

### *Pattern Definitions:*

#### Singleton Pattern

Ensure a class has only one instance, and provide a global point of access to it.

#### Factory Method Pattern

Define an interface for creating an object, but let subclasses decide which class to instantiate. Factory Method lets a class defer instantiation to subclasses.

#### Abstract Factory Pattern

Provide an interface for creating families of related or dependent objects without specifying their concrete classes.

#### Template Pattern

Define the skeleton of an algorithm in an operation, deferring some steps to subclasses. Template Method lets subclasses redefine certain steps of an algorithm without changing the algorithm structure.

#### Builder Pattern

Separate the construction of a complex object from its representation so that the same construction process can create different representations.

#### Proxy Pattern

Provide a surrogate or placeholder for another object to control access to it.

#### Prototype Pattern

Specify the kinds of objects to create using a prototypical instance, and create new objects by copying this prototype.

#### Composite Pattern

Compose objects into tree structures to represent part-whole hierarchies. Composite lets clients treat individual objects and compositions of objects uniformly.

#### Memento Pattern

Without violating encapsulating, capture and externalize an object internal state so that the object can be restored to this state later.