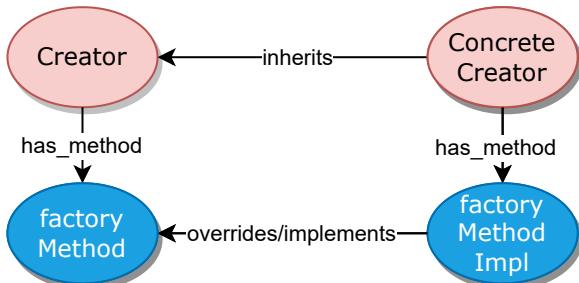
DP graph 1



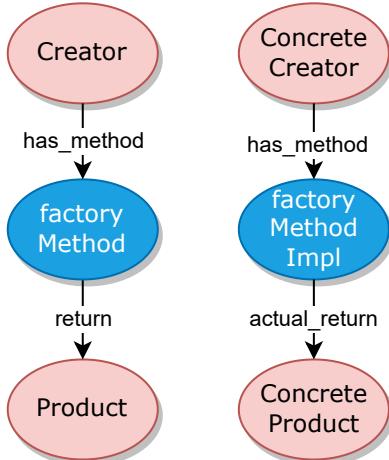
Decomposition

$$\text{FactoryMethod}_1 = TMM \cup TM \cup TT + TMT \times 2 + TT$$

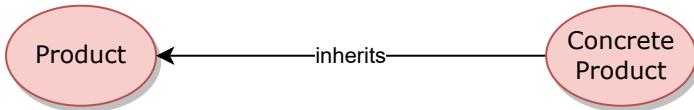
1. $TMM \cup TM \cup TT$



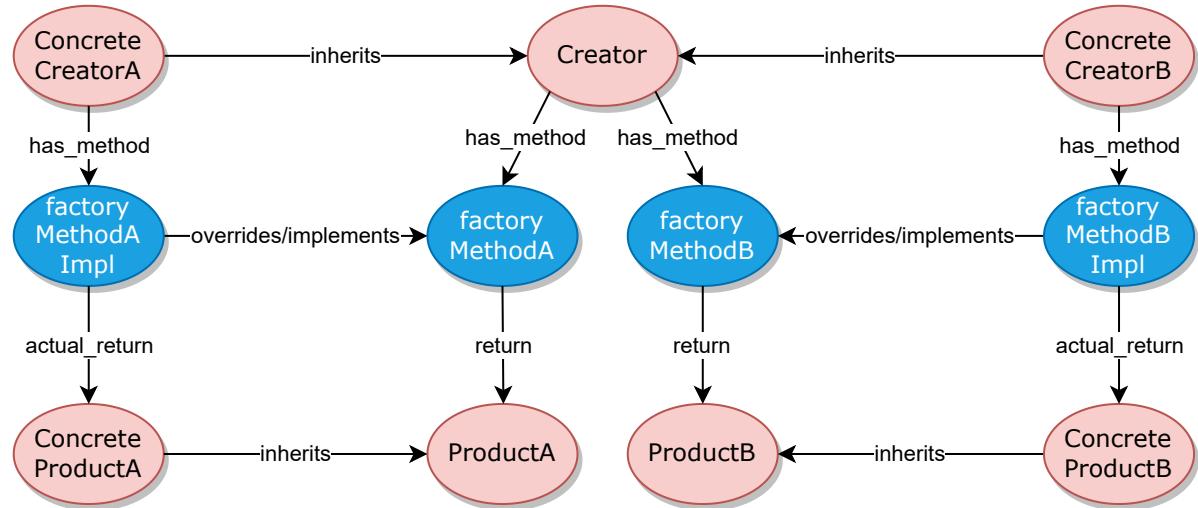
2. $TMT \times 2$



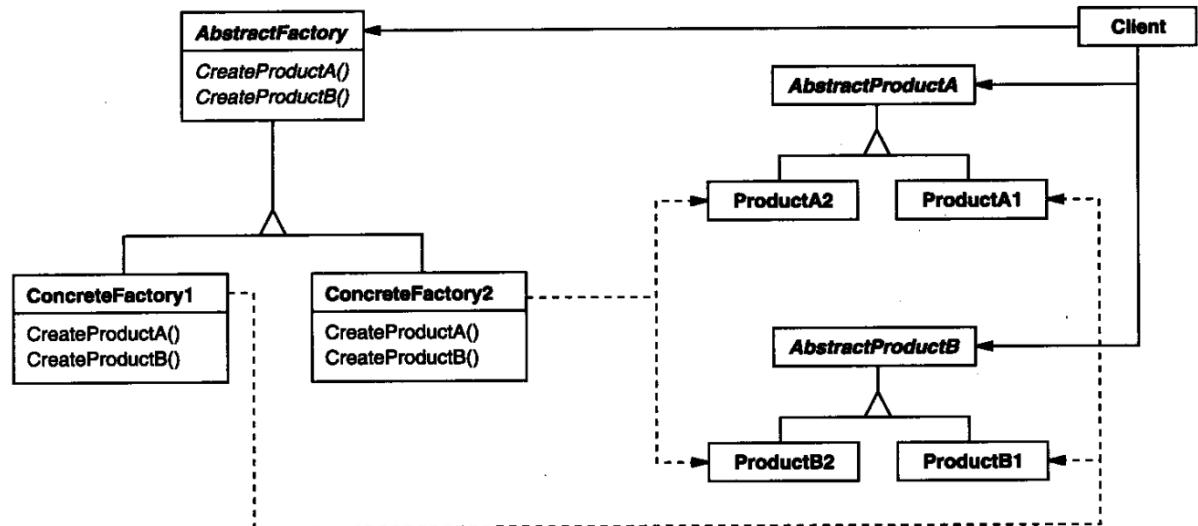
3. TT



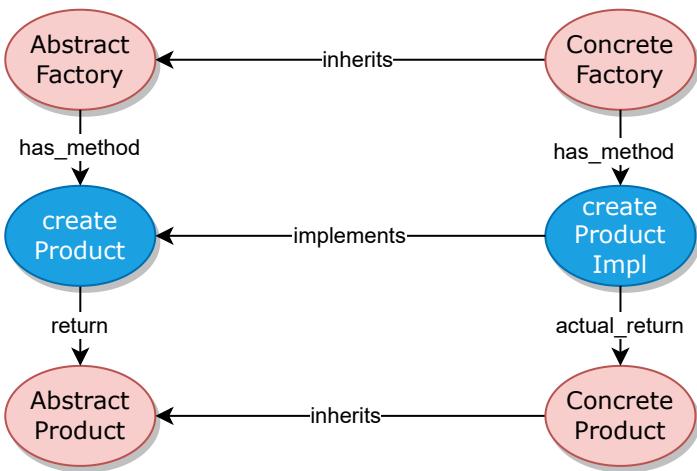
DP graph 2



Abstract Factory



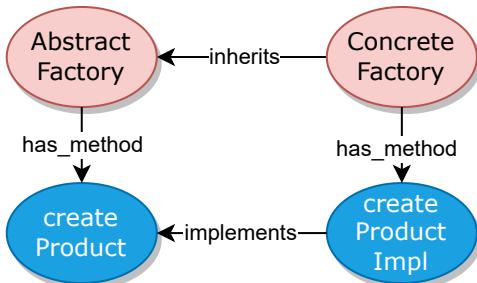
DP graph 1



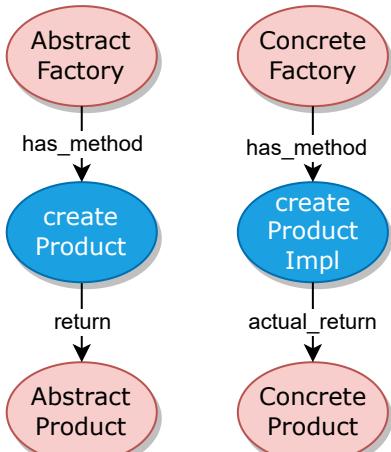
Decomposition

$$AbstractFactory_1 = TMM \cup TM \cup TT + TMT \times 2 + TT$$

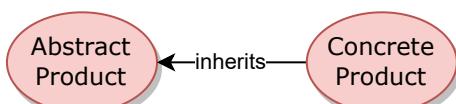
1. $TMM \cup TM \cup TT$



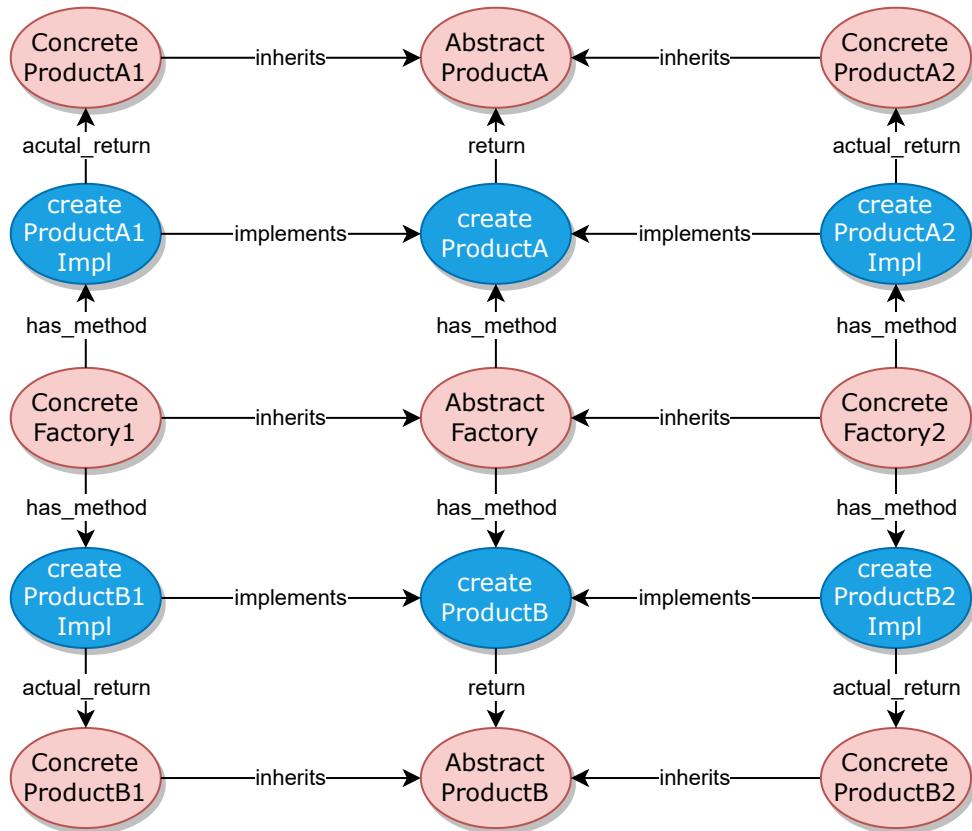
2. $TMT \times 2$



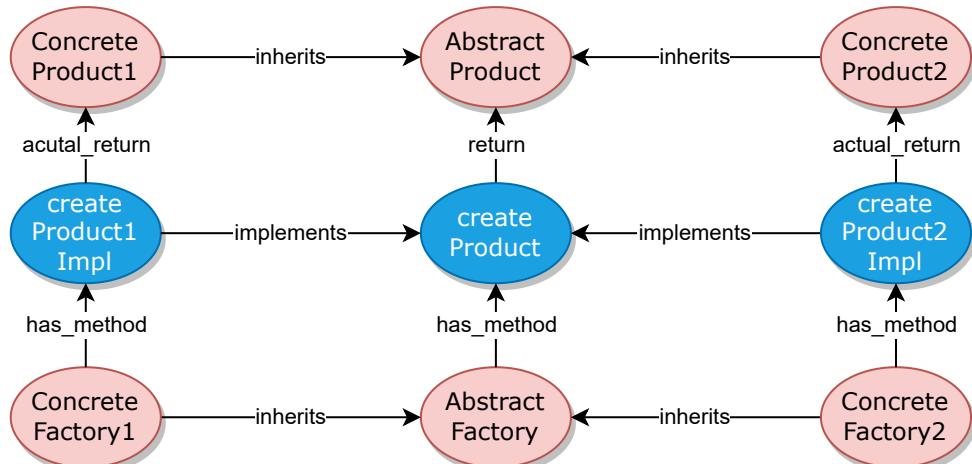
3. TT



DP graph 2



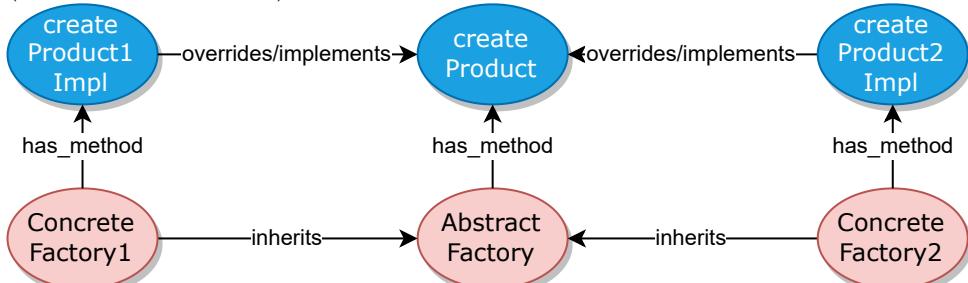
DP graph 3



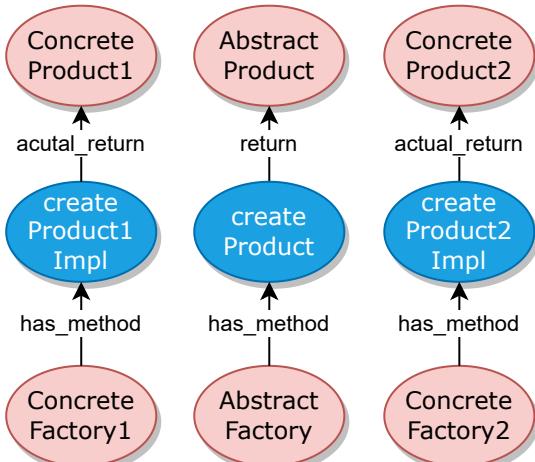
Decomposition

$$AbstractFactory_3 = (TMM \cup TM \cup TT)^2 + TMT \times 3 + TT^2$$

1. $(TMM \cup TM \cup TT)^2$



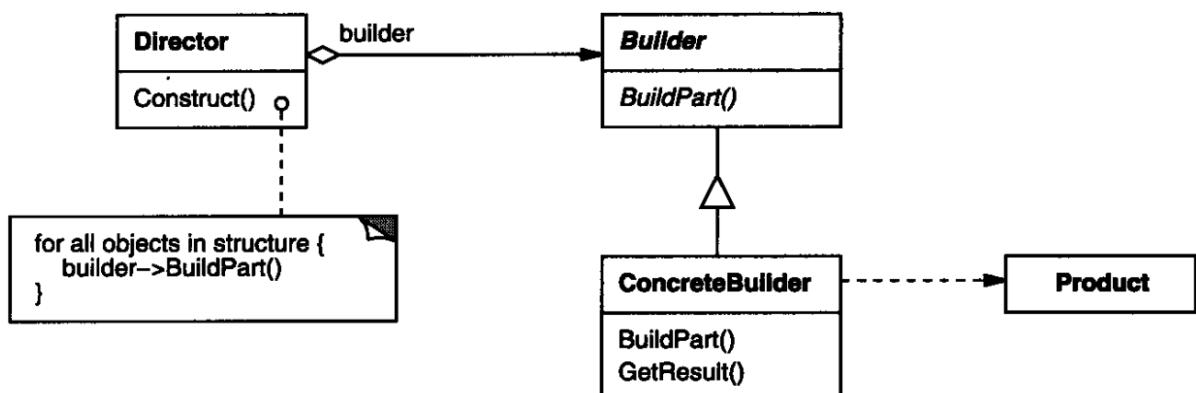
2. $TMT \times 3$



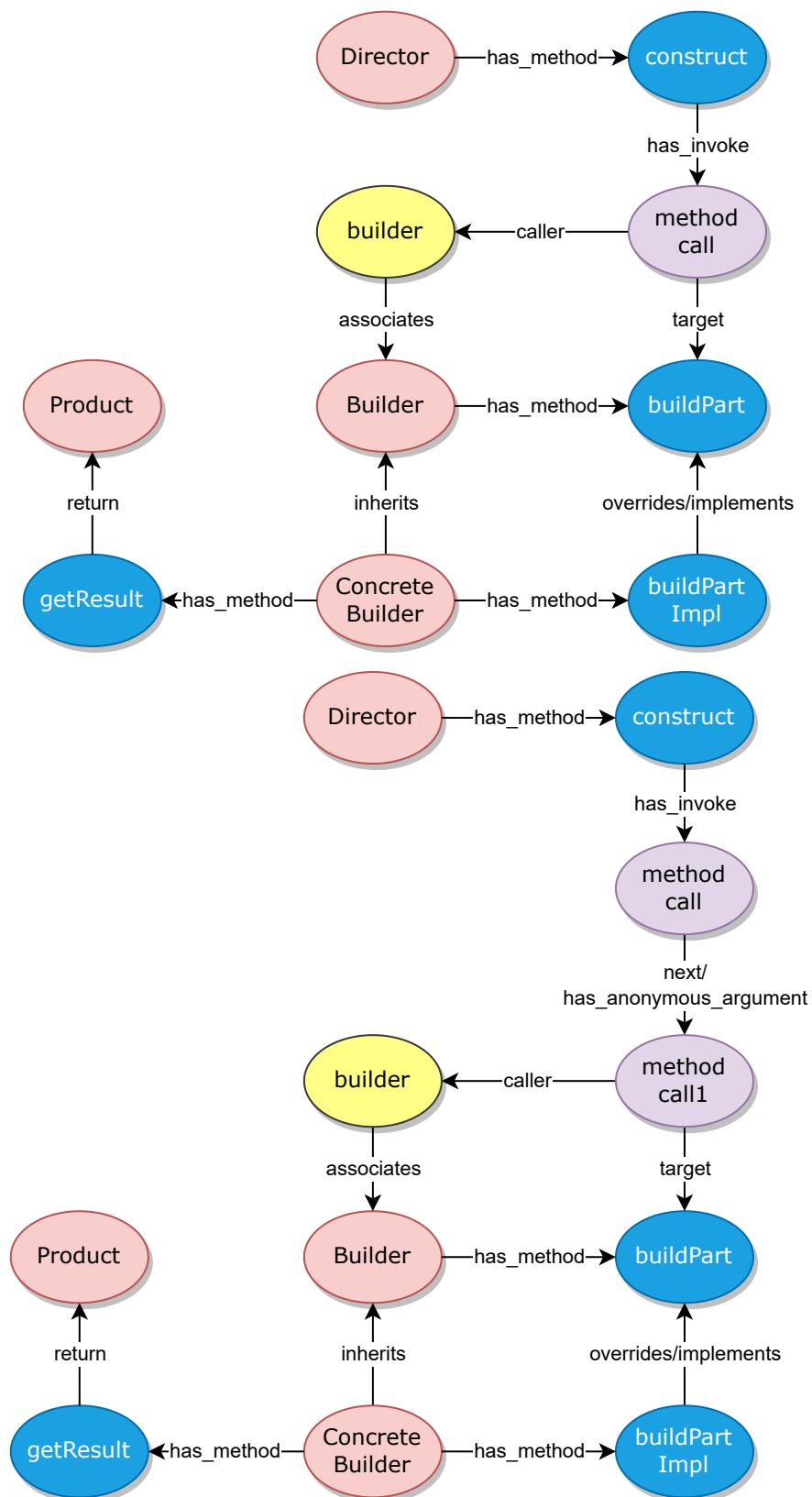
3. TT^2



Builder



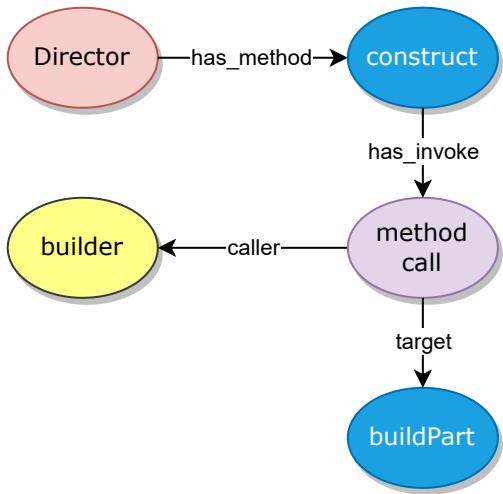
DP graph 1



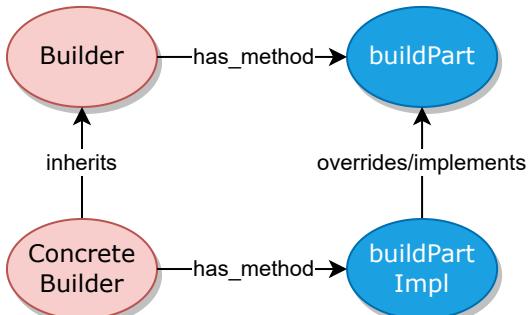
Decomposition

$$Builder_1 = TMI_m F \cup TMI_m M + TMM \cup TM \cup TT + TMT + FT$$

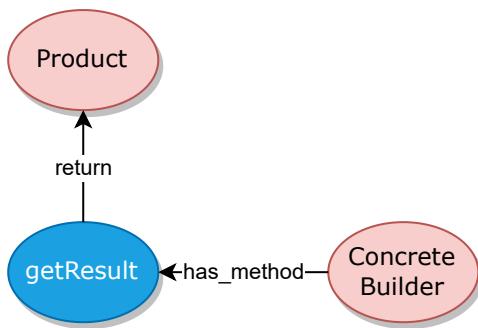
1. $TMI_mF \cup TMI_mM$



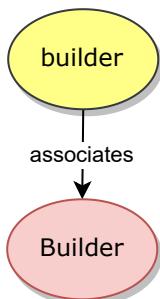
2. $TMM \cup TM \cup TT$



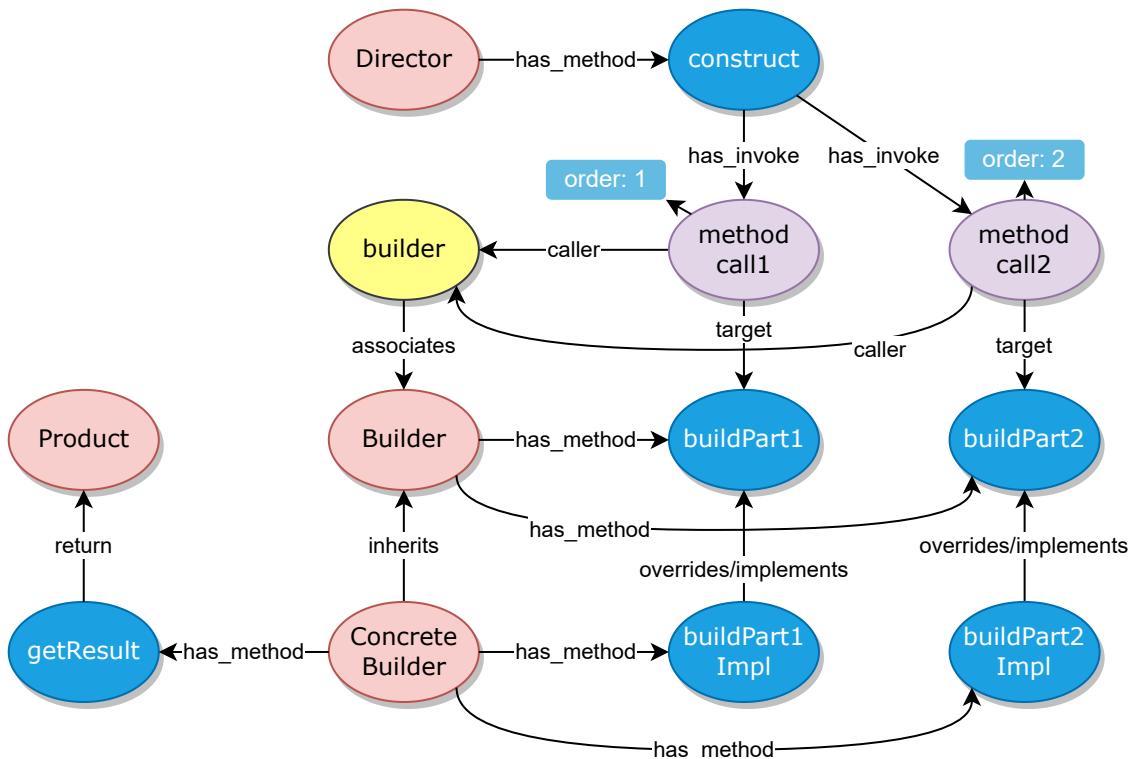
3. TMT



4. FT



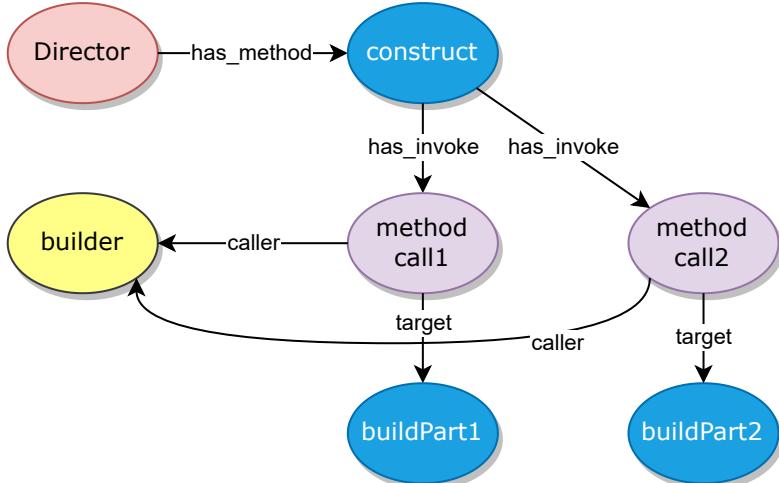
DP graph 2



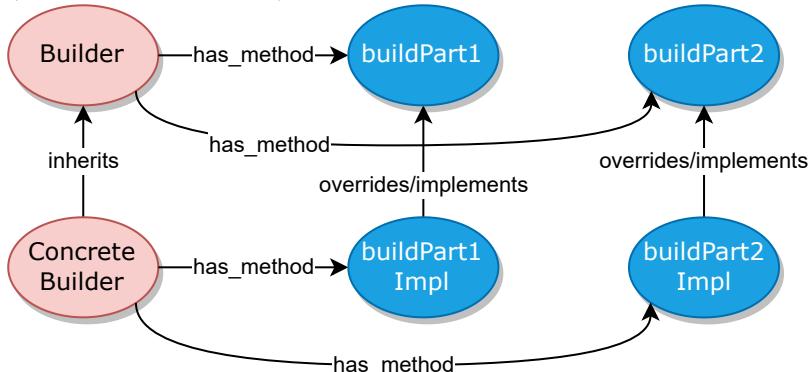
Decomposition

$$\text{Builder}_2 = (TMI_m F \cup TMI_m M)^2 + (TMM \cup TM \cup TT)^2 + TMT + FT$$

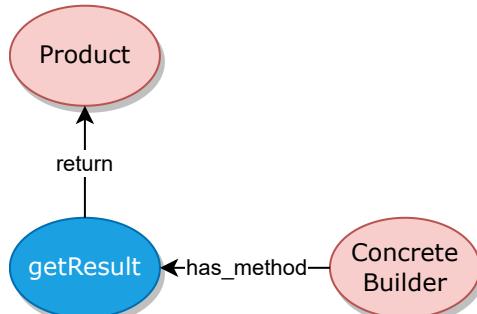
1. $(TMI_m F \cup TMI_m M)^2$



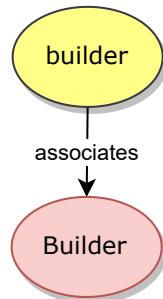
2. $(TMM \cup TM \cup TT)^2$



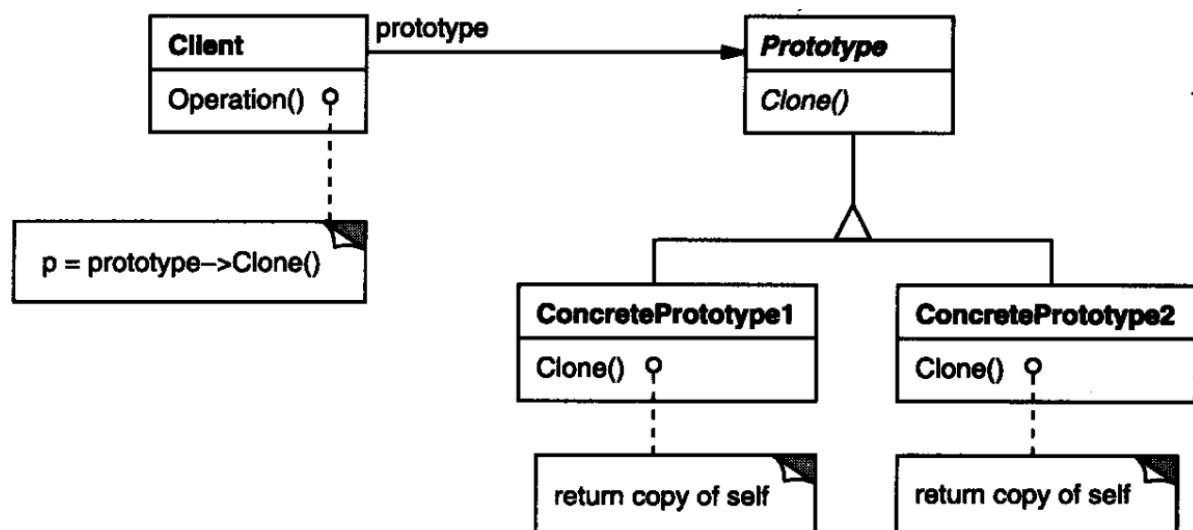
3. TMT



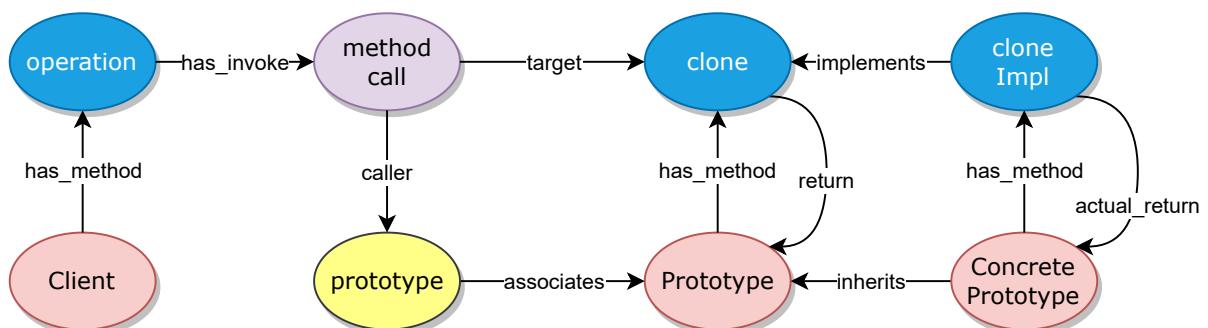
4. FT

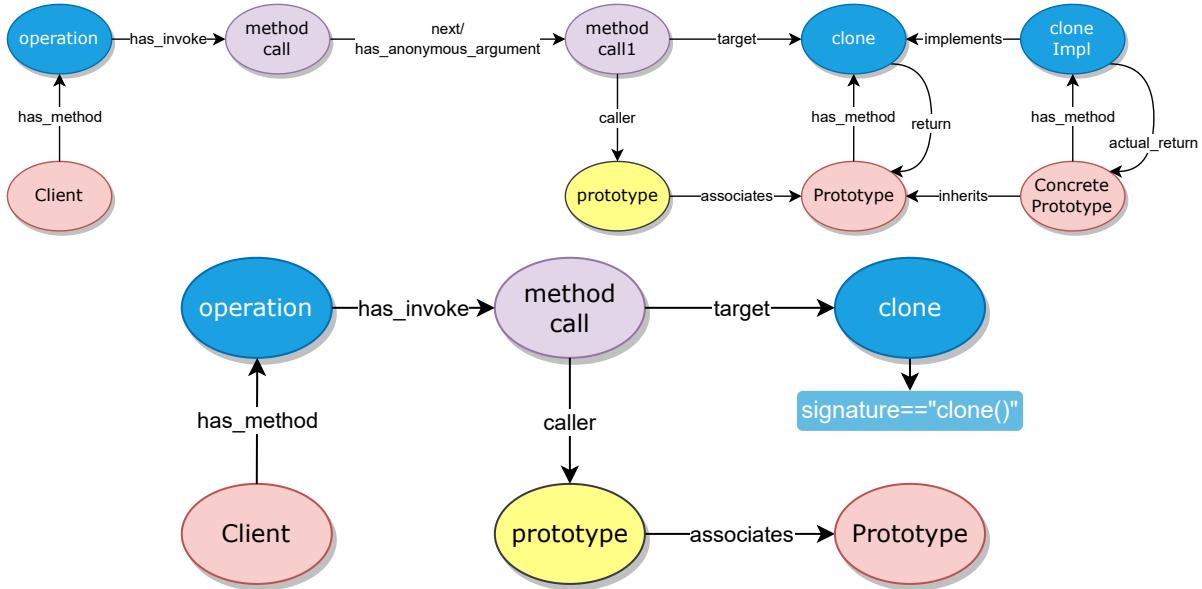


Prototype



DP graph

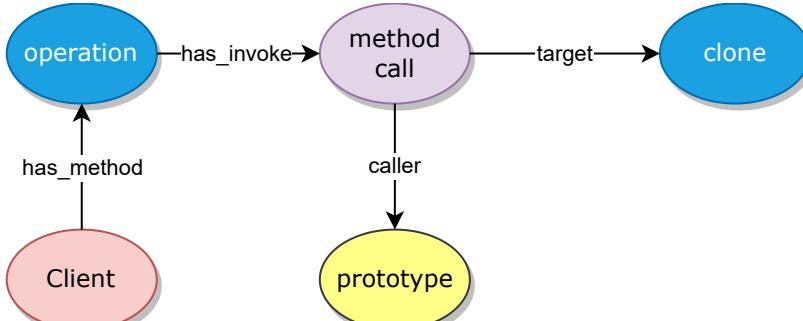




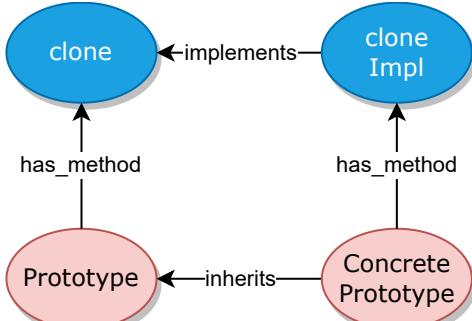
Decomposition

$$\text{Prototype} = TMI_m F \cup TMI_m M + TMM \cup TM \cup TT + TMT \times 2 + FT$$

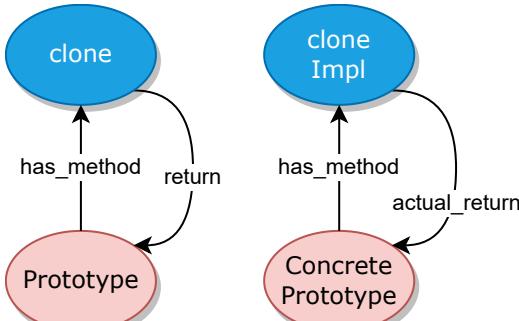
1. $TMI_m F \cup TMI_m M$



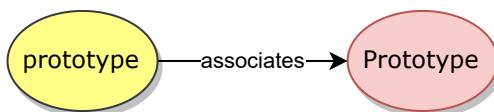
2. $TMM \cup TM \cup TT$



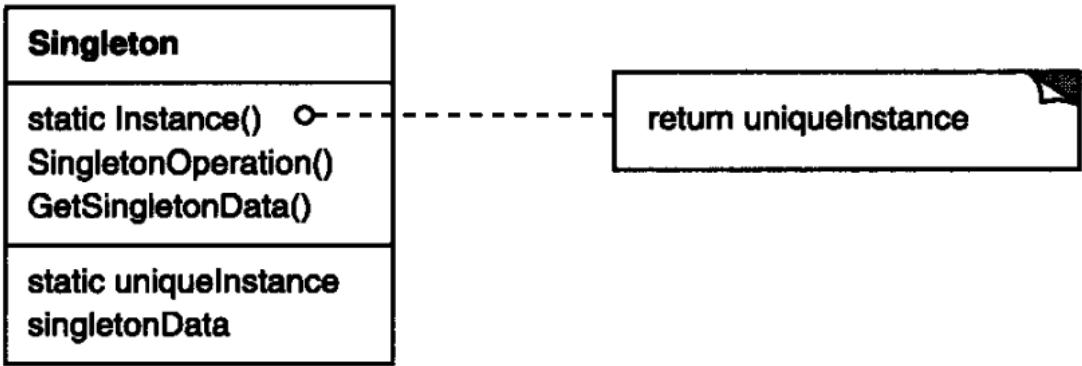
3. $TMT \times 2$



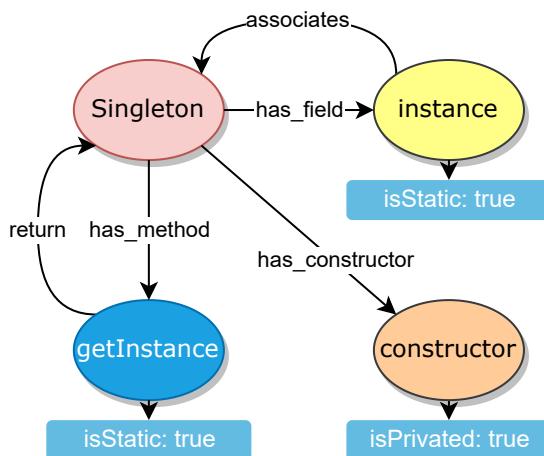
4. FT



Singleton



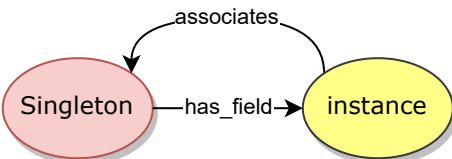
DP graph



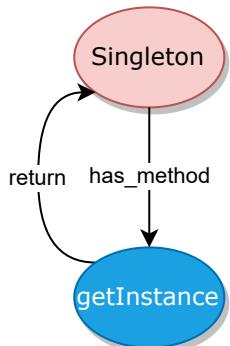
Decomposition

$$\text{Singleton} = \text{TFT} + \text{TMT} + \text{TC}$$

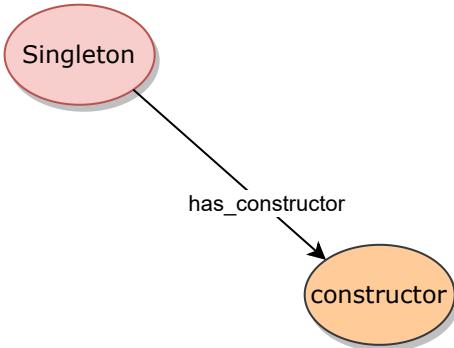
1. TFT



2. TMT

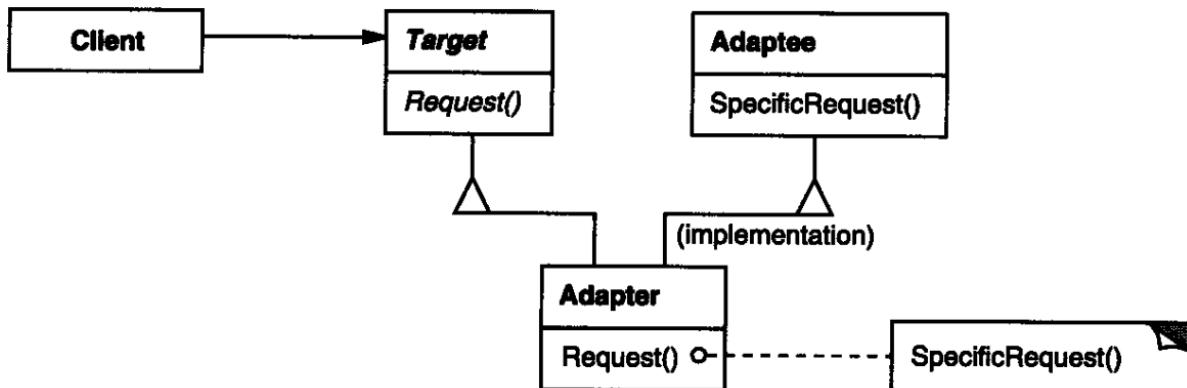


3. TC

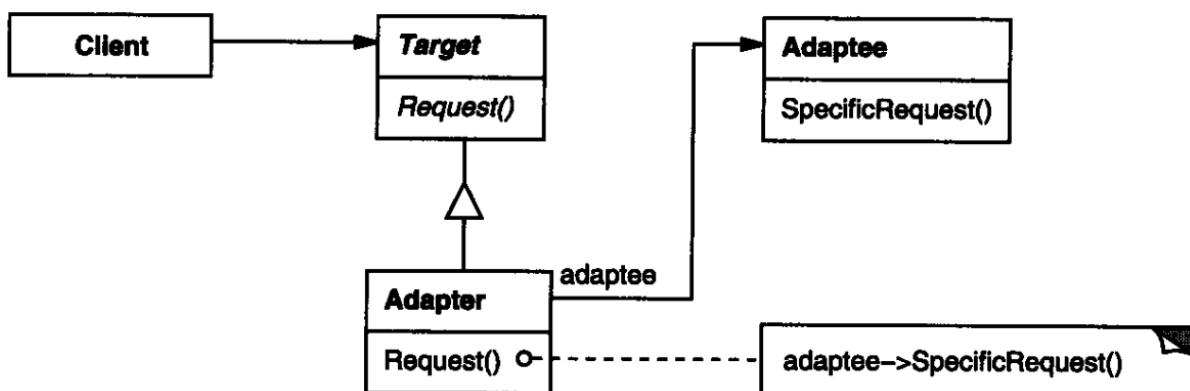


Adapter

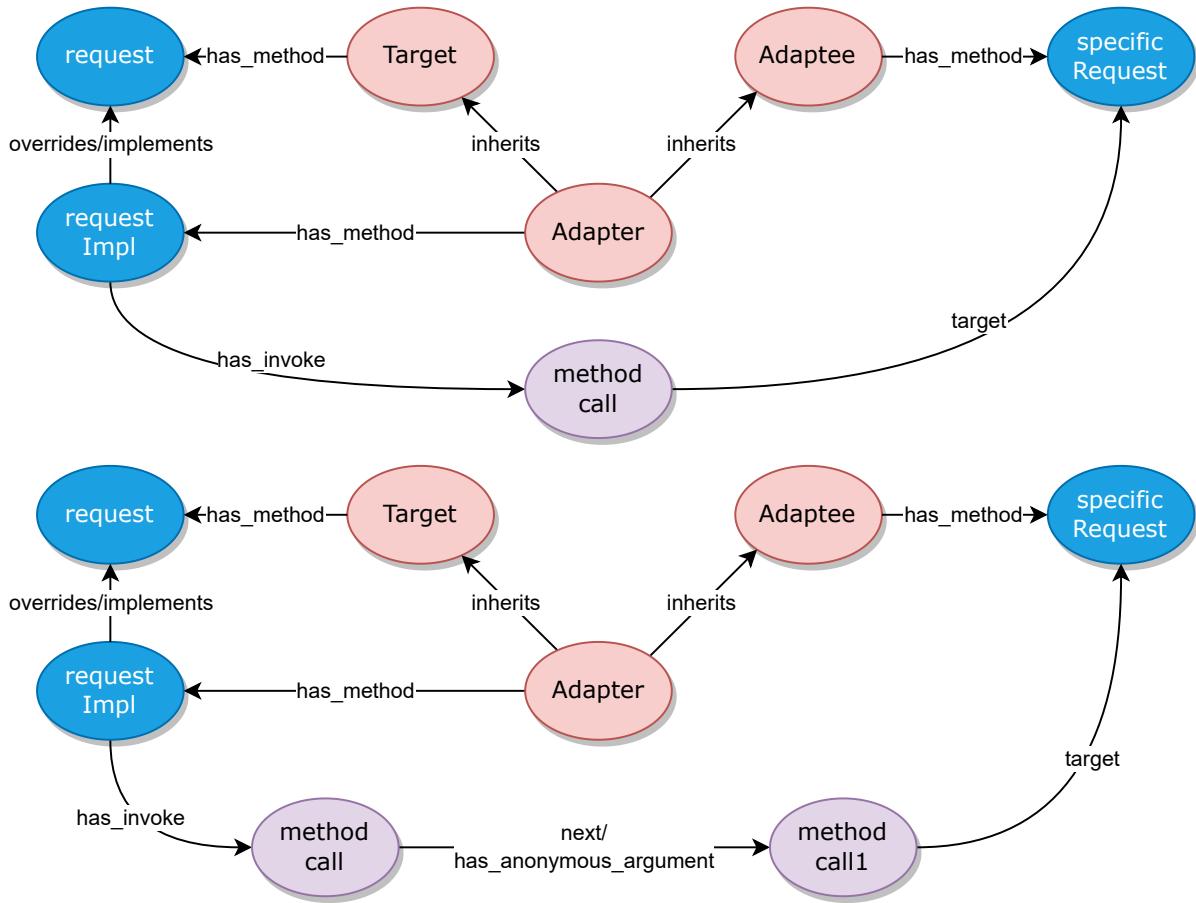
Class Adapter:



Object Adapter:



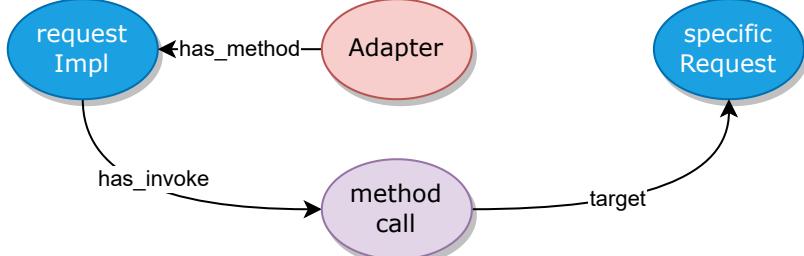
DP graph 1: Class Adapter



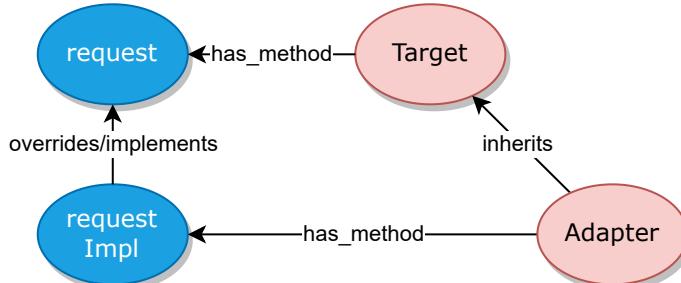
Decomposition

$$Adapter_1 = TMI_m M + TMM \cup TM \cup TT + TT \cup TM$$

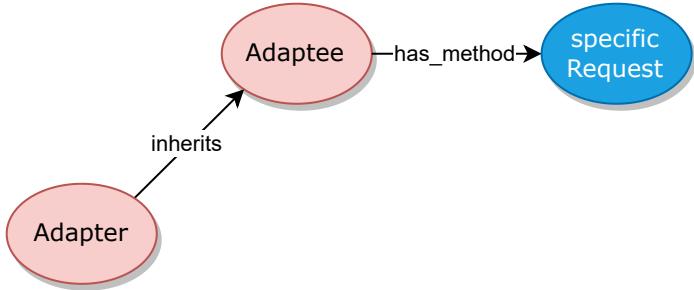
1. $TMI_m M$



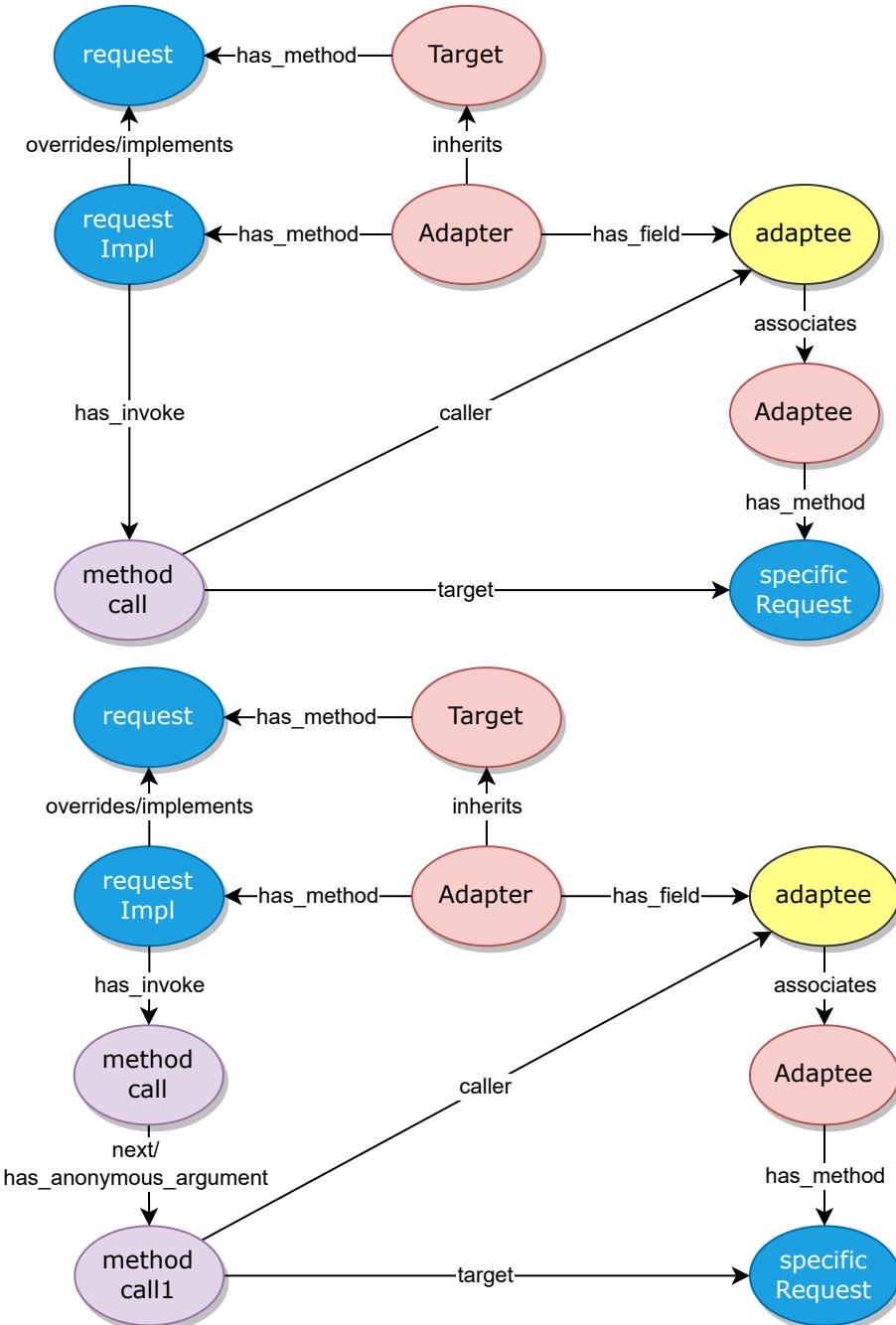
2. $TMM \cup TM \cup TT$



3. $TT \cup TM$



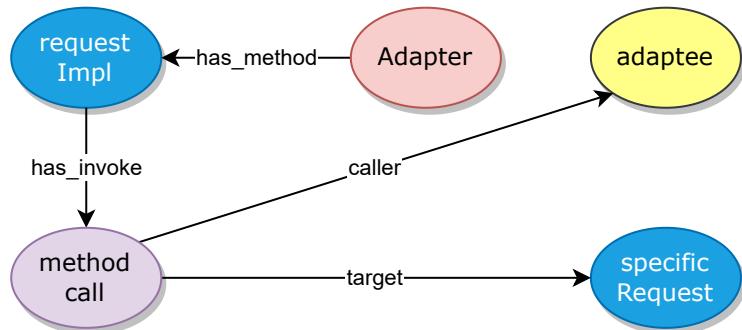
DP graph 2: Object Adapter



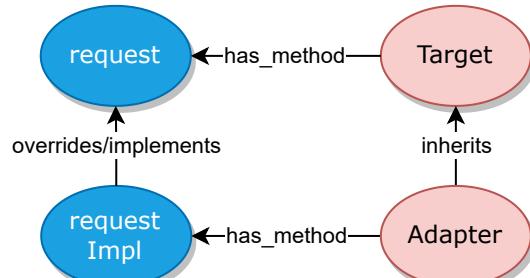
Decomposition

$$Adapter_2 = TMI_mF \cup TMI_mM + TMM \cup TM \cup TT + TFT + TM$$

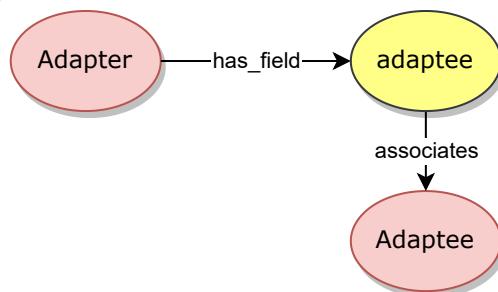
1. $TMI_mF \cup TMI_mM$



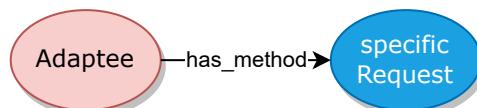
2. $TMM \cup TM \cup TT$



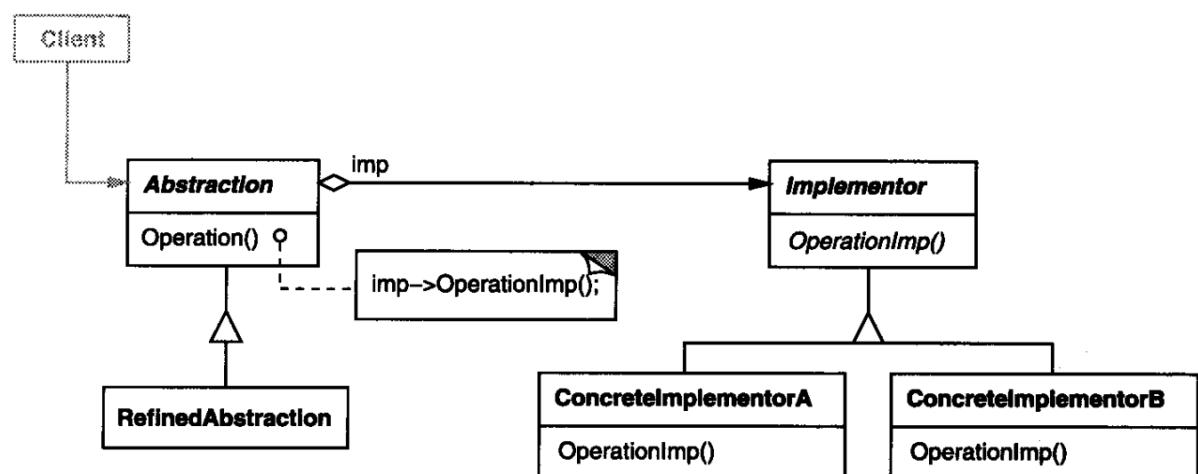
3. TFT



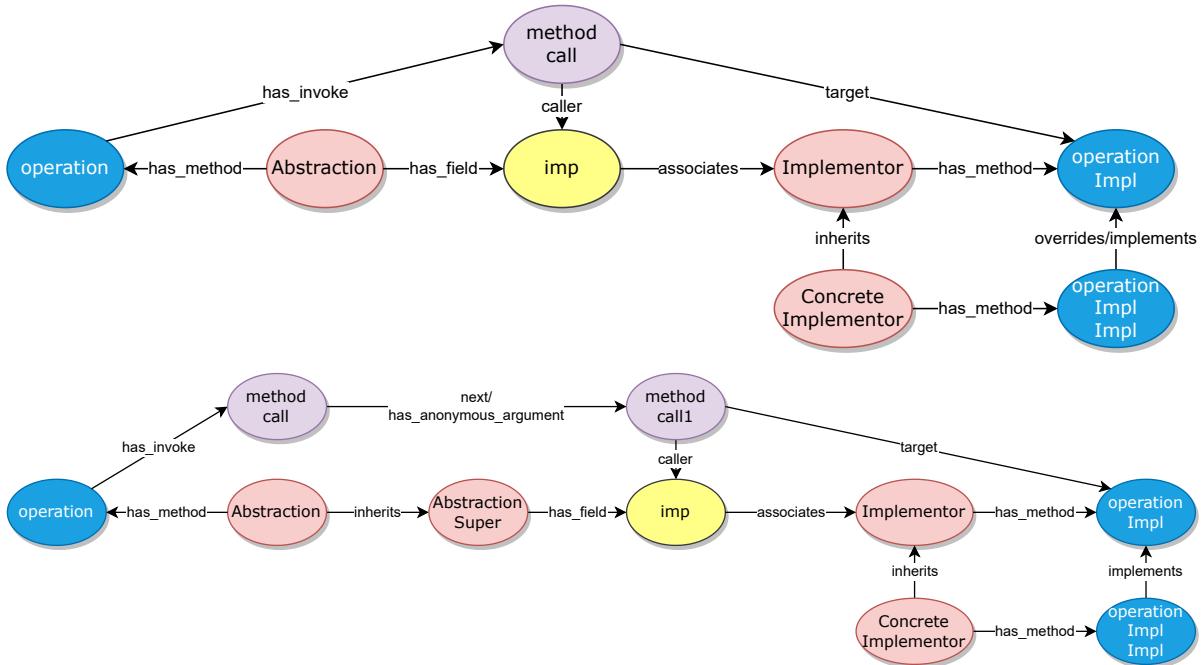
4. TM



Bridge



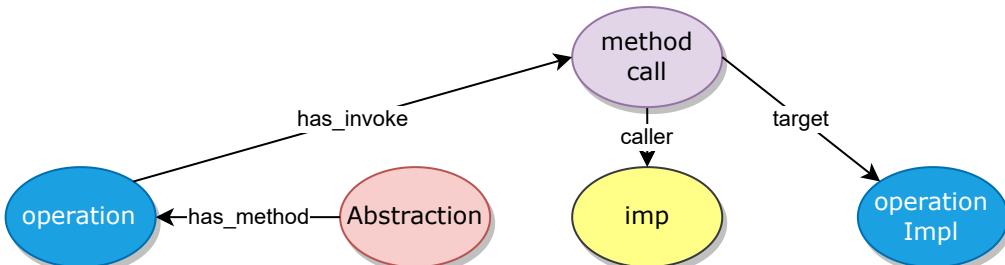
DP graph



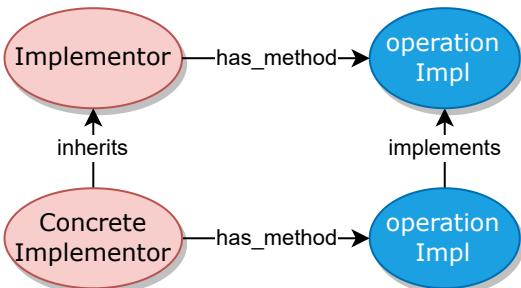
Decomposition

$$Bridge = TMI_m F \cup TMI_m M + TMM \cup TM \cup TT + FT$$

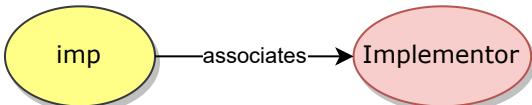
1. $TMI_m F \cup TMI_m M$



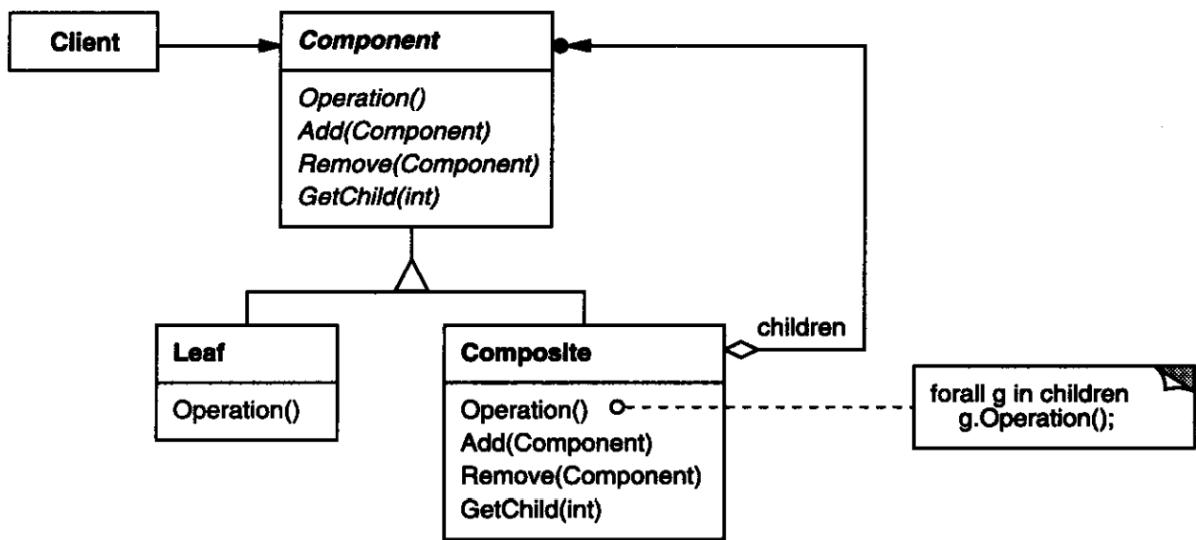
2. $TMM \cup TM \cup TT$



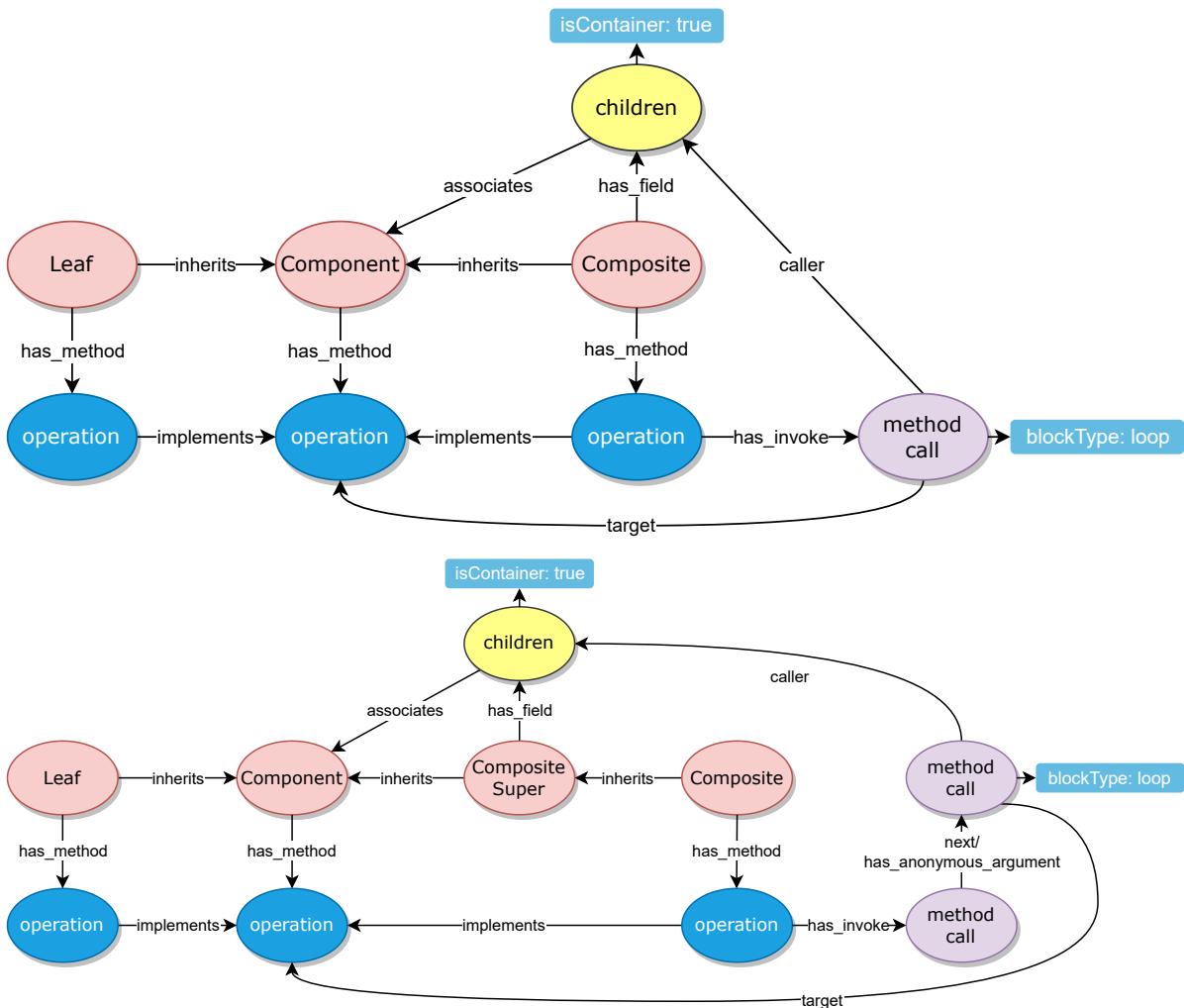
3. FT



Composite



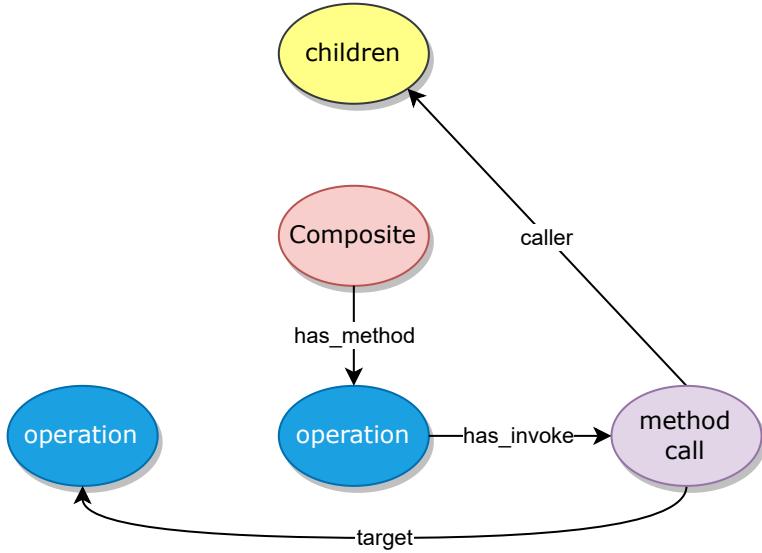
DP graph



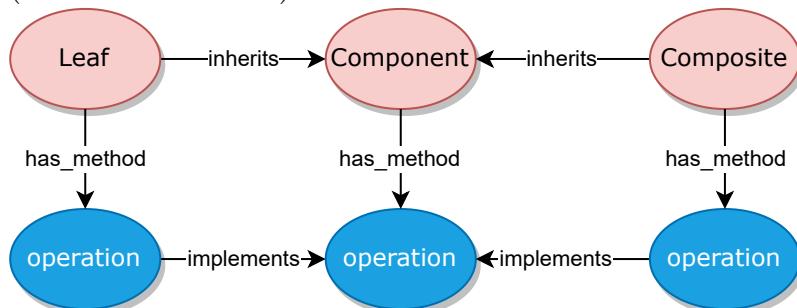
Decomposition

$$\text{Composite} = TMI_m F \cup TMI_m M + (TMM \cup TM \cup TT)^2 + TFT$$

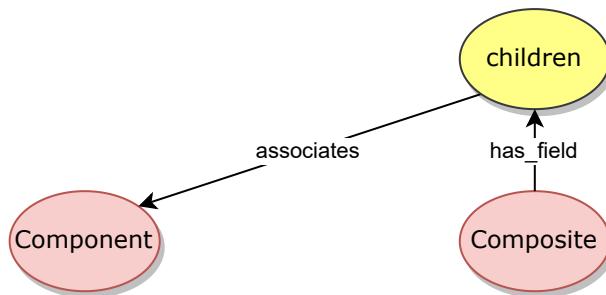
1. $TMI_mF \cup TMI_mM$



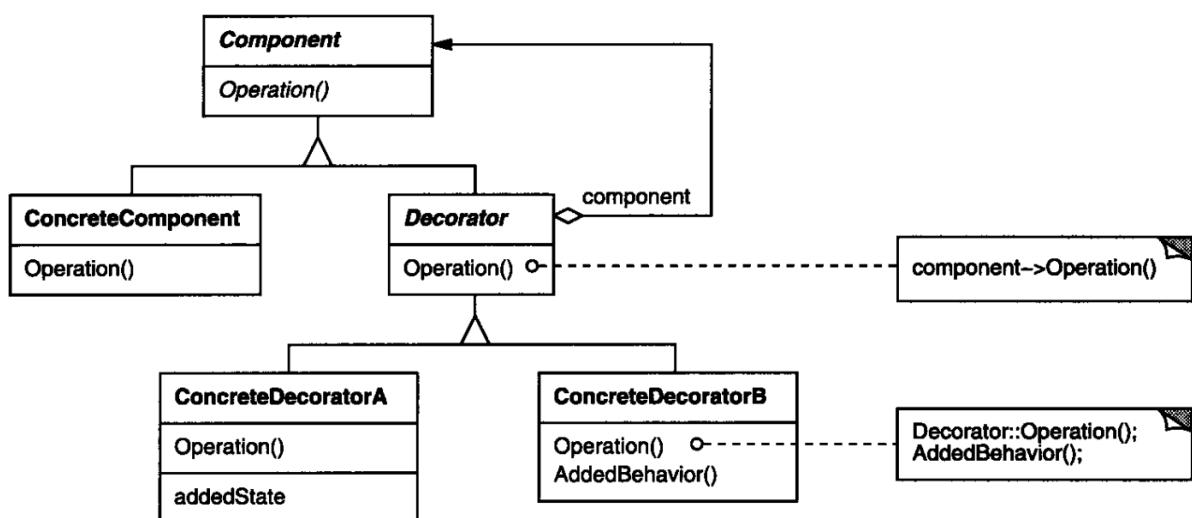
2. $(TMM \cup TM \cup TT)^2$



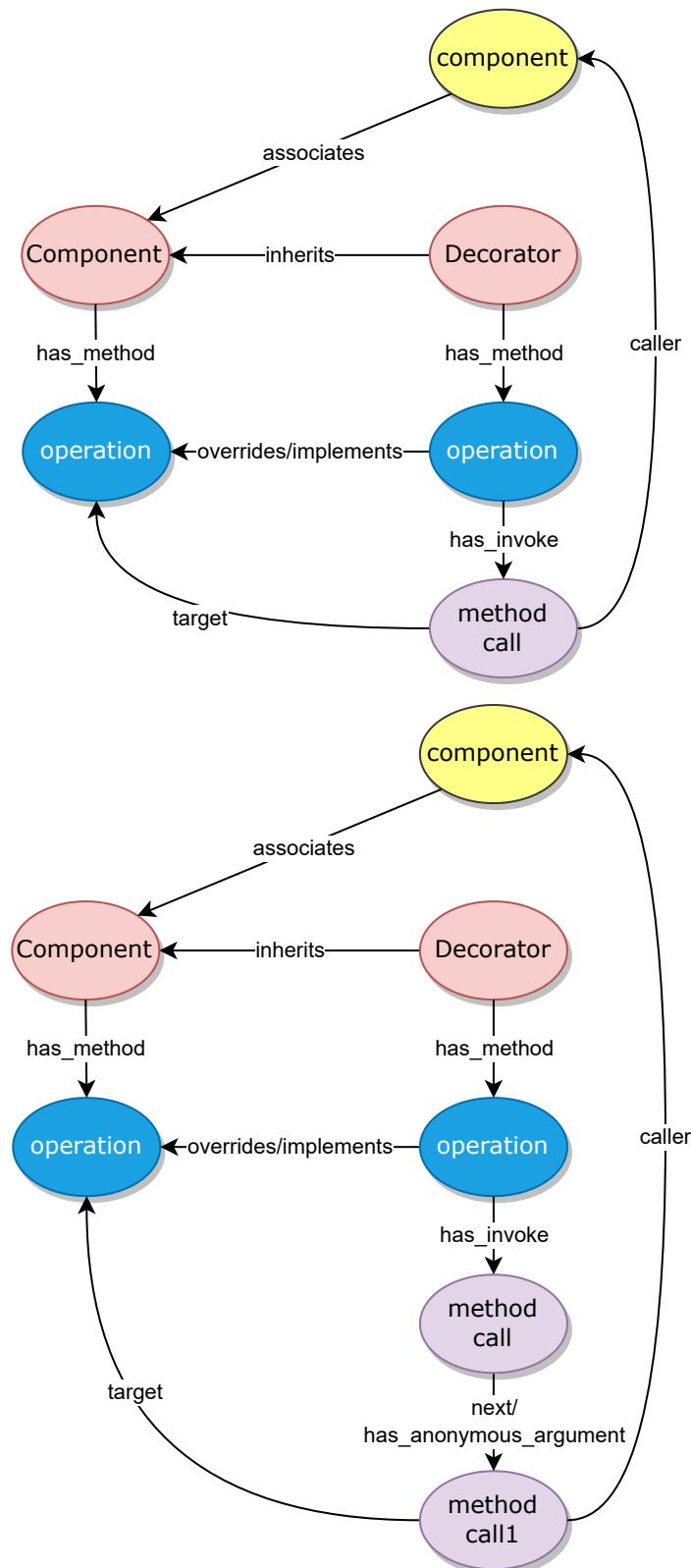
3. TFT



Decorator



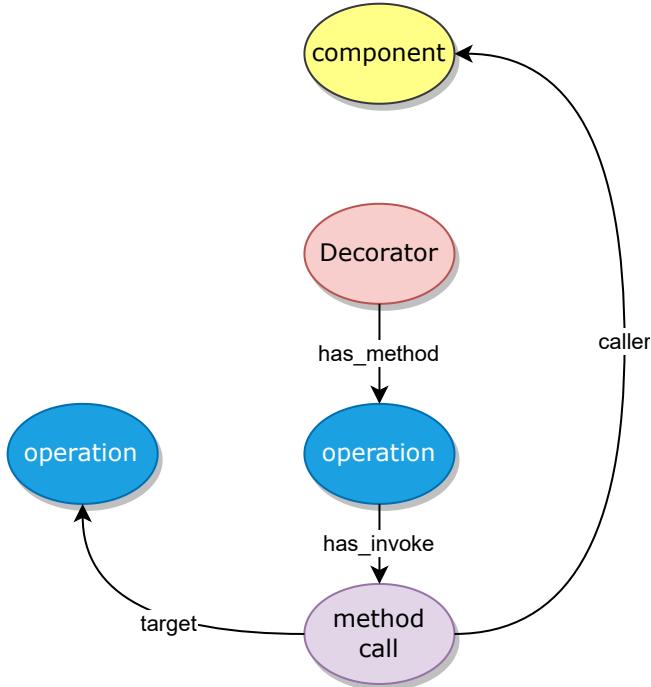
DP graph



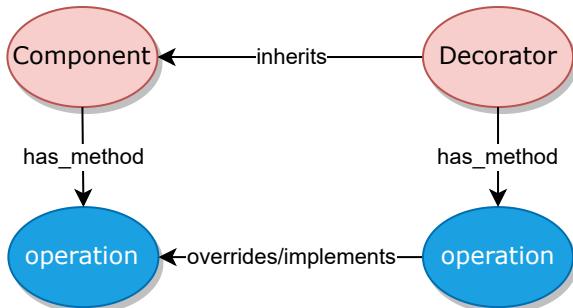
Decomposition

$$Decorator = TMI_m F \cup TMI_m M + TMM \cup TM \cup TT + FT$$

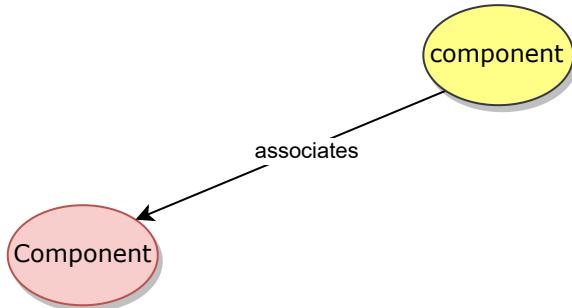
1. $TMI_mF \cup TMI_mM$



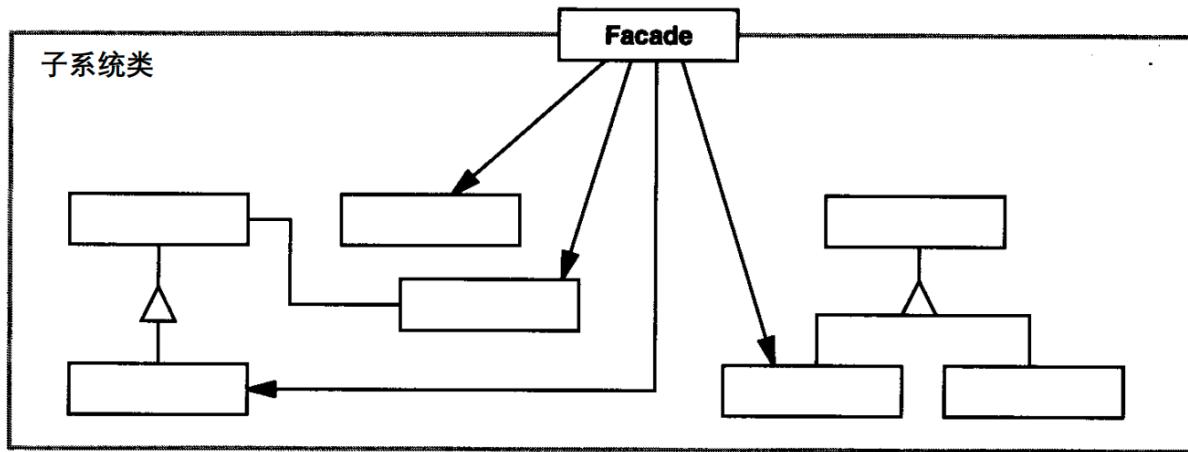
2. $TMM \cup TM \cup TT$



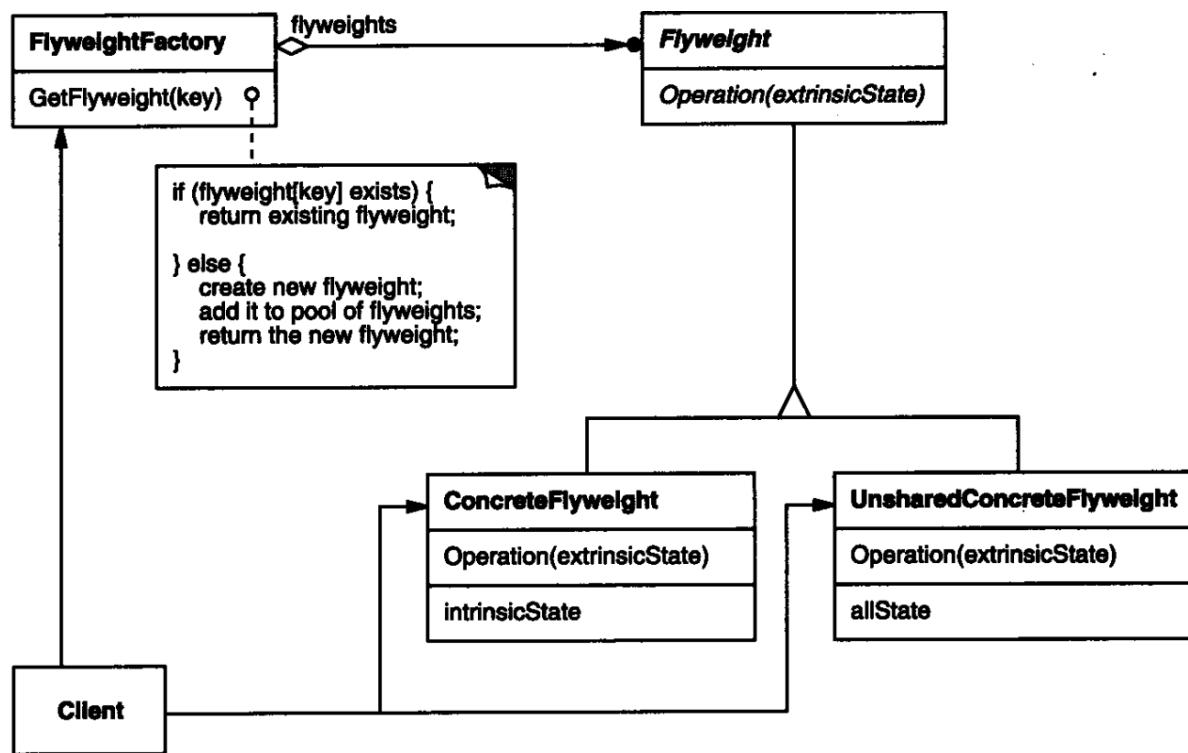
3. FT



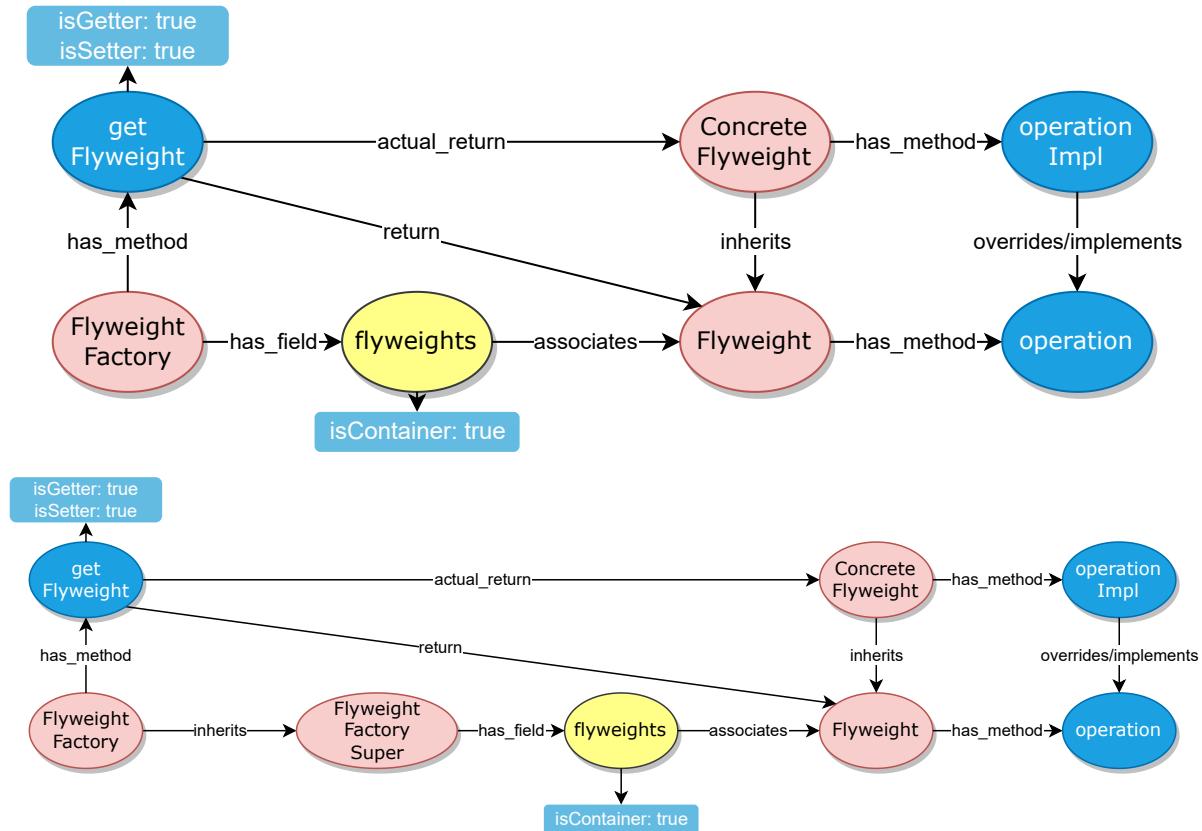
Facade



Flyweight



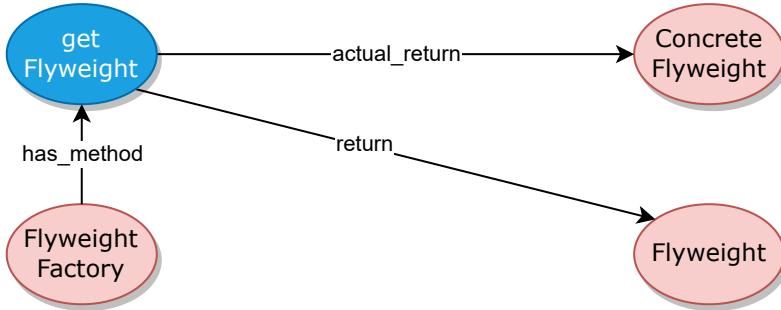
DP graph



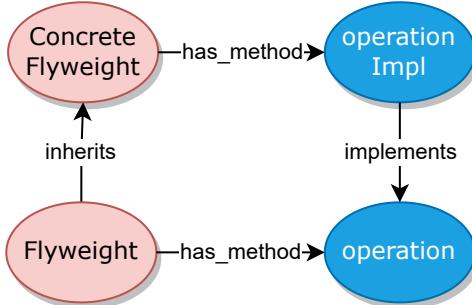
Decomposition

$$Flyweight = TMT^2 + TMM \cup TM \cup TT + TFT$$

1. TMT^2



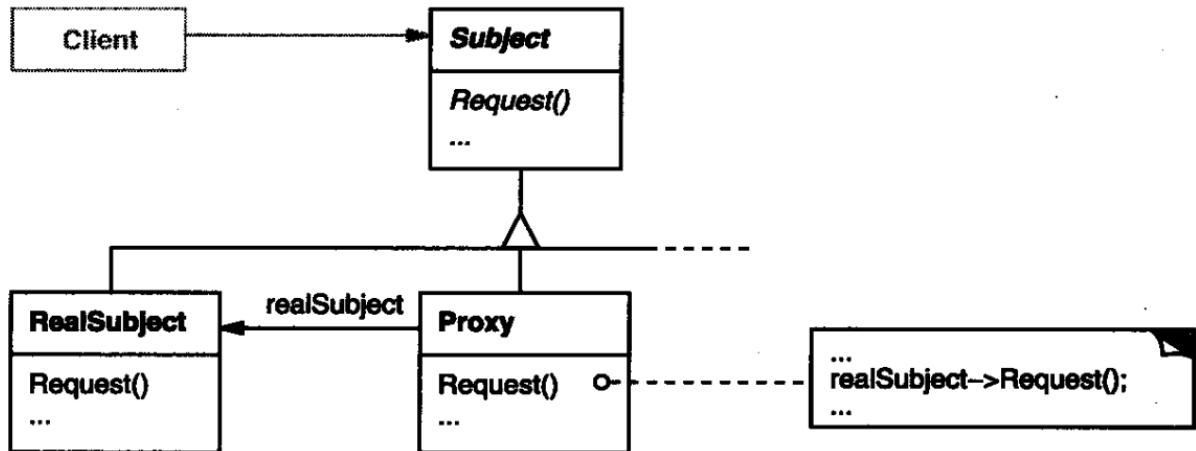
2. $TMM \cup TM \cup TT$



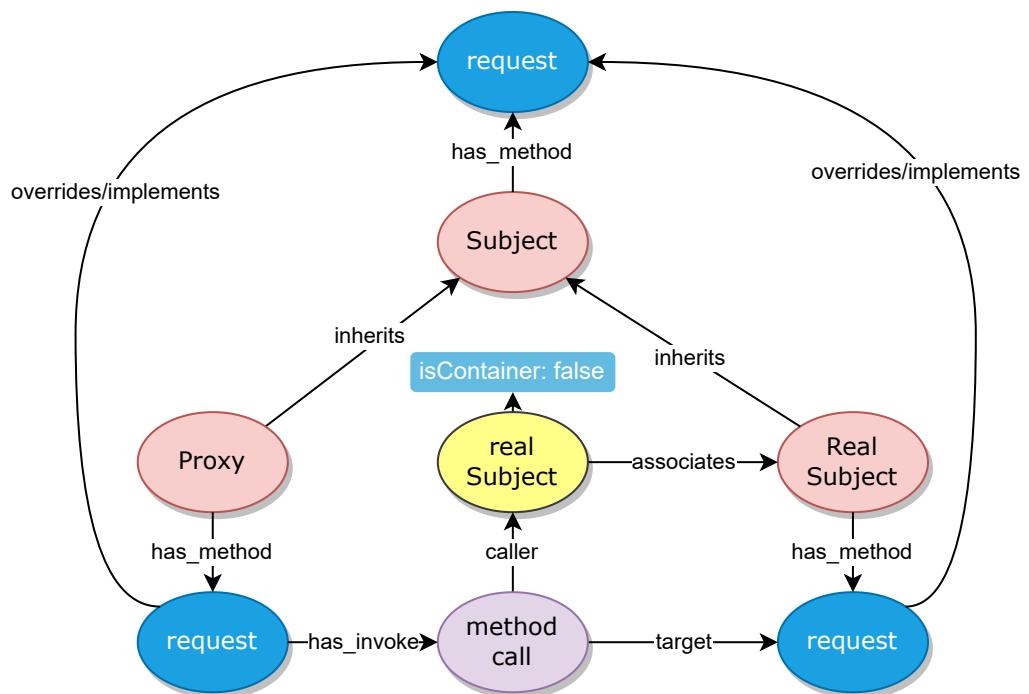
3. TFT

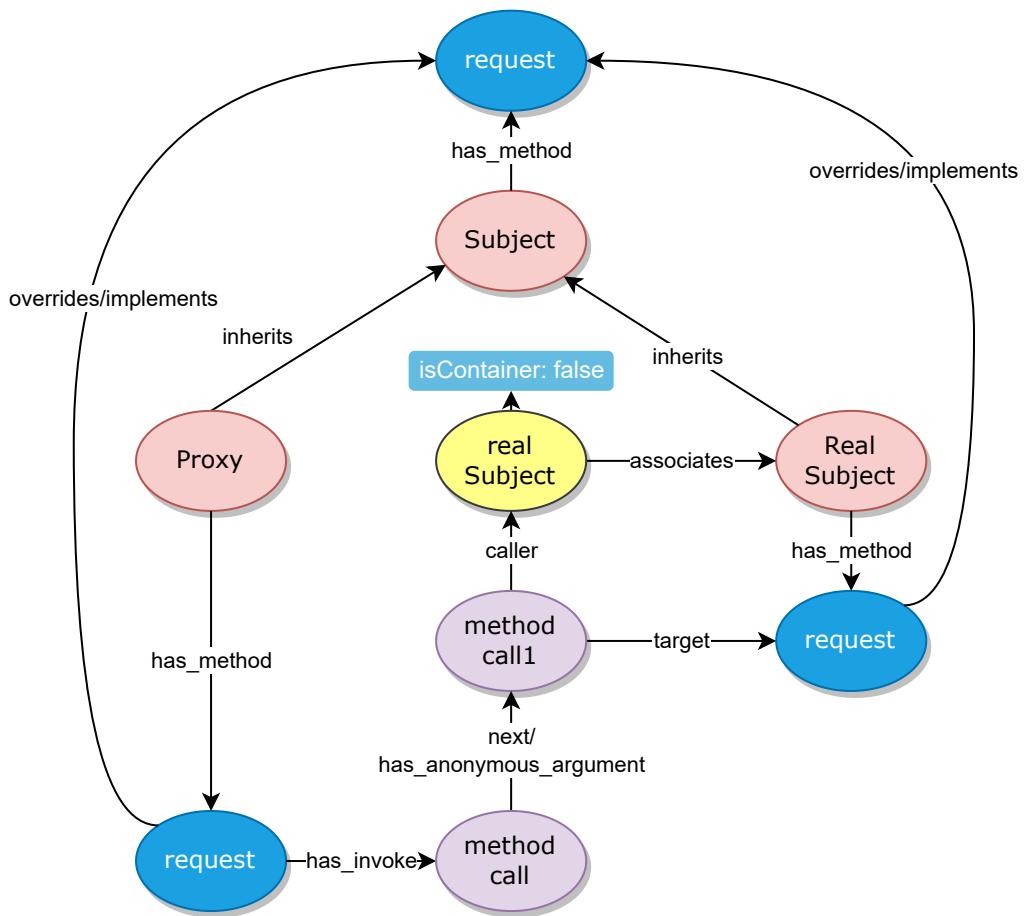


Proxy



DP graph

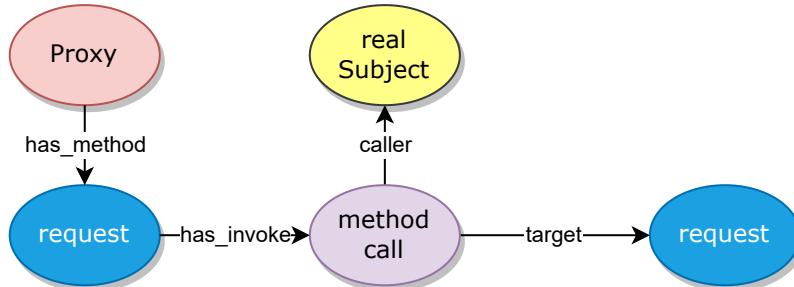




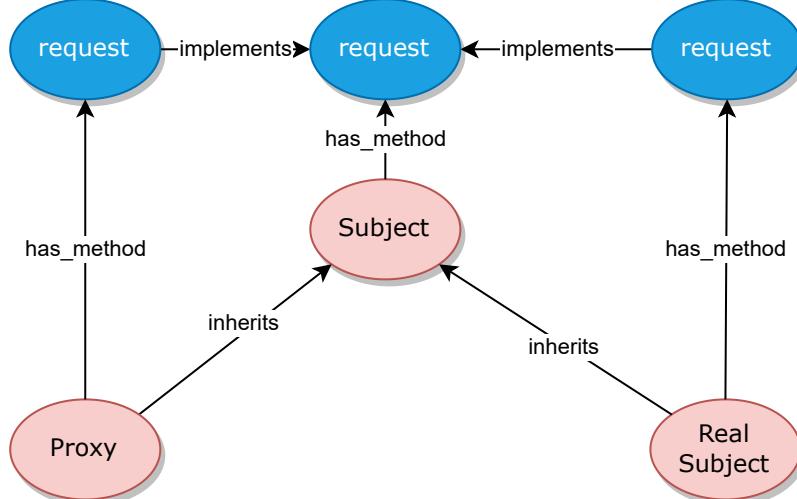
Decomposition

$$Proxy = TMI_mF \cup TMI_mM + (TMM \cup TM \cup TT)^2 + FT$$

1. $TMI_mF \cup TMI_mM$



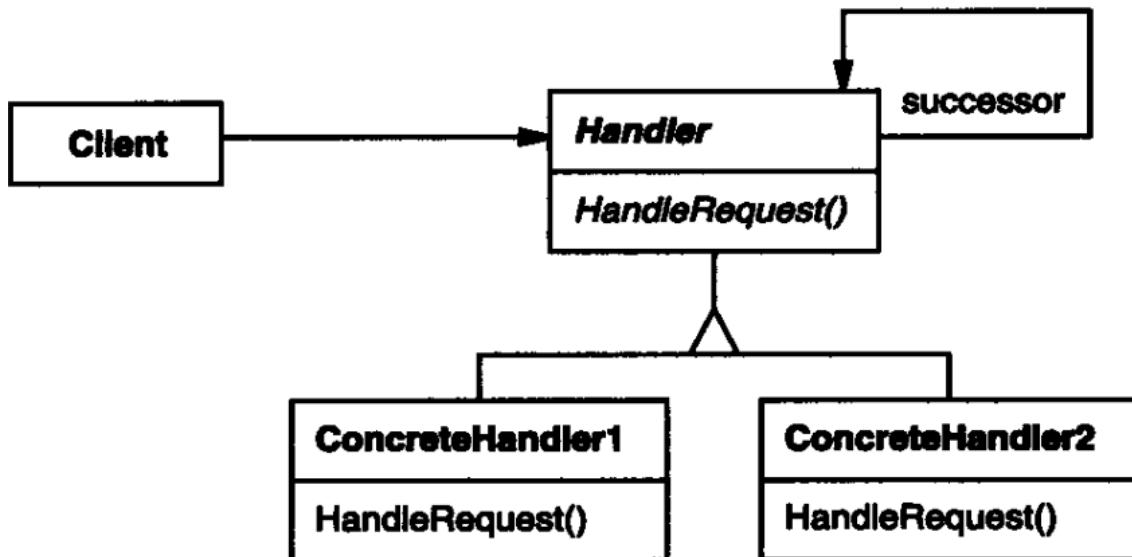
2. $(TMM \cup TM \cup TT)^2$



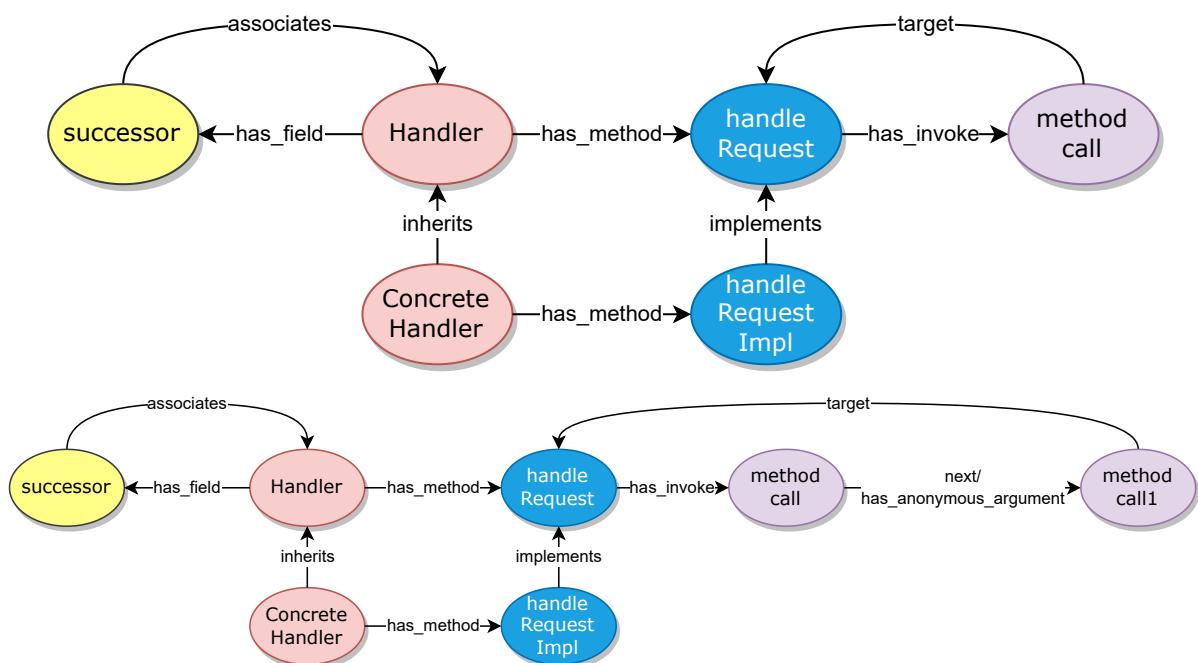
3. FT



Chain Of Responsibility



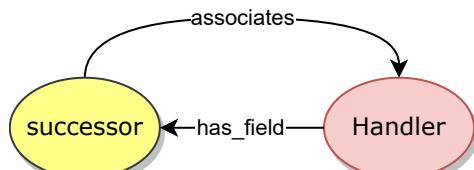
DP graph



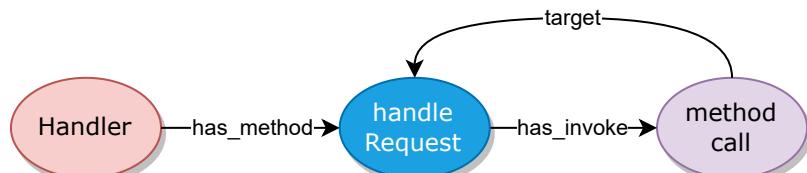
Decomposition

$$\text{ChainOfResponsibility} = TFT + TMI_mM + TMM \cup TM \cup TT$$

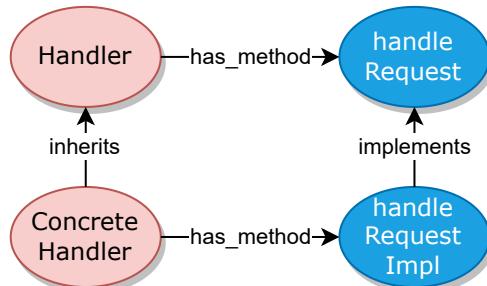
1. TFT



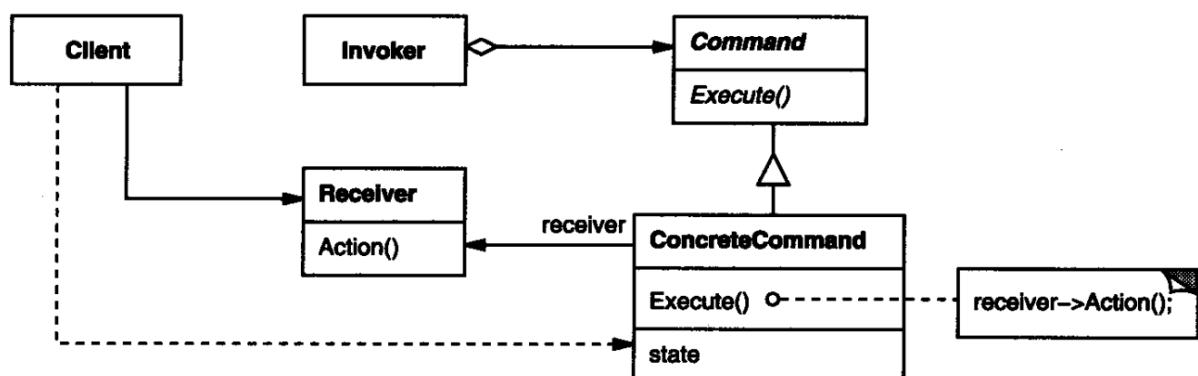
2. $TMI_m M$



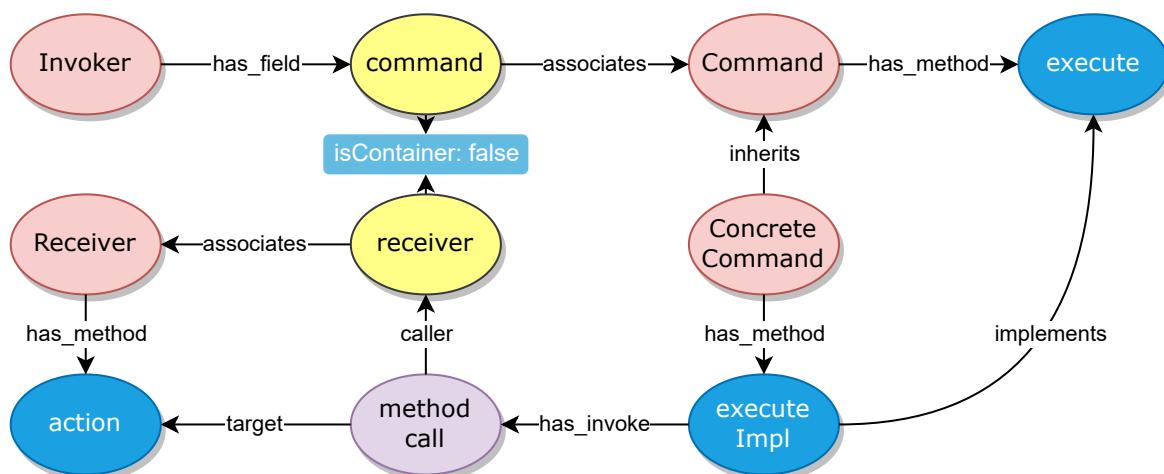
3. $TMM \cup TM \cup TT$

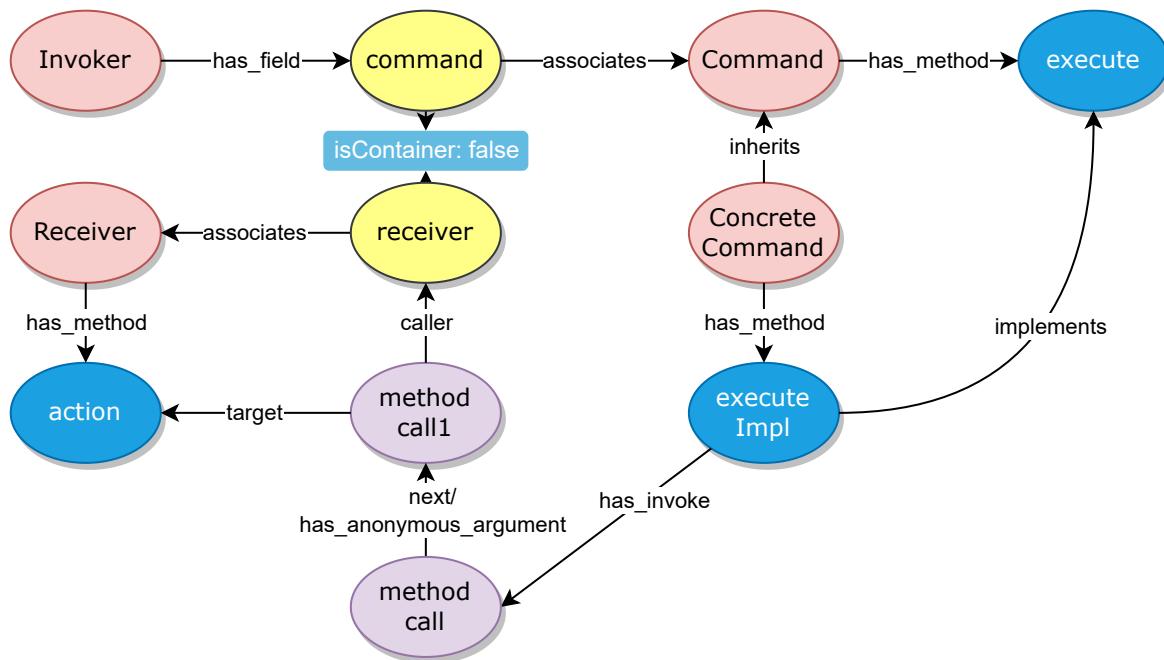


Command



DP graph

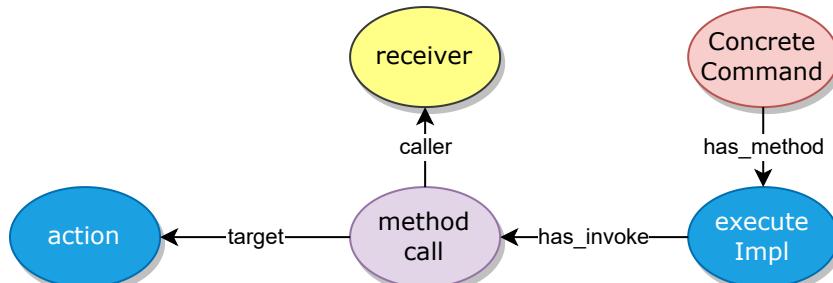




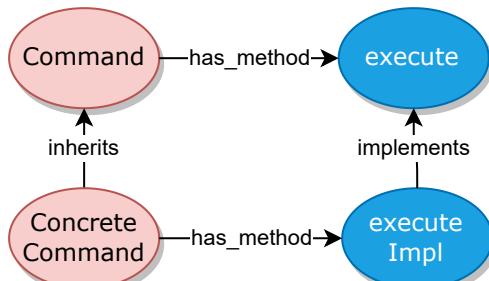
Decomposition

$$\text{Command} = TMI_mF \cup TMI_mM + TMM \cup TM \cup TT + TFT + TM + FT$$

1. $TMI_mF \cup TMI_mM$



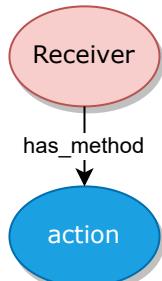
2. $TMM \cup TM \cup TT$



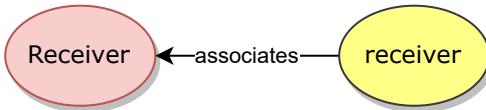
3. TFT



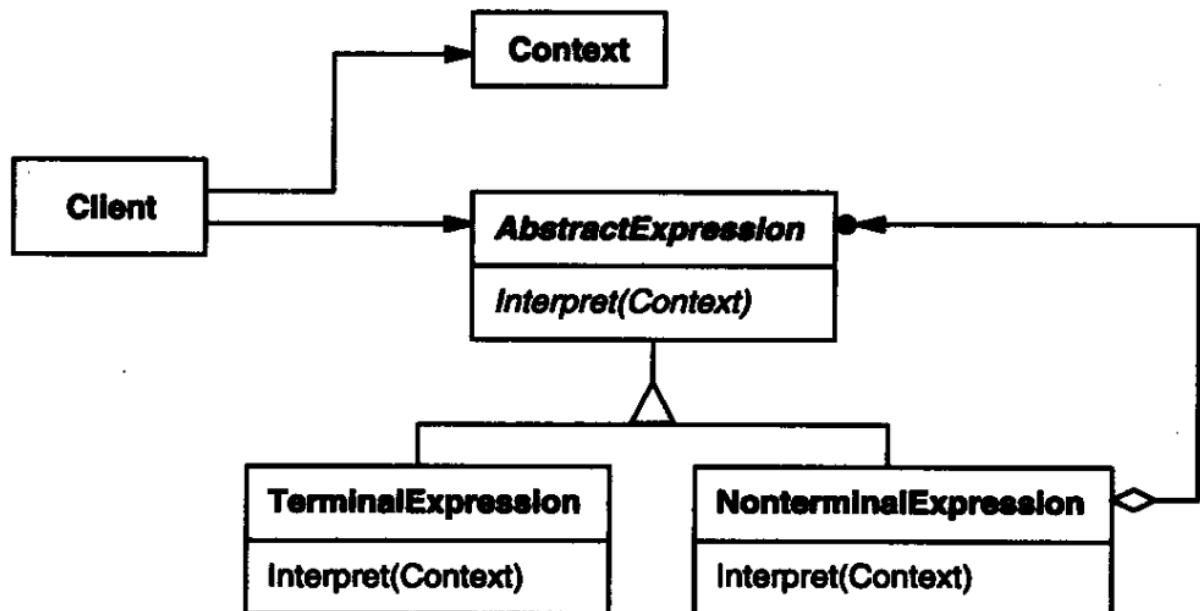
4. TM



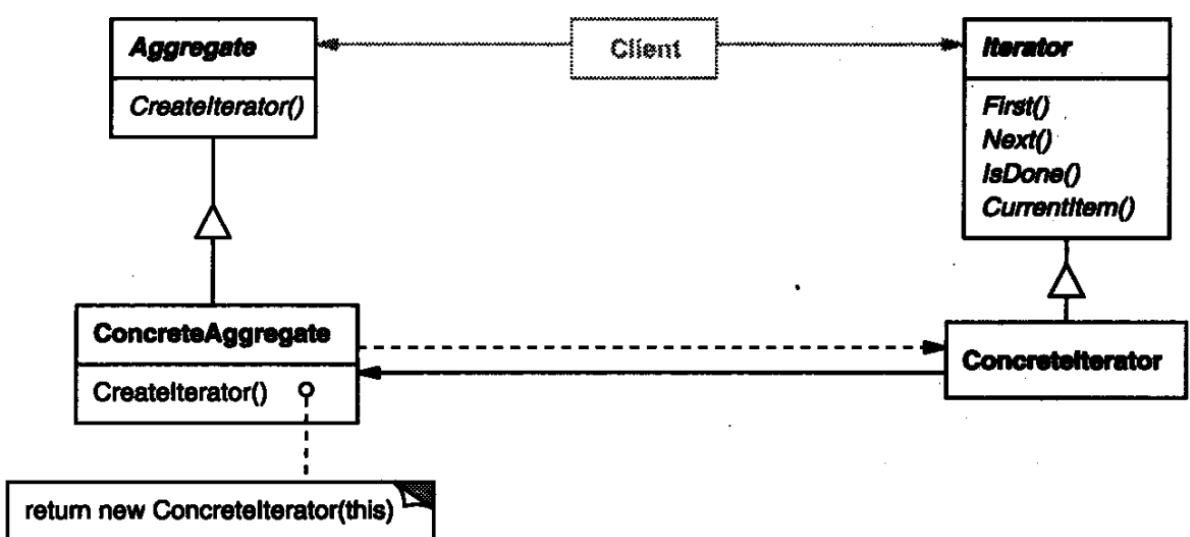
5. FT



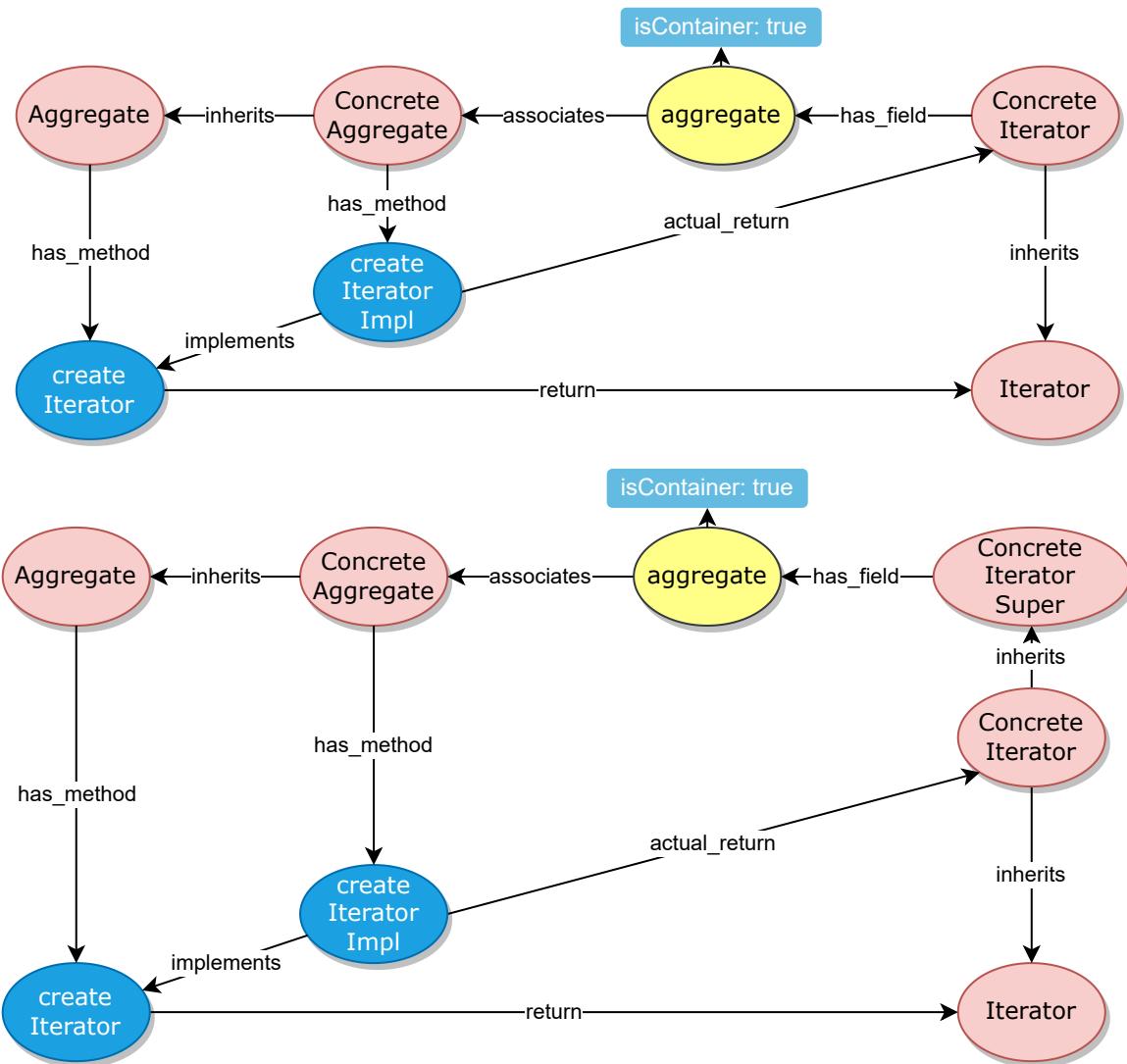
Interpreter



Iterator



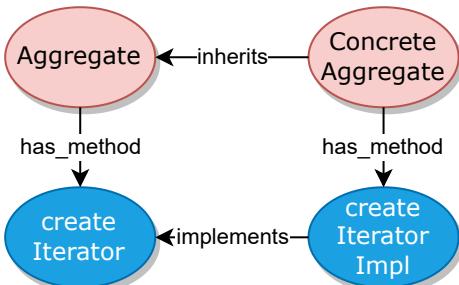
DP graph



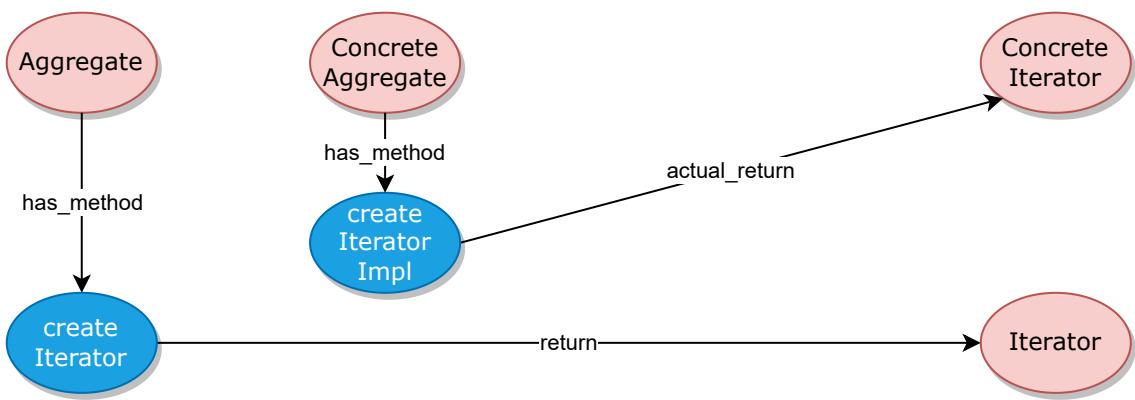
Decomposition

$$\text{Iterator} = TMM \cup TM \cup TT + TMT \times 2 + TFT + TT$$

1. $TMM \cup TM \cup TT$



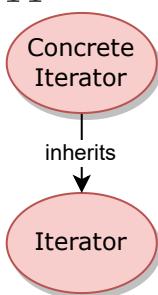
2. TMT × 2



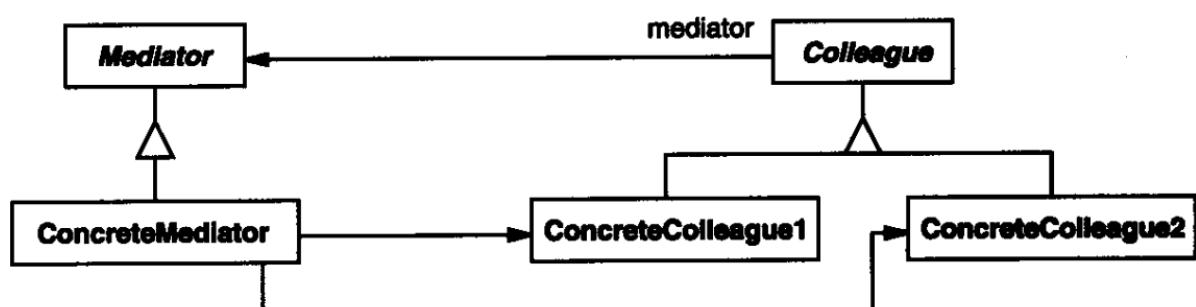
3. TFT



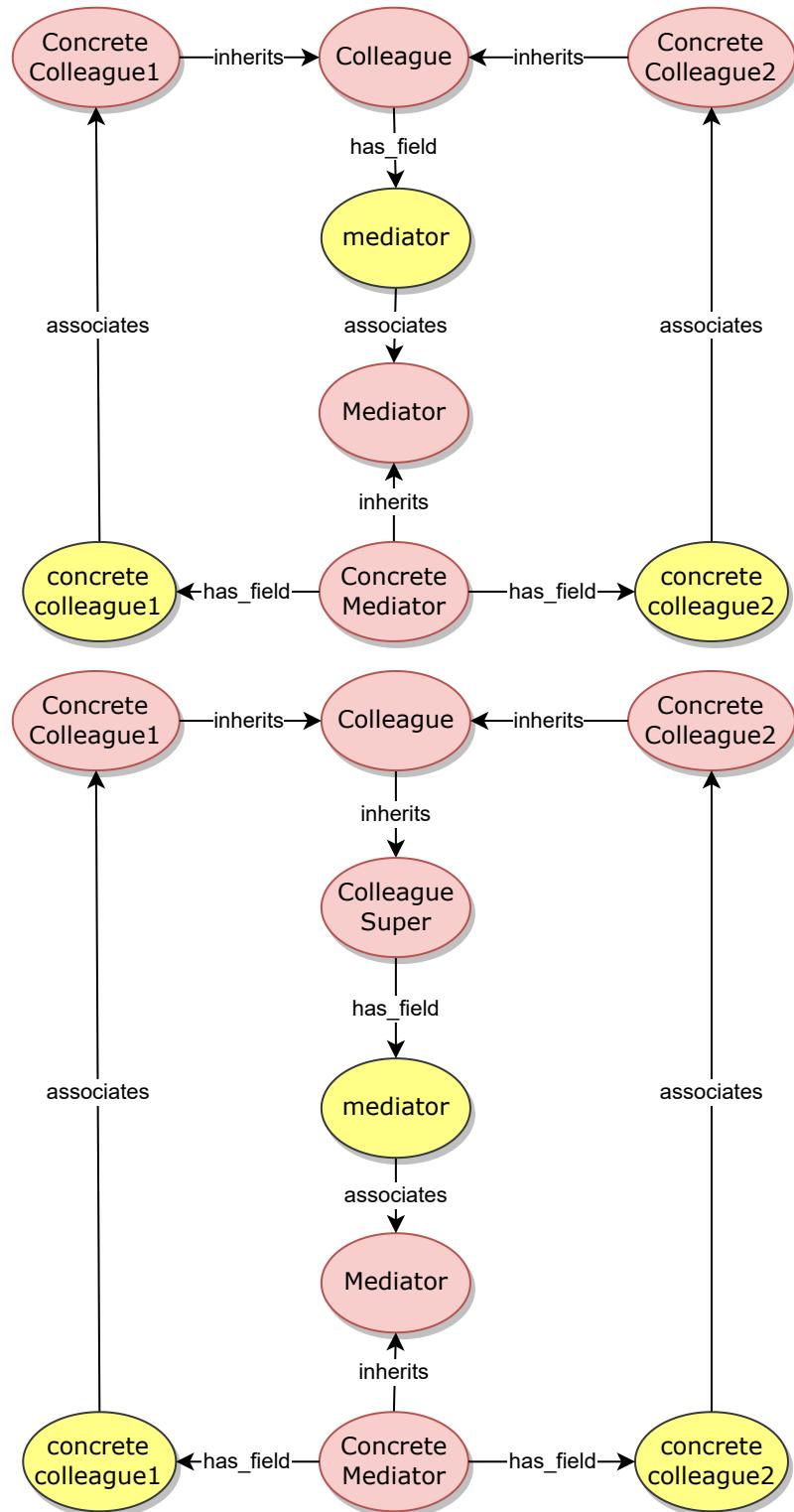
4. TT



Mediator



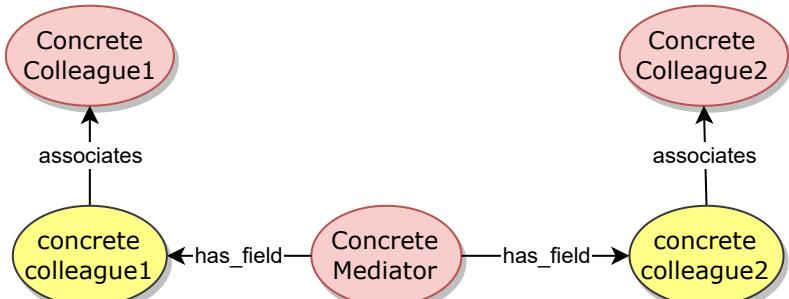
DP graph



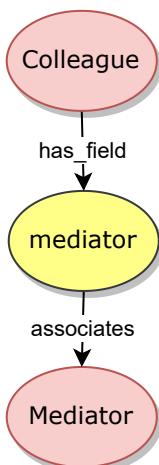
Decomposition

$$\text{Mediator} = TFT^2 + TFT + TT^2 + TT$$

1. TFT²



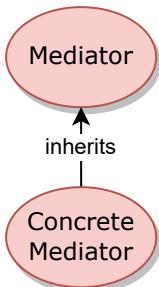
2. TFT



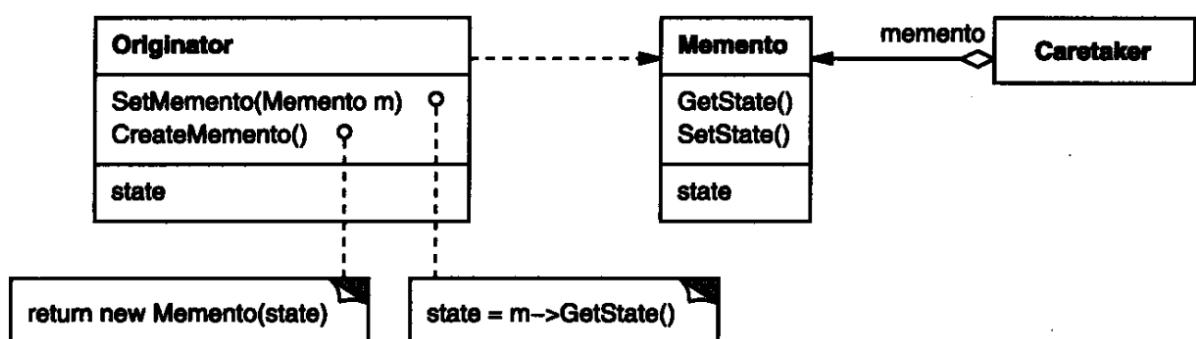
3. TT²



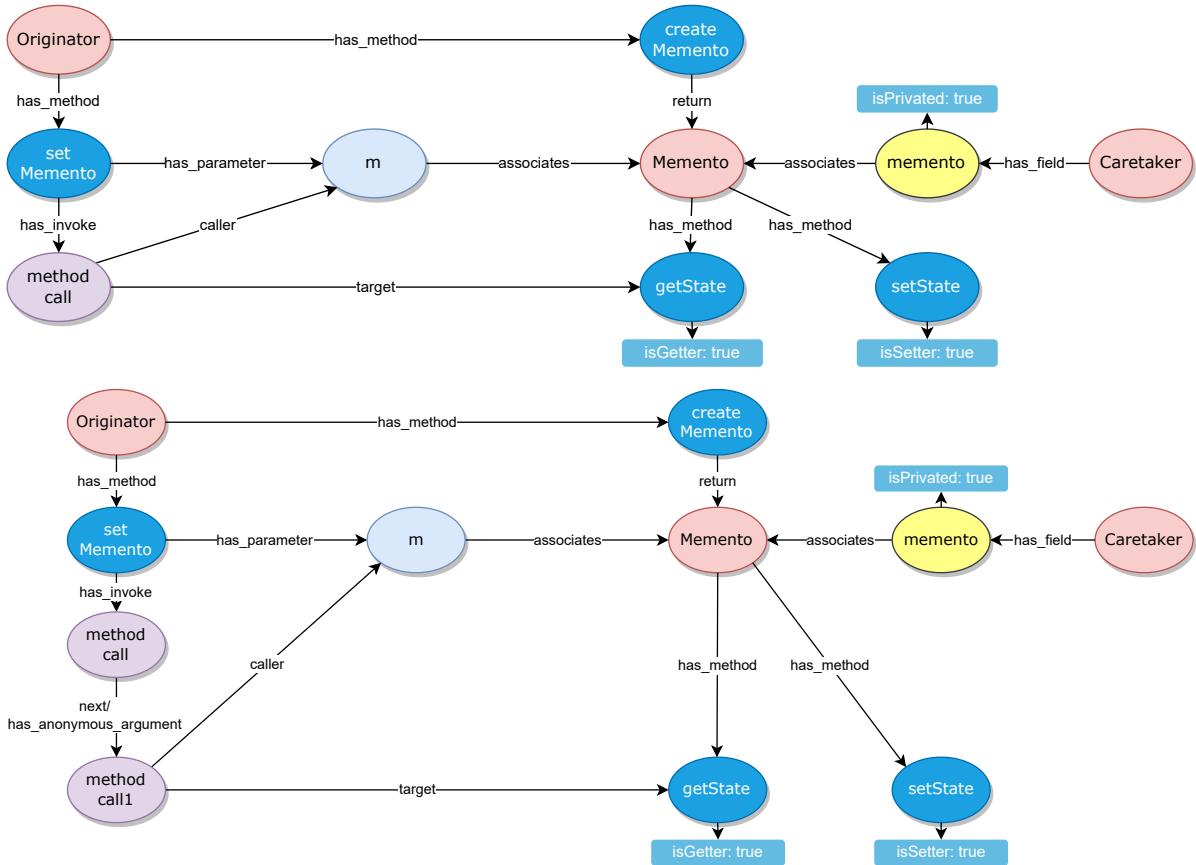
4. TT



Memento



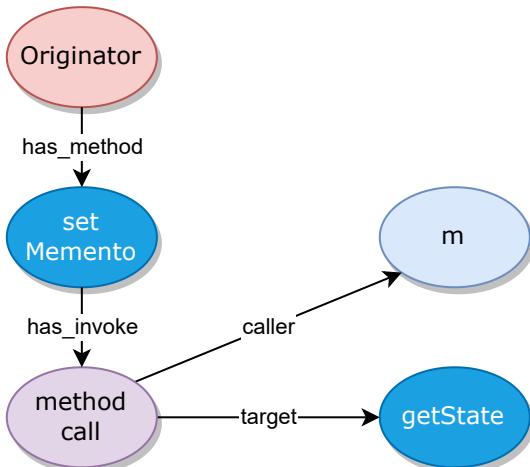
DP graph



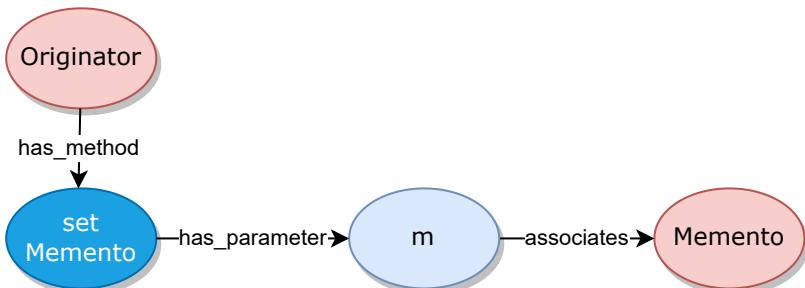
Decomposition

$$Memento = TMI_mP \cup TMI_mM + TMPT + TMT + TFT + TM^2$$

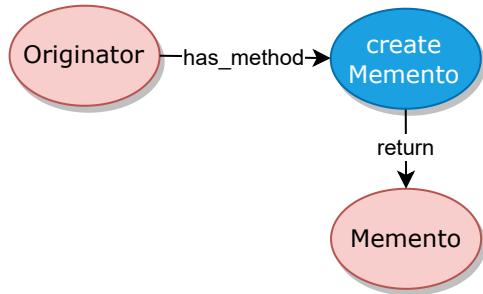
1. $TMI_mP \cup TMI_mM$



2. $TMPT$



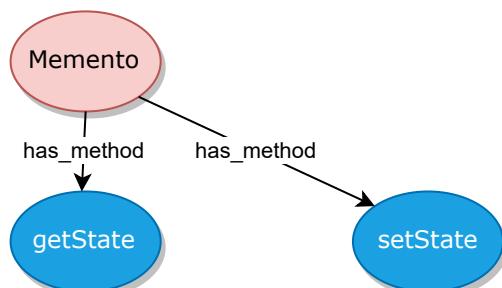
3. TMT



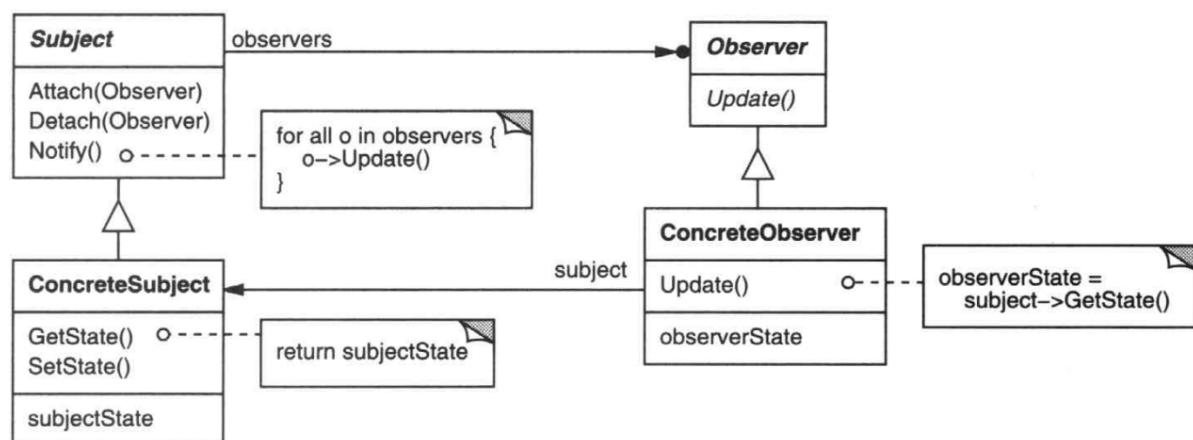
4. TFT



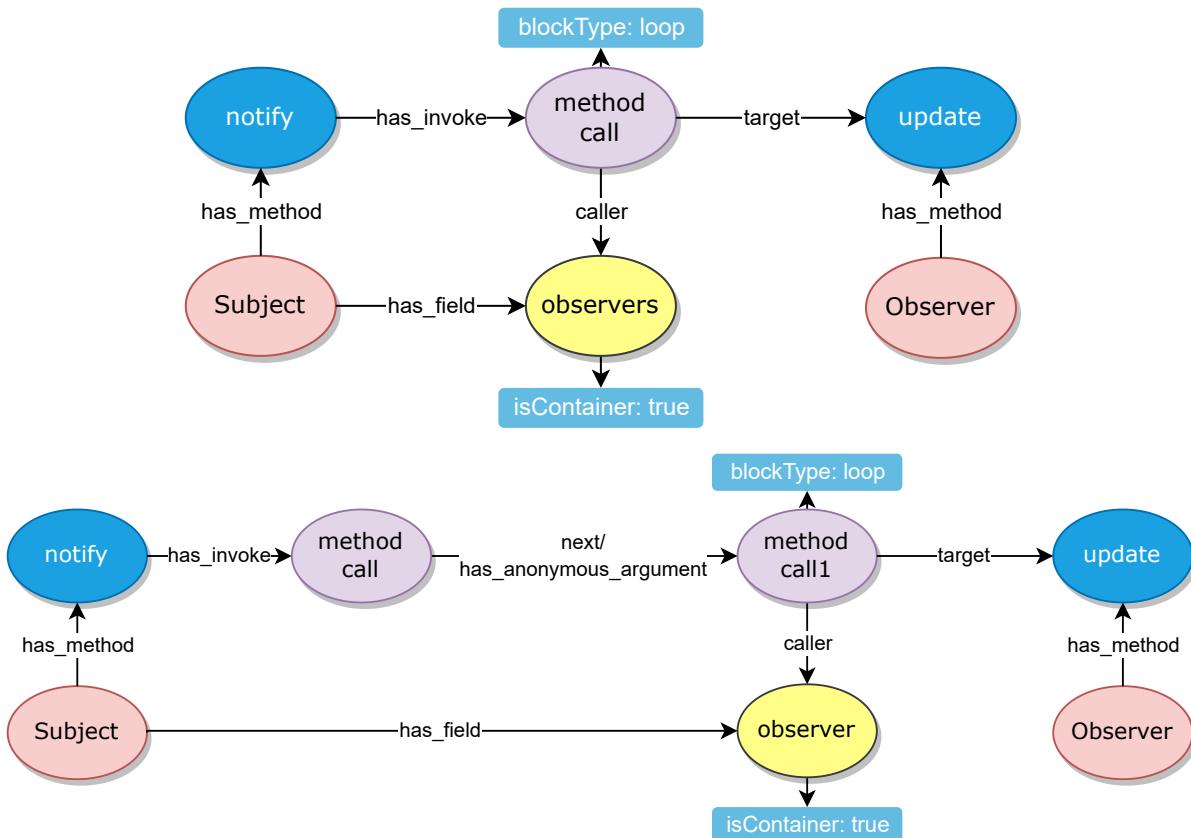
5. TM²



Observer



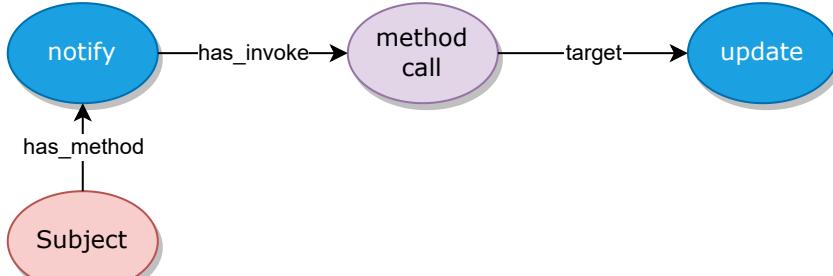
DP graph



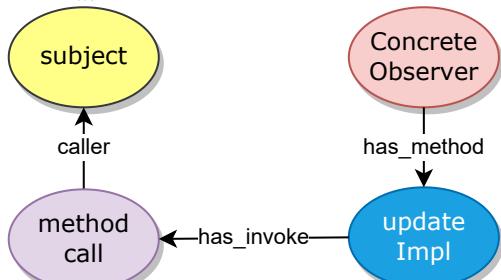
Decomposition

$$Observer = TMI_mM + TMI_mF + TMM \cup TM \cup TT + TFT \times 2 + TT$$

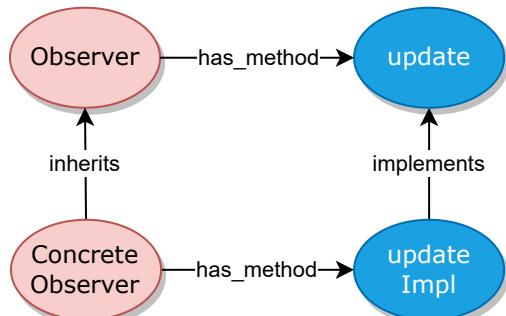
1. TMI_mM



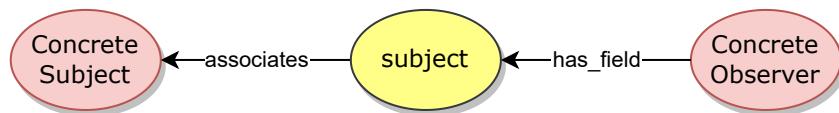
2. TMI_mF



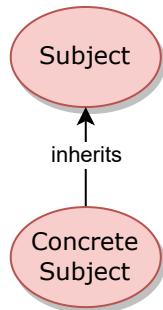
3. $TMM \cup TM \cup TT$



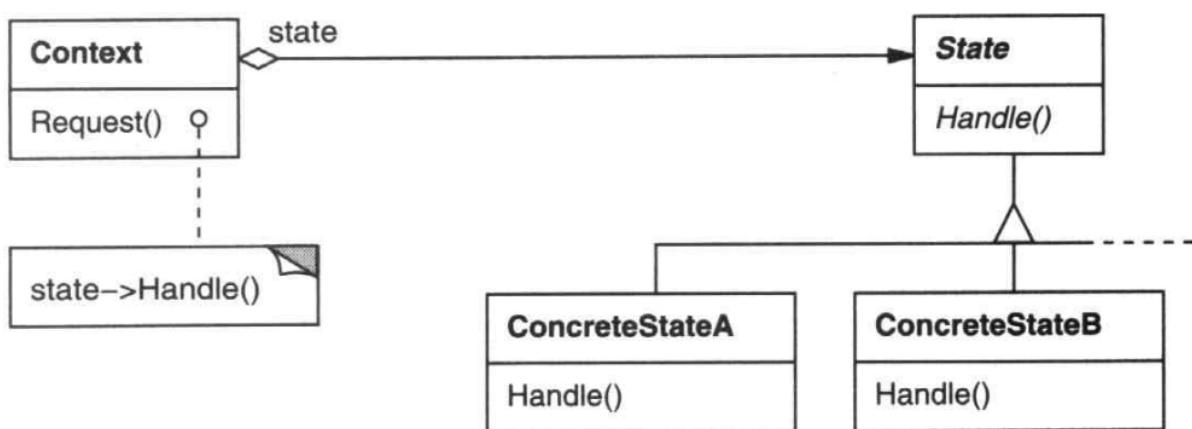
4. $TFT \times 2$



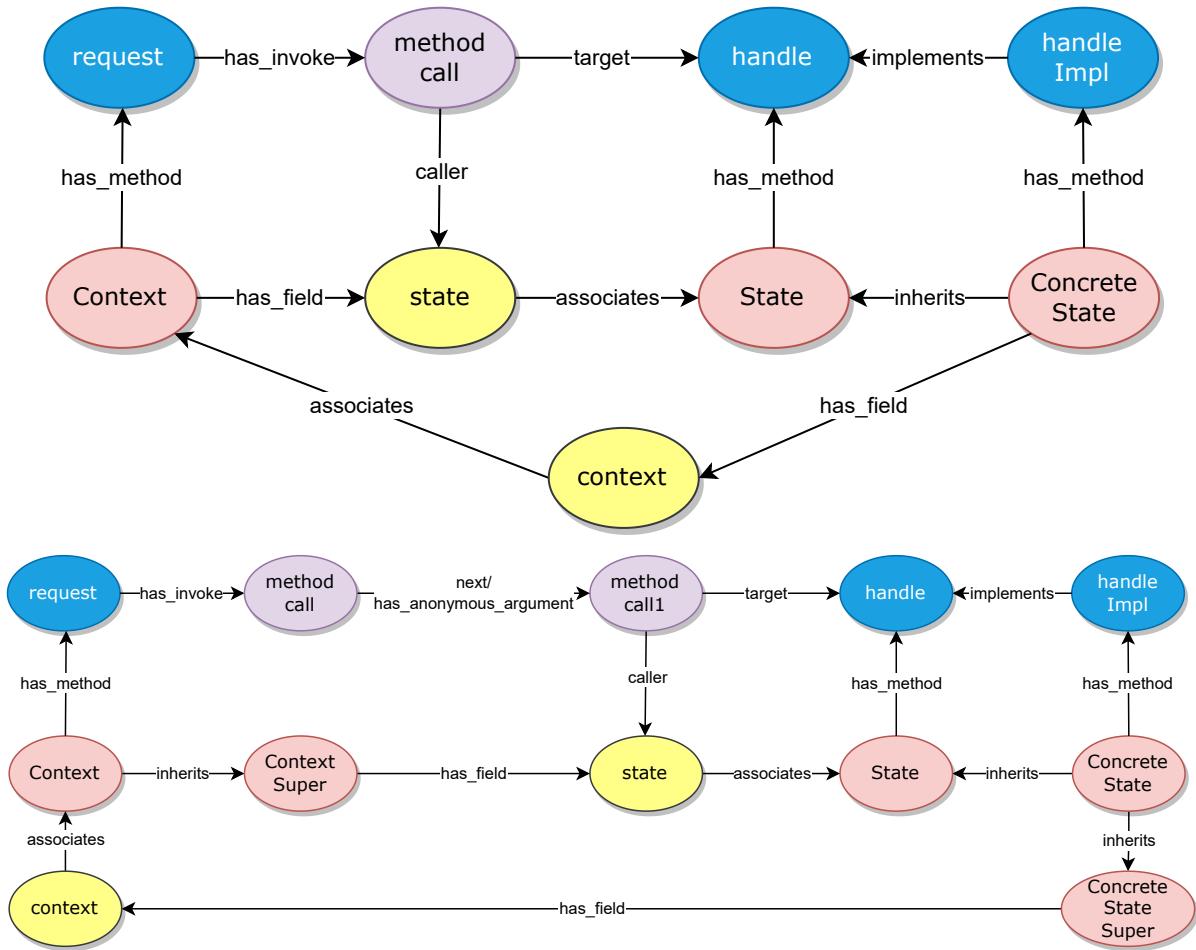
5. TT



State



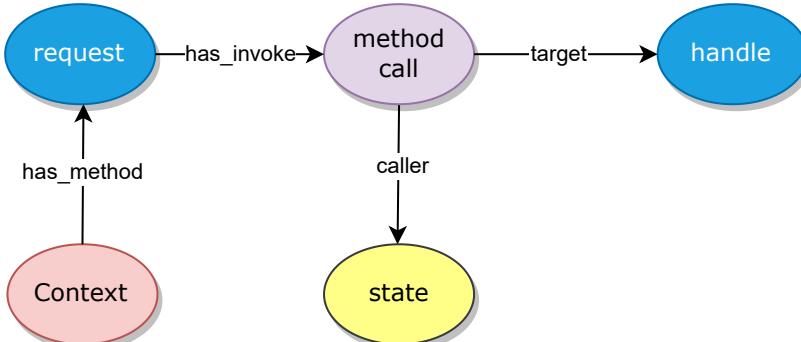
DP graph



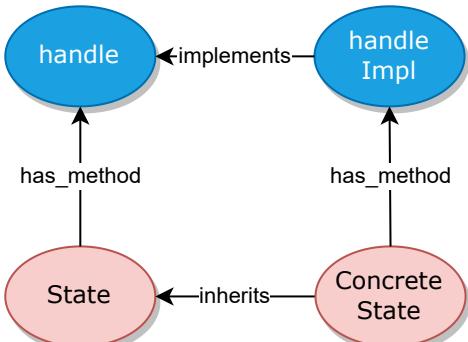
Decomposition

$$State = TMI_mF \cup TMI_mM + TMM \cup TM \cup TT + TFT \times 2$$

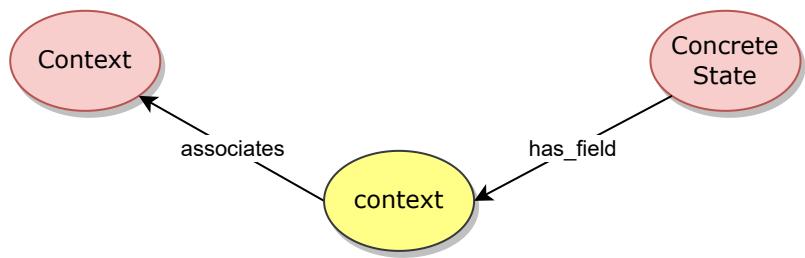
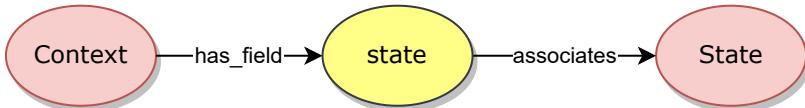
1. $TMI_mF \cup TMI_mM$



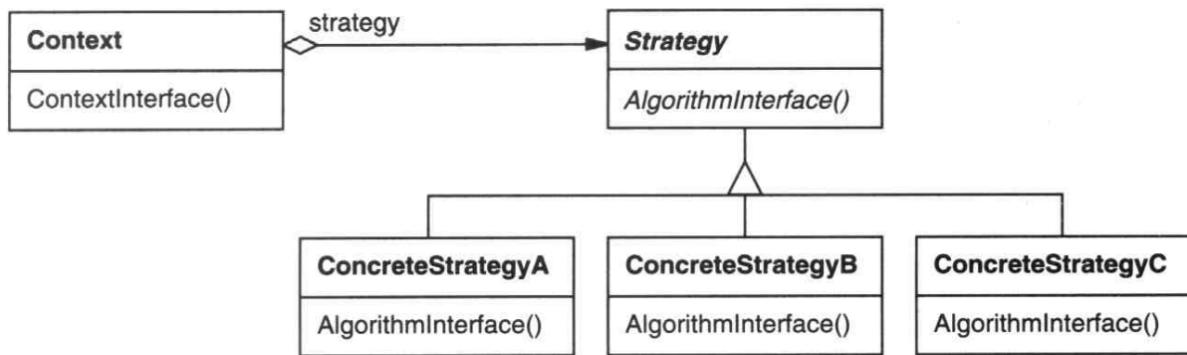
2. $TMM \cup TM \cup TT$



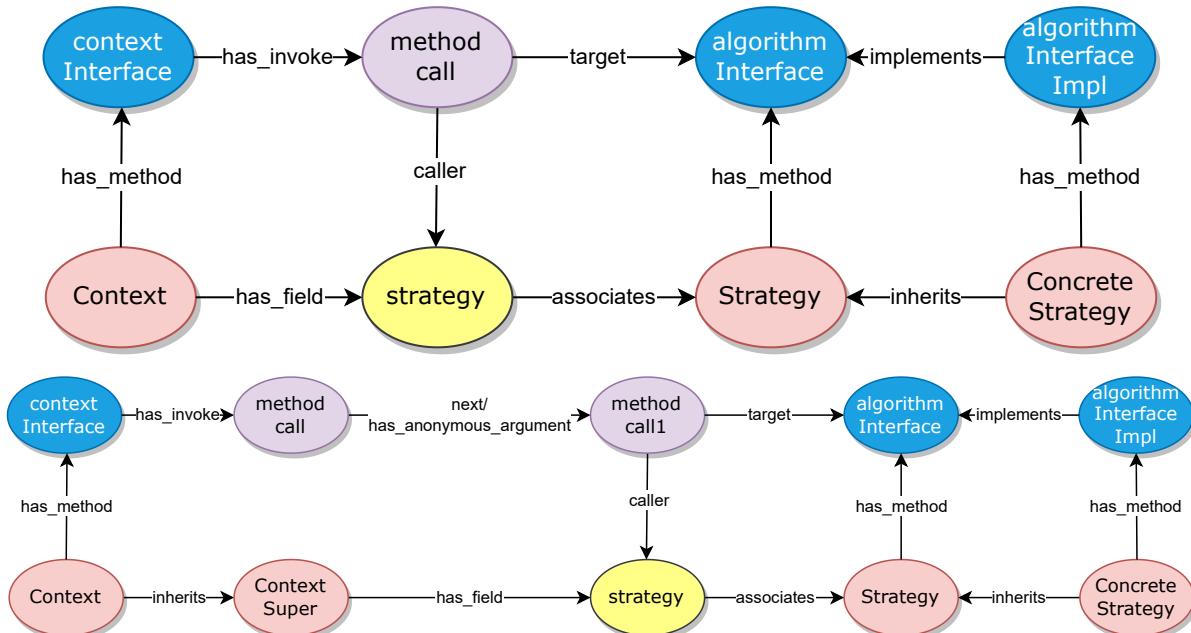
3. TFT × 2



Strategy



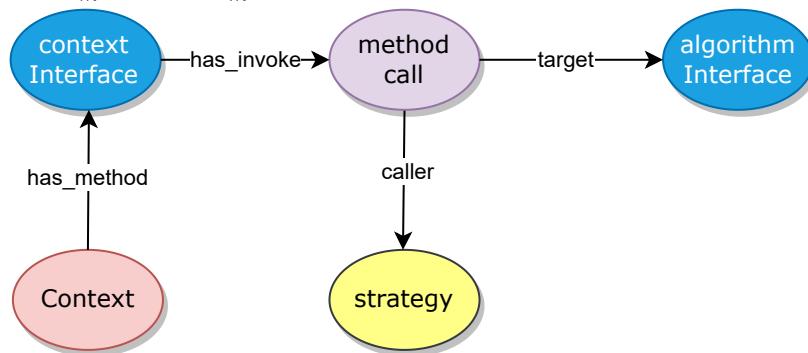
DP graph



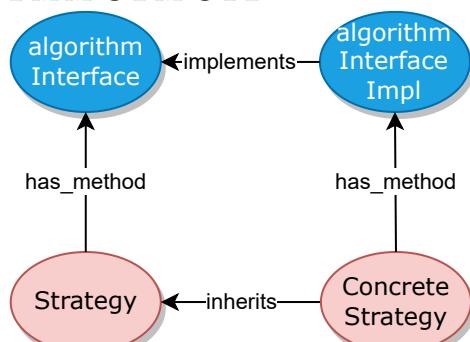
Decomposition

$$Strategy = TMI_mF \cup TMI_mM + TMM \cup TM \cup TT + TFT$$

1. $TMI_mF \cup TMI_mM$



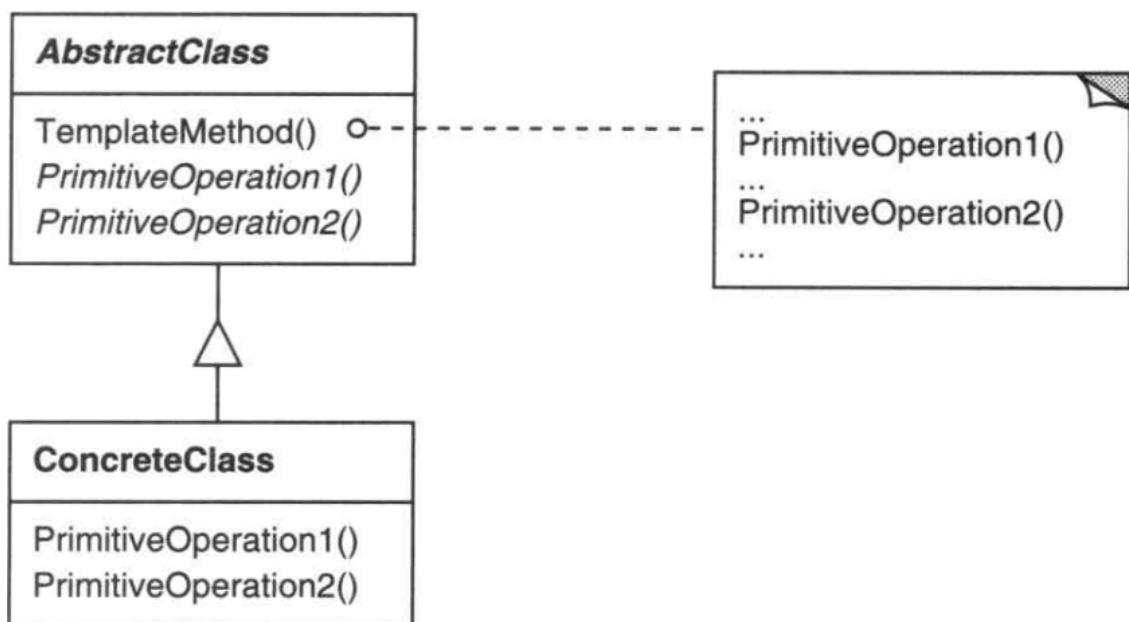
2. $TMM \cup TM \cup TT$



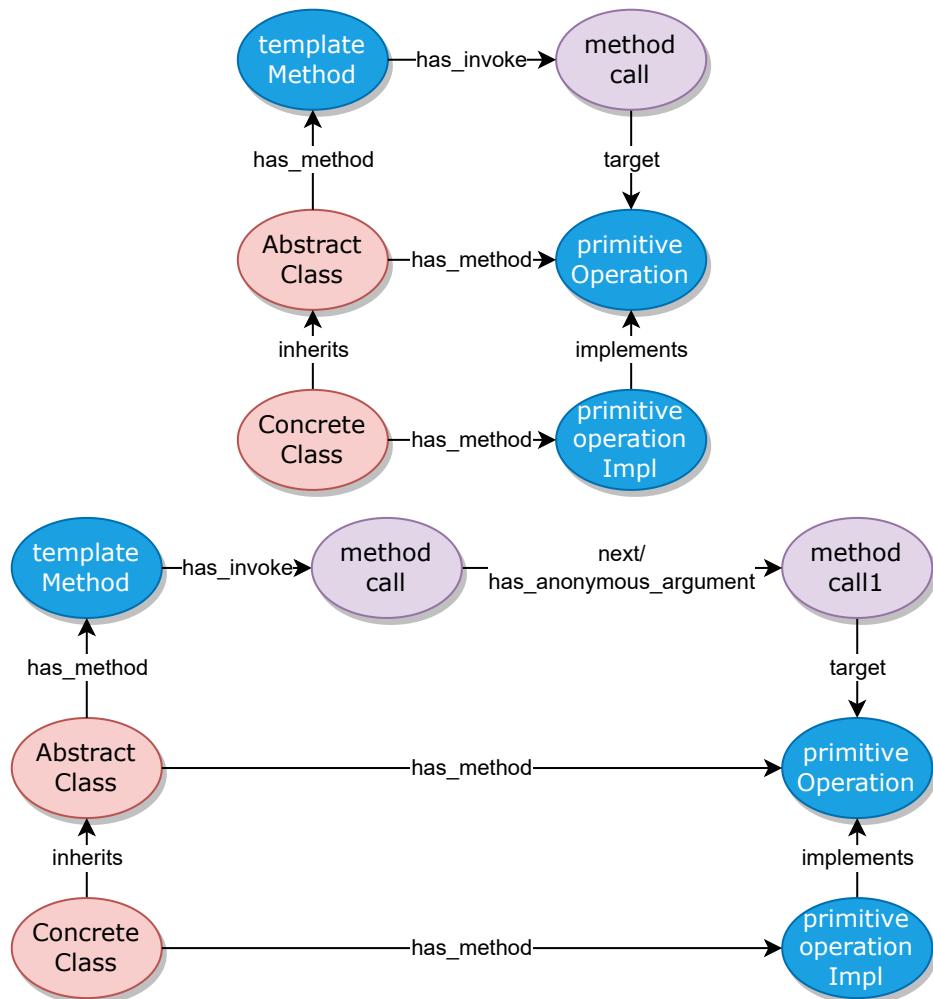
3. TFT



Template Method



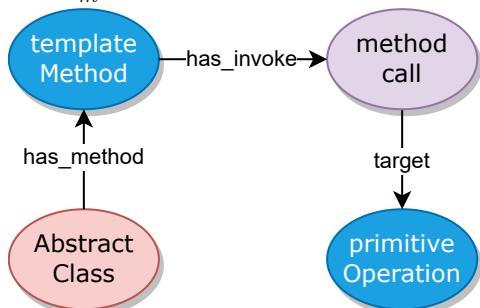
DP graph 1



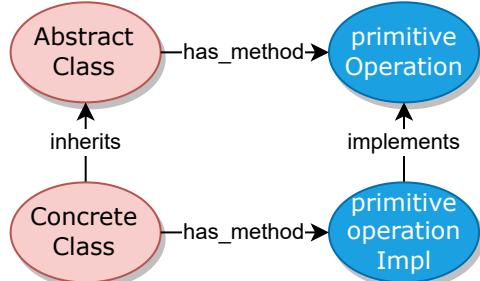
Decomposition

$$\text{TemplateMethod}_1 = TMI_mM + TMM \cup TM \cup TT$$

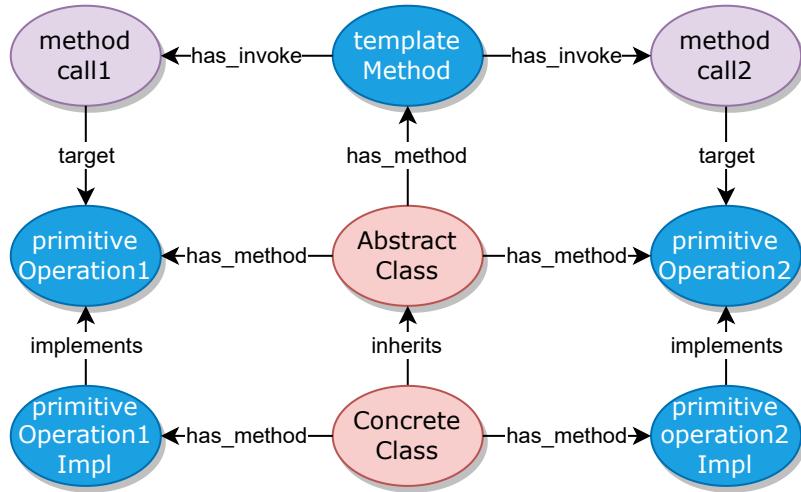
1. TMI_mM



2. $TMM \cup TM \cup TT$



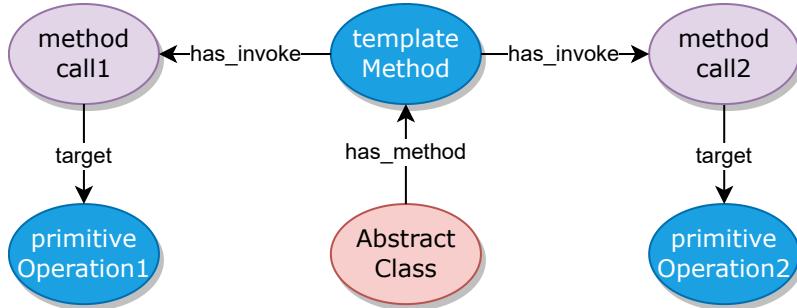
DP graph 2



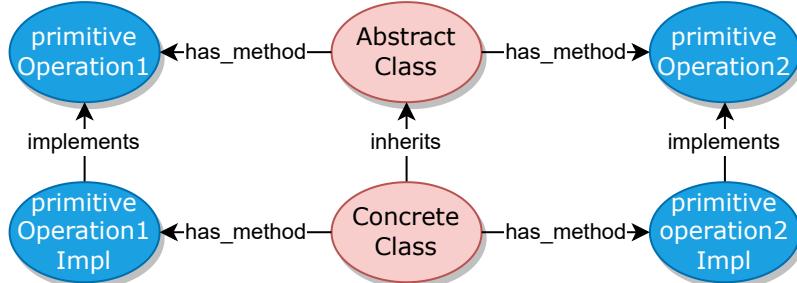
Decomposition

$$TemplateMethod_2 = TMI_m M^2 + (TMM \cup TM \cup TT)^2$$

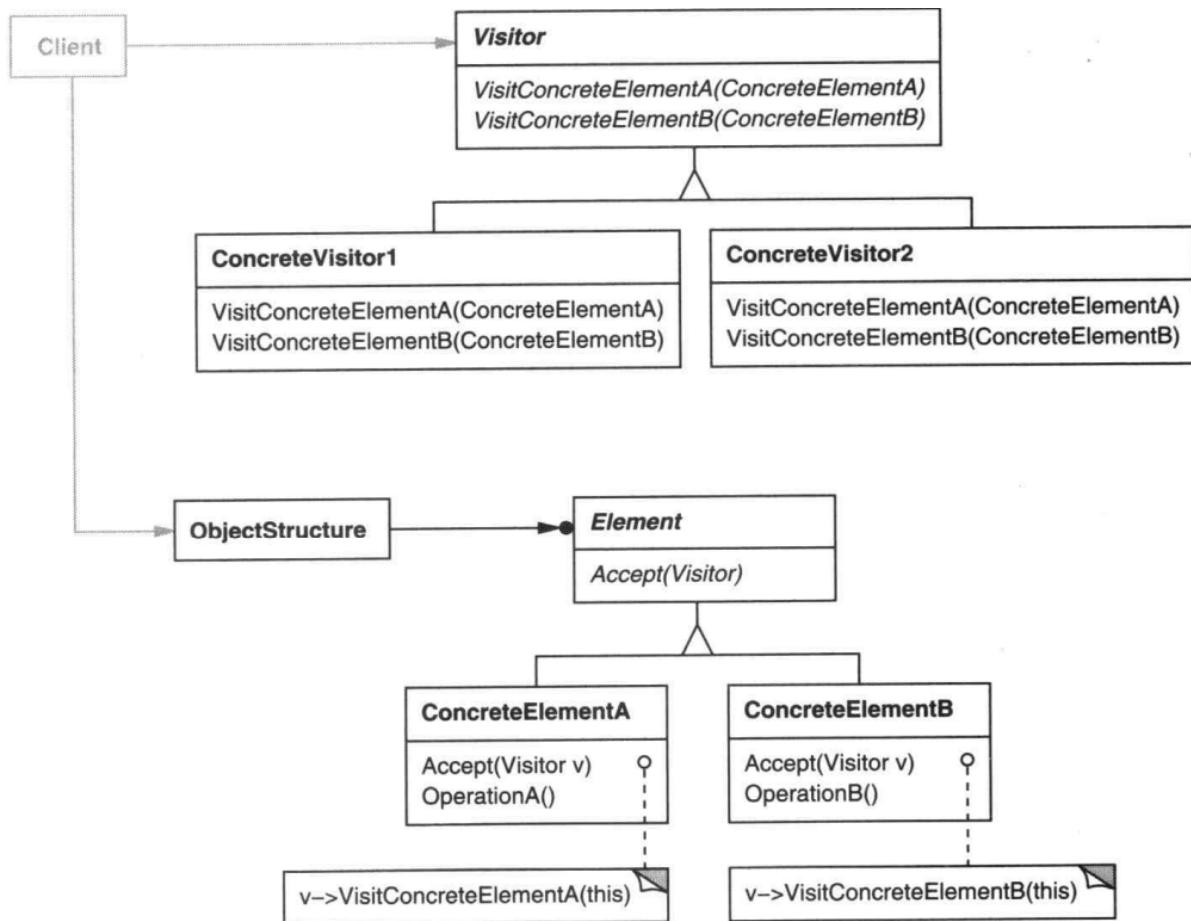
1. $TMI_m M^2$



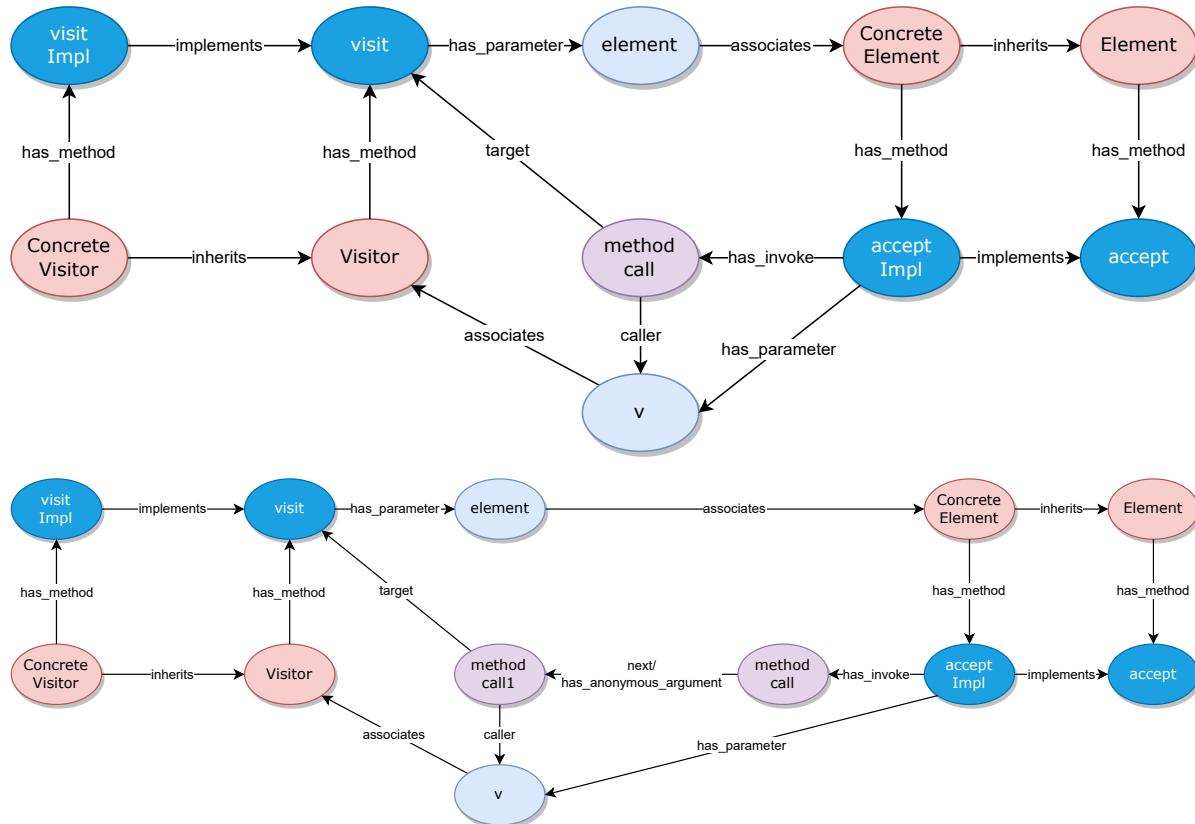
2. $(TMM \cup TM \cup TT)^2$



Visitor



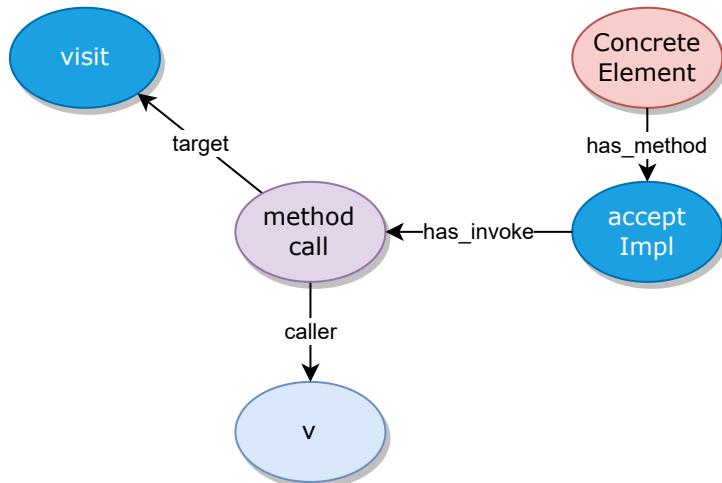
DP graph



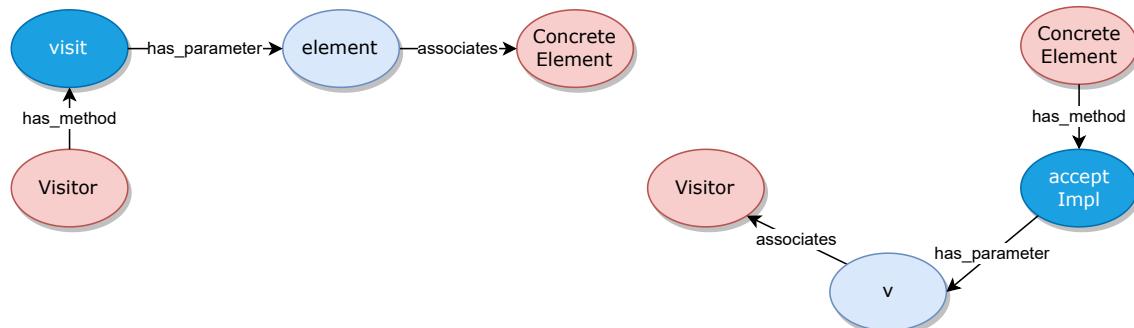
Decomposition

$$Visitor = TMI_m P \cup TMI_m M + TMPT \times 2 + TMM \cup TM \cup TT \times 2$$

1. $TMI_m P \cup TMI_m M$



2. $TMPT \times 2$



3. $TMM \cup TM \cup TT \times 2$

