COP 3330, Spring 2013

Recap: UML Relationships among Classes

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UML Symbols for Relationships among Classes

Relationship	UML Symbol	Meaning	Example
inheritance		is-a	A book is a printed resource.
aggregation	\longrightarrow	has-a	A book <i>has a</i> publisher.
composition	•	contains-a	A book <i>contains a</i> chapter.

Example 1: Classes for University Registration System

Course

credit:float dept:String id:String name:String sections:Section[]

Section

place:String
term:String
time:String
instructor:Instructor
students:Student[]

Person

yob:int
email:String
id:String
male:boolean
name:String

Classes for University Registration System

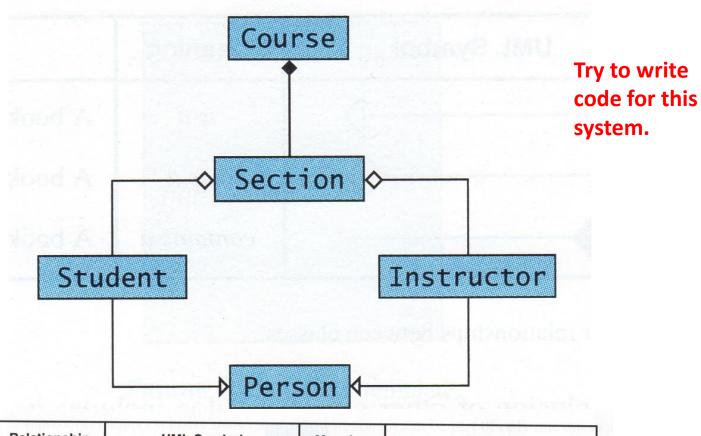
Student

credits:int
gpa:double
country:String

Instructor

dept:String
office:String
tel:String

Relationships among Classes



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Example 2: Car and Engine Classes

Car

engine: Engine

brand: String

engineCapacity: Int

run(): void

Engine

engineCapacity: int

showCapacity(): void

work(): void

Relationship between Car and Engine

Car

engine: Engine

brand: String

engineCapacity: Int

run(): void

Engine

engineCapacity: int

showCapacity(): void

work(): void

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