

SOEN 387 Web-based Enterprise Application Design

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Outline

Domain Object Inheritance

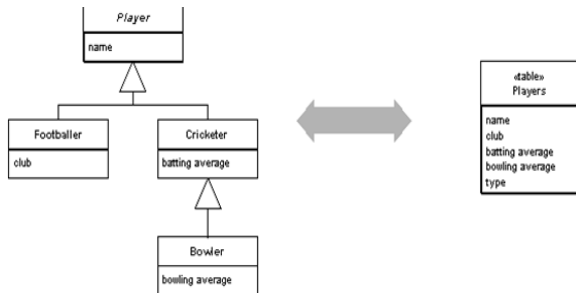
Inheriting Domain Objects

- ▶ For starters, this is almost always a bad idea
- ▶ Often it is just:
 - ▶ An association (maybe behavioural)
 - ▶ A structural relation
- ▶ Sometimes you will need it
 - ▶ Because of how it gets used
 - ▶ Because of a lot of shared data... but
 - ▶ Because of shared Domain Logic Behaviour
- ▶ You need to be able to identify when other people have used Domain Object Inheritance

DO Inheritance Considerations

- ▶ Do they share ids?
- ▶ Can we do multiple-inheritance?

Single Table Inheritance Diagram



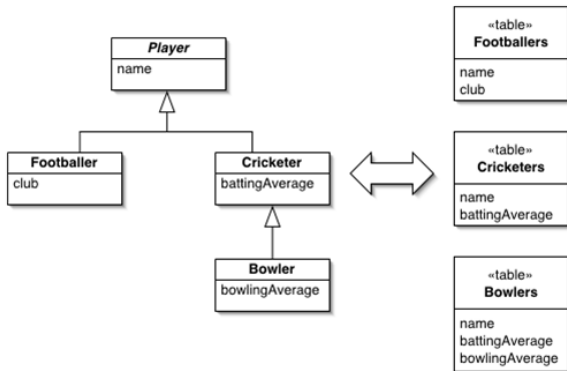
Single Table Inheritance

- ▶ For when you just can't bother
- ▶ All fields for all classes in one table
- ▶ A row for one class just nulls the other fields
- ▶ One read per class
- ▶ Shared ids are easy
- ▶ Multiple Inheritance? No issue, maybe even an "advantage"

Concrete Table Inheritance Diagram

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Domain Object
Inheritance



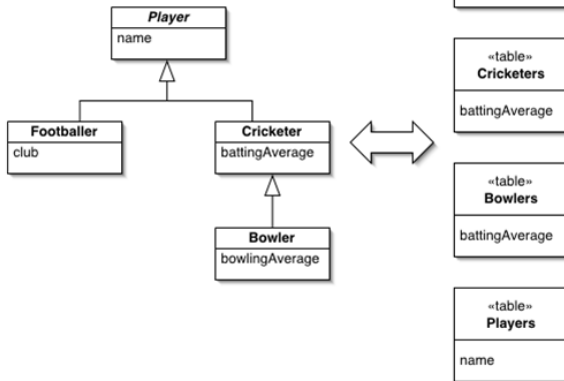
Concrete Table Inheritance

- ▶ Each Concrete Class has its own Table
- ▶ Each Table has all fields for the class
- ▶ One read per class
- ▶ Shared ids are not as easy
 - ▶ But you can use an id table which is safer anyway. . .
 - ▶ How 'bout that auto-increment field now?
- ▶ Multiple Inheritance? No issue, no advantage

Class Table Inheritance Diagram

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Domain Object
Inheritance



Class Table Inheritance

- ▶ Each Class in heirarchy has a Table
- ▶ Each Table only has fields specific to the corresponding Class
- ▶ Need to read from multiple tables, often with a complex join or view
- ▶ Shared ids as with Concrete Table Inheritance
- ▶ Tables need links up or down in the hierarchy
 - ▶ SELECT statements looking by type?
 - ▶ SELECT statements looking by id, pulling back multiple types?
- ▶ Multiple Inheritance? No issue, some advantage

Multiple Inheritance?

- ▶ Don't do it. . .
- ▶ You'll eventually see someone whose done it
- ▶ Just have it in your mind somewhere so that it'll click when it happens

TITLE

