

Ont412 assignment documentation

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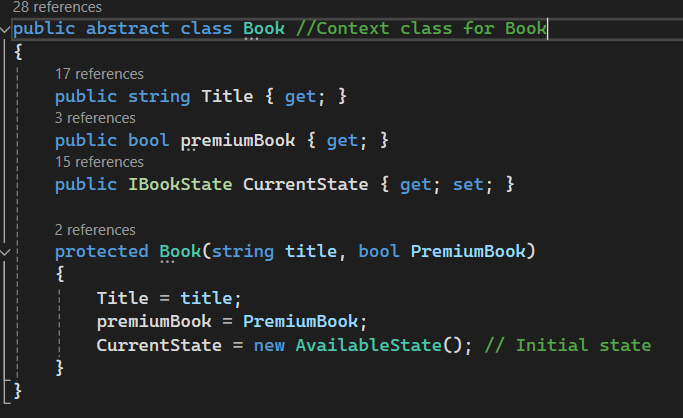
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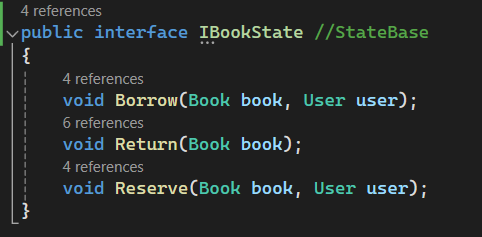
**Code Snippets**

**State Pattern**

**Context**

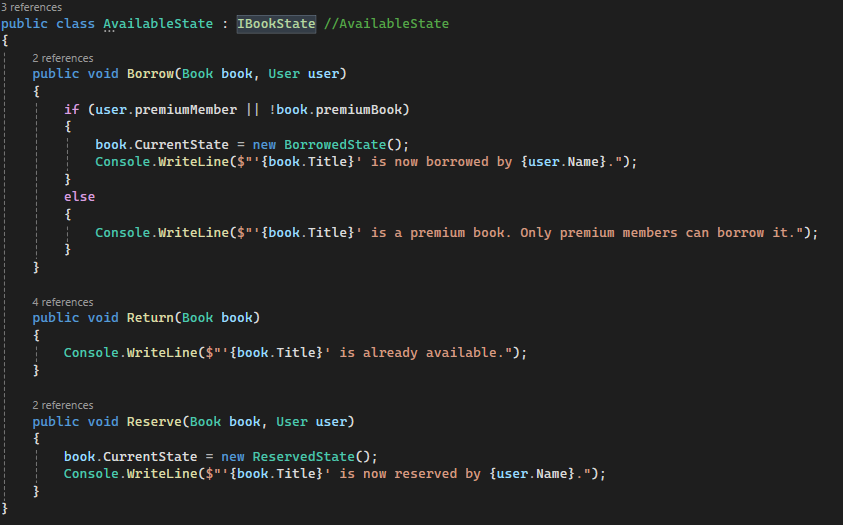
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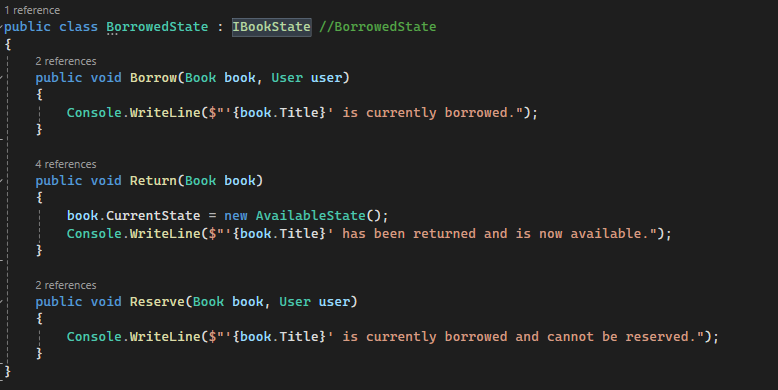
**StateBase**

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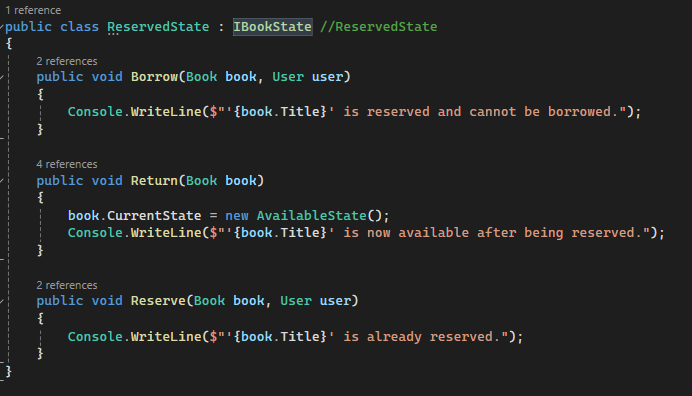
**ConcreteStates**

Available State

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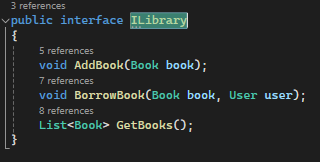
****Borrowed State

Reserved State

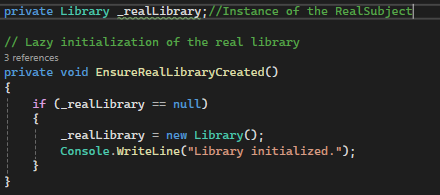
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**Proxy Pattern**

**SubjectBase**

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**RealSubject**

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**Proxy**

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**Iterator Pattern**

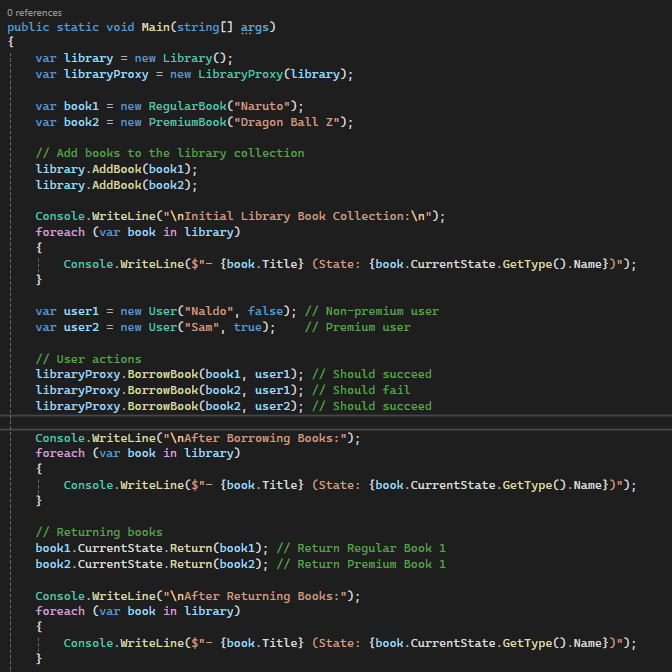
**Aggregate Base**

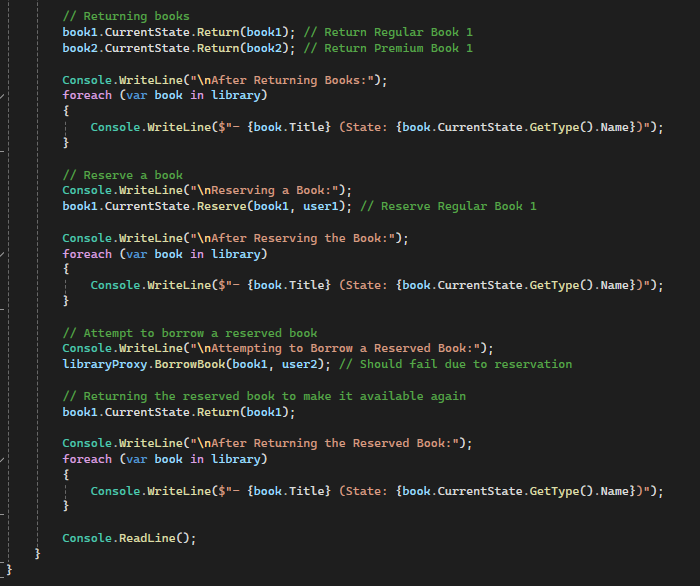
**Concrete Aggregate**

**Iterator Base**

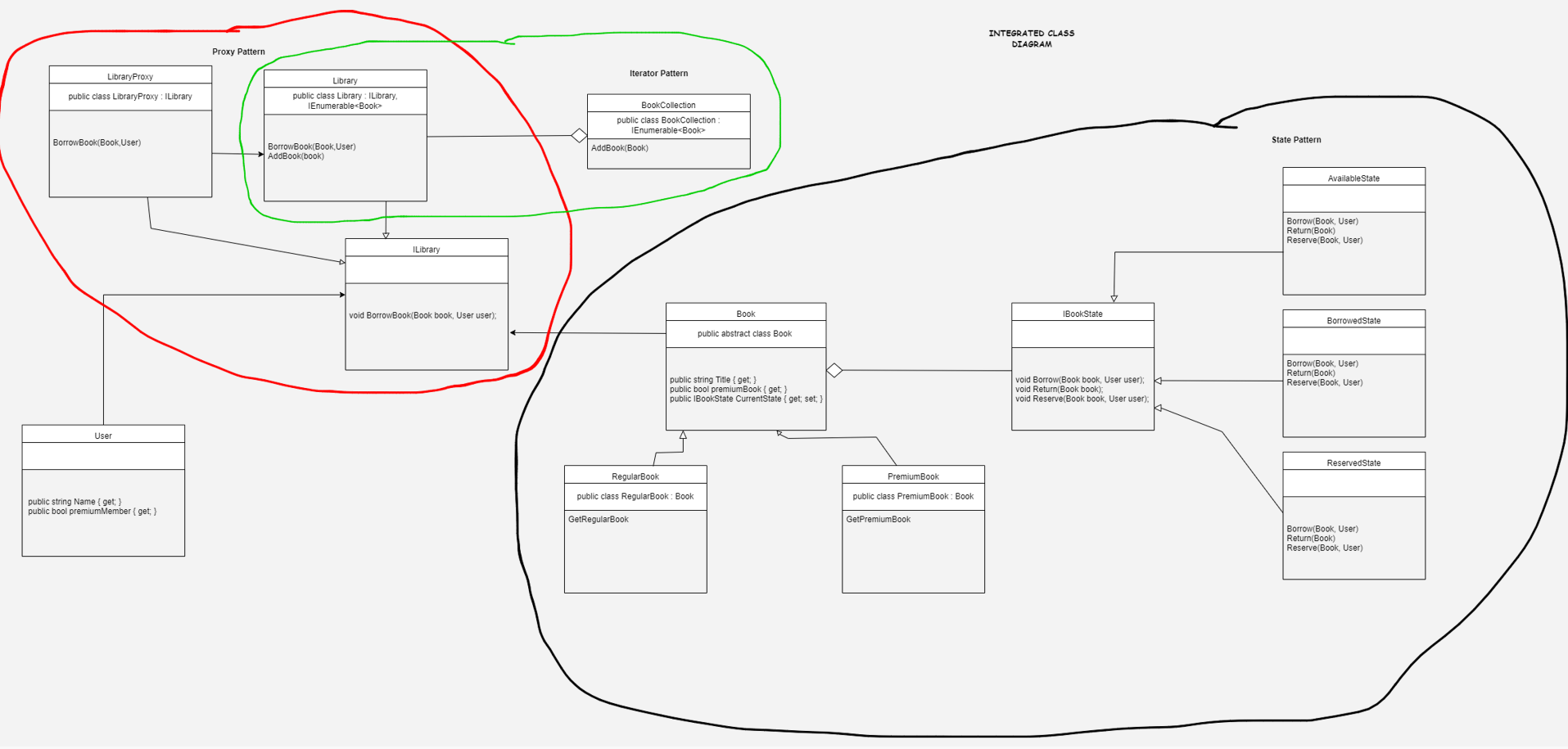
**Concrete Iterator**

**Main Program**

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**Integrated Class Diagram**

**Explanation of patterns used**

State Pattern

* The state pattern is used to manage the different states of the books. In this scenario the different states are Available, Borrowed and Reserved.
* When a book’s internal state changes its behavior does as well.

Iterator Pattern

* The iterator pattern is used to access the elements of the book collection sequentially without knowledge of its structure.

Proxy Pattern

* It is used to control access to the books based on the type of user. In this scenario only premium users can access premium books.