



الجامعة السورية الخاصة  
SYRIAN PRIVATE UNIVERSITY

Week 11

كلية الهندسة المعلوماتية

مقرر تصميم نظم البرمجيات

# Design Patterns: Iterator Pattern

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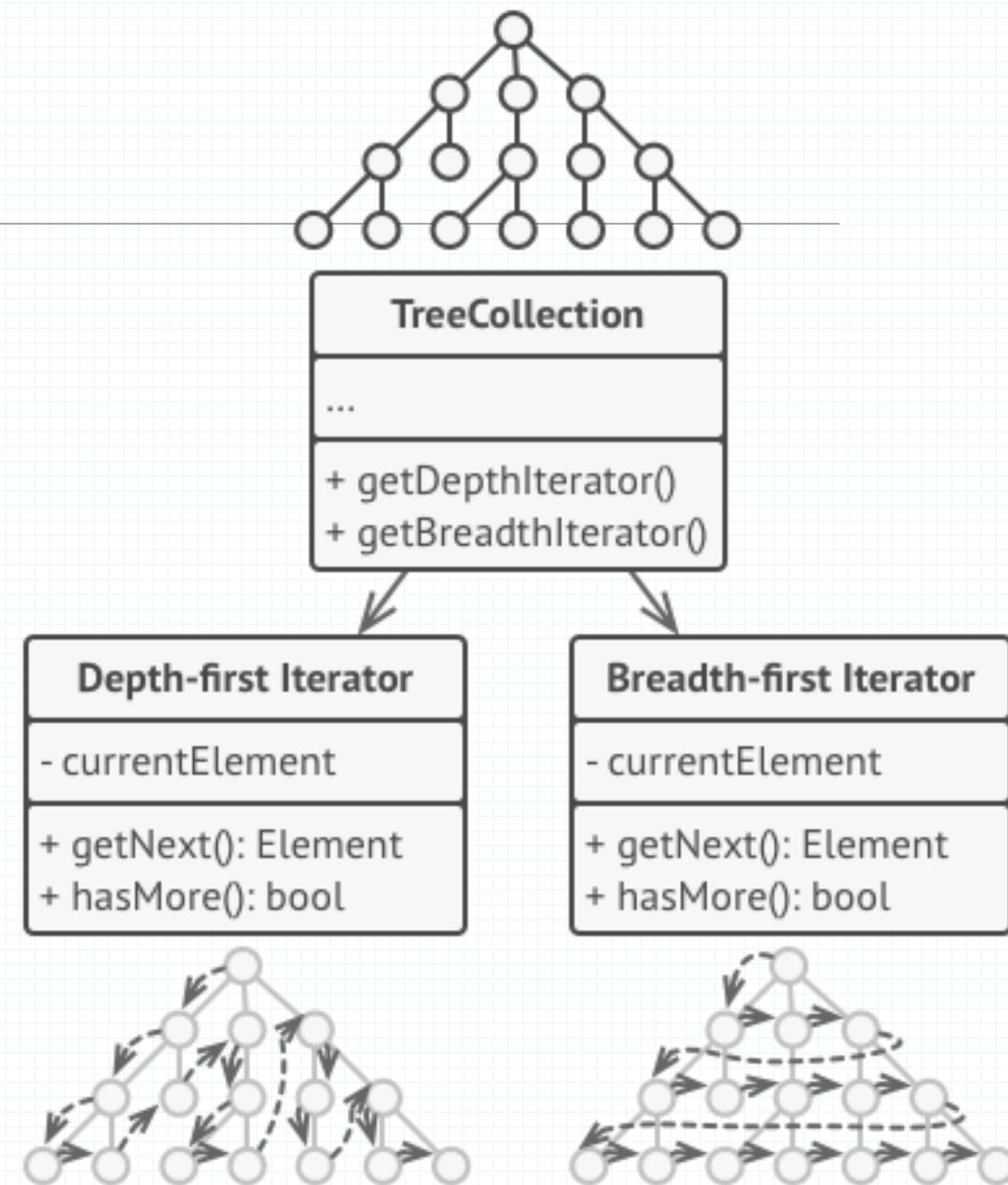
# Behavioral Patterns

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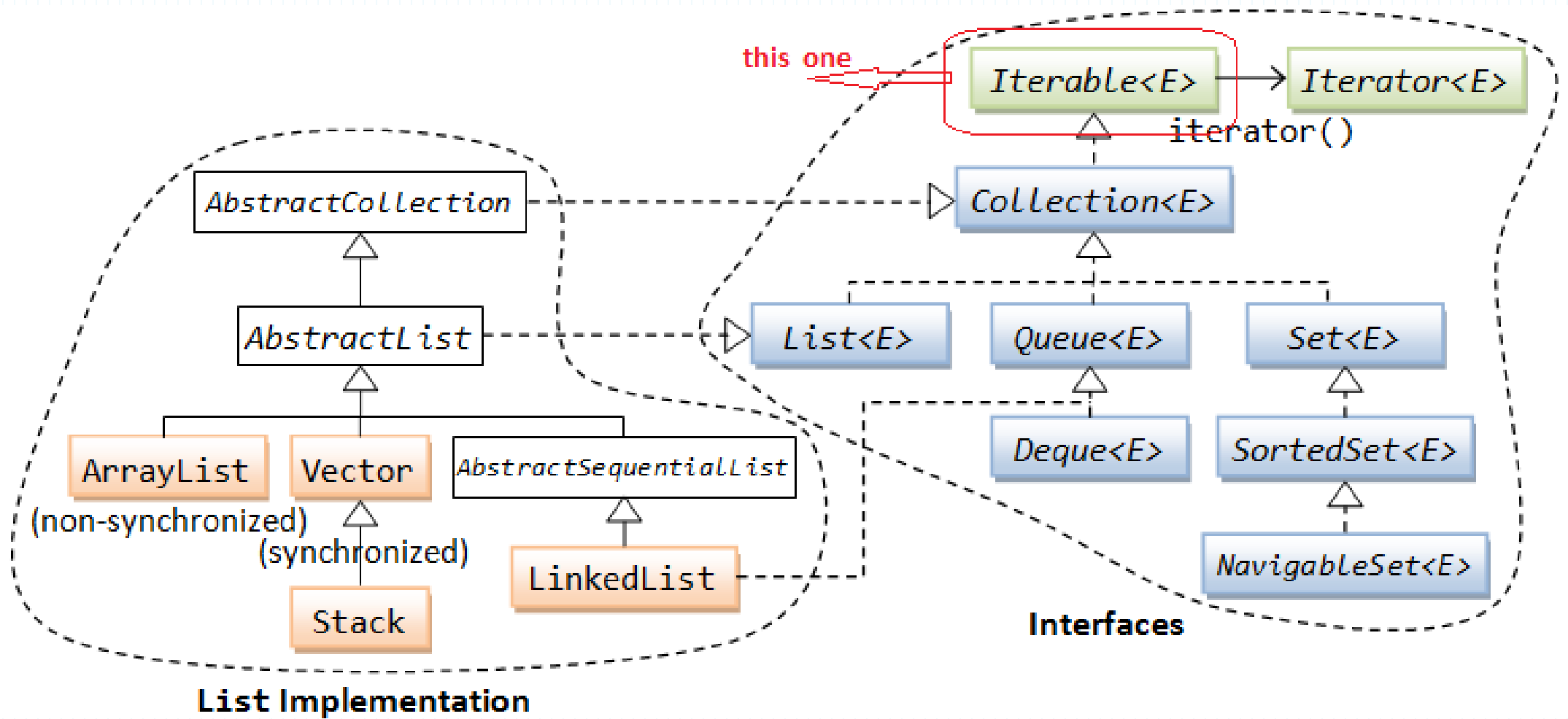
## ITERATOR PATTERN

# Iterator Pattern

- **Iterator** is a behavioral design pattern that lets you traverse elements of a collection without exposing its underlying representation (list, stack, tree, etc.).
- The main idea of the Iterator pattern is to **extract the traversal behavior of a collection into a separate object** called an **iterator**.

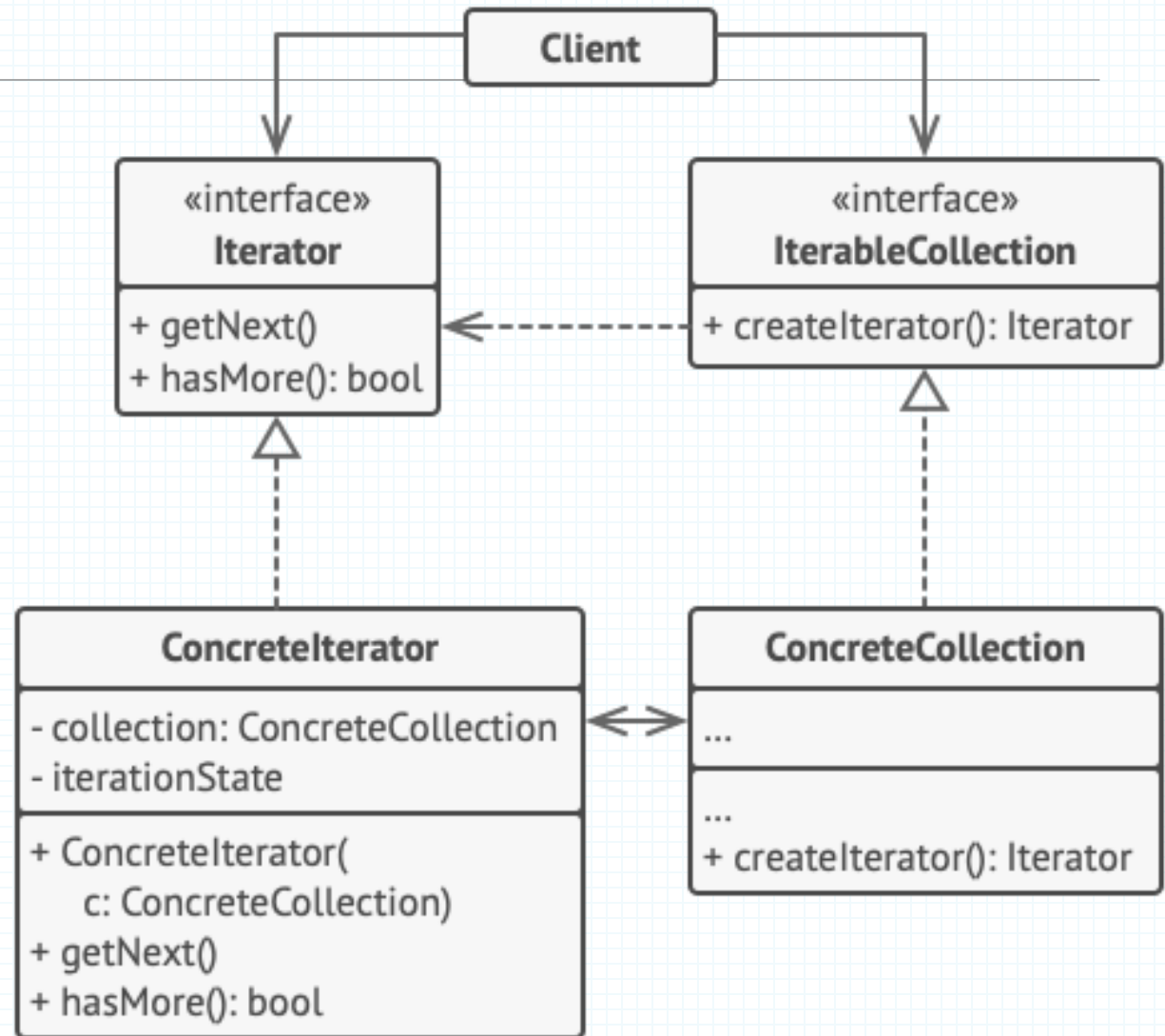


# Iterator Pattern - Example



# Iterator Pattern

Extract the traversal behavior of a collection into a separate object



# Design Patterns

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## ■ Creational Patterns

*(abstracting the object-instantiation process)*

Factory Method

Abstract Factory

Singleton

Builder

Prototype

## ■ Structural Patterns

*(how objects/classes can be combined)*

Adapter

Bridge

Composite

Decorator

Facade

Flyweight

Proxy

## ■ Behavioral Patterns

*(communication between objects)*

Command

Interpreter

Iterator

Mediator

Observer

State

Strategy

Chain of Responsibility

Visitor

Template Method