# Module 24: "Mediator"





## Agenda

- Introductory Example: Colleague Chatroom
- Challenges
- Implementing the Mediator Pattern
- Pattern: Mediator
- Overview of Mediator Pattern





## Introductory Example: Colleague Chatroom

```
interface IColleague
{
    string Name { get; }
    void Register( IColleague colleague );
    void Send( string messageContents );
    void Receive( IMessage message );
}
```



## Challenges

- How do we loosely couple the various chatroom participants?
- ▶ Do we <u>really</u> need to send all messages to everybody?





## Pattern: Mediator

Define an object that encapsulates how a set of objects interact. Mediator promotes loose coupling by keeping objects from referring to each other explicitly, and it lets you vary their interactions independently.

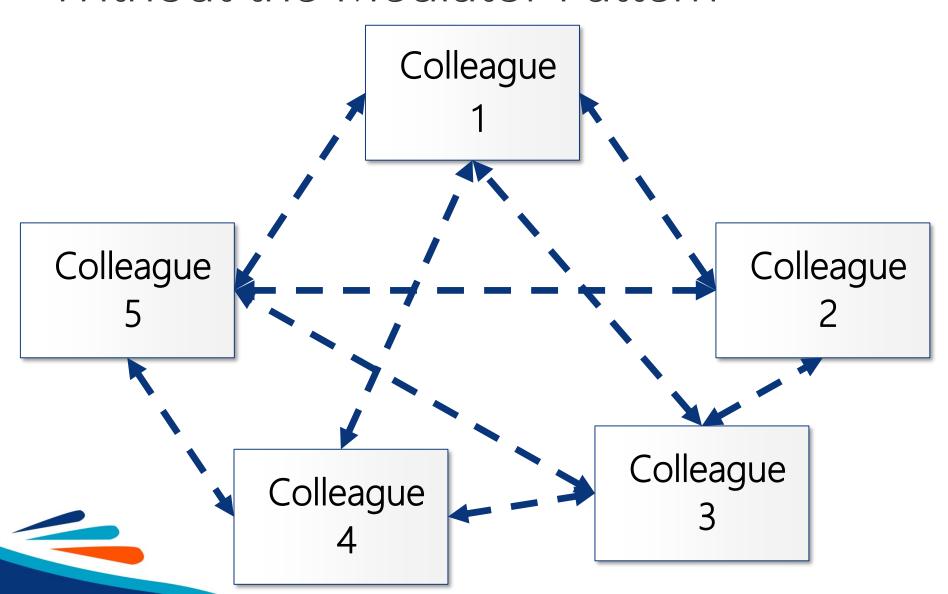
#### Outline

- Define a separate object ("mediator") that encapsulates the interactions between objects
- All objects interact with the mediator instead of interacting with each other directly
- Objects have no explicit knowledge of other objects than the mediator

Origin: Gang of Four

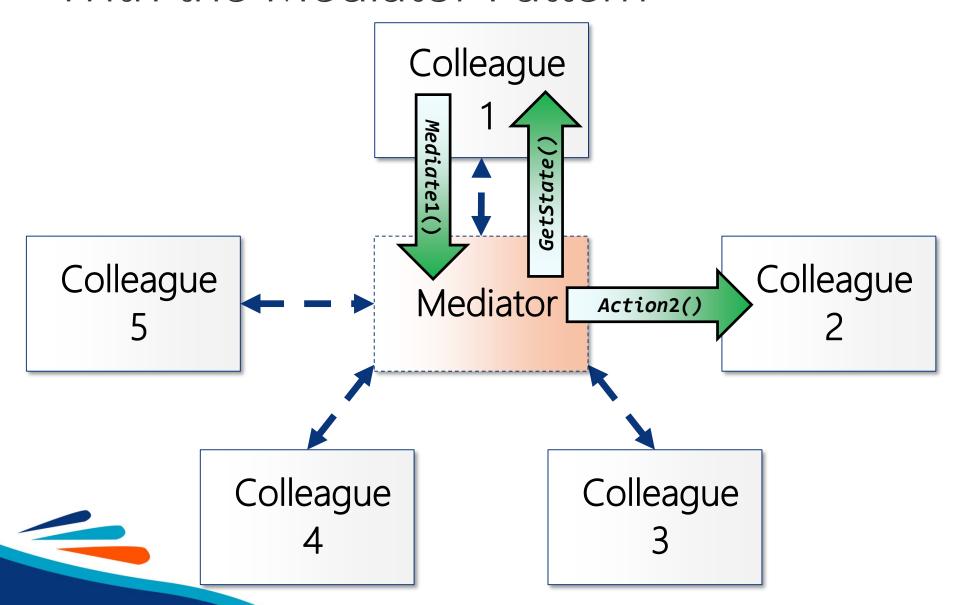


### Without the Mediator Pattern



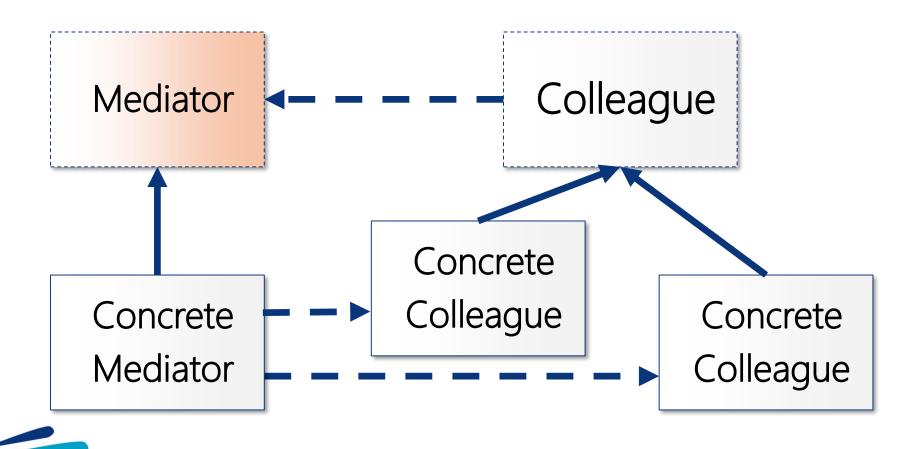


## With the Mediator Pattern





## Overview of the Mediator Pattern





## Overview of Mediator Pattern

- Mediator
  - Interface or abstract class handling communication between Colleagues
- Concrete Mediator
  - Implements the Mediator interface
  - Aware of all Concrete Colleague objects
  - Coordinates communication between Colleagues
- Colleague
  - Defines the interface for communication with other Colleagues
- Concrete Colleague
  - Implements the Colleague interface
  - Communicates with other Colleagues indirectly through the Mediator





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