

## SDET Course

**Design Patterns - Abstract Factory** 

### 3 Types of Design Patterns



- Creational
  - Singleton
  - o Builder
  - Prototype
  - Factory Method
  - Abstract Factory

- Structural
  - Adapter
  - o Composite
  - Proxy
  - Flyweight
  - o Bridge
  - Facade
  - Decorator

- Behavioral
  - Strategy
  - Observer
  - Command
  - Memento
  - State
  - Template Method
  - Mediator
  - Chain of Responsibility
  - Interpreter
  - Visitor
  - Iterator



# Agenda

- Description
- Diagram
- Code sample (Java)
- Use cases

### The Proble







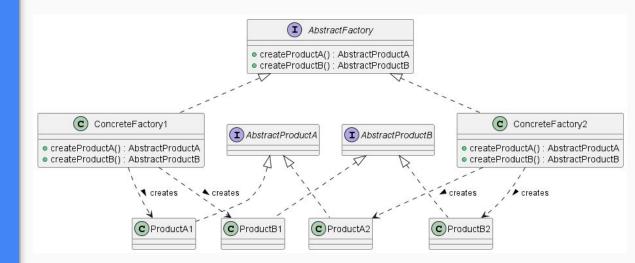
### Description

The Abstract Factory Design Pattern provides an interface for creating families of related or dependent objects without specifying their concrete classes. This pattern is useful when there is a need to ensure that the created objects can work together and you want to hide the implementation details from the client.



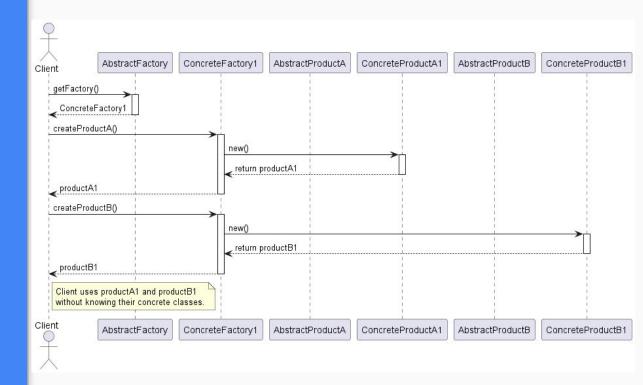


## Class Diagram





## Sequence Diagram





# Code Sample

#### Use cases



#### General

- Vehicle Manufacturing
- Database Abstraction Layer
- Cross-Platform File System Operations
- Theme for applications

#### In Test Automation

- Cross-Platform UI Testing
- Browser Compatibility Testing
- Mobile App Testing on Different Devices
- Similar page objects with small differences (e.g different types of calendar object)



# Happy Coding