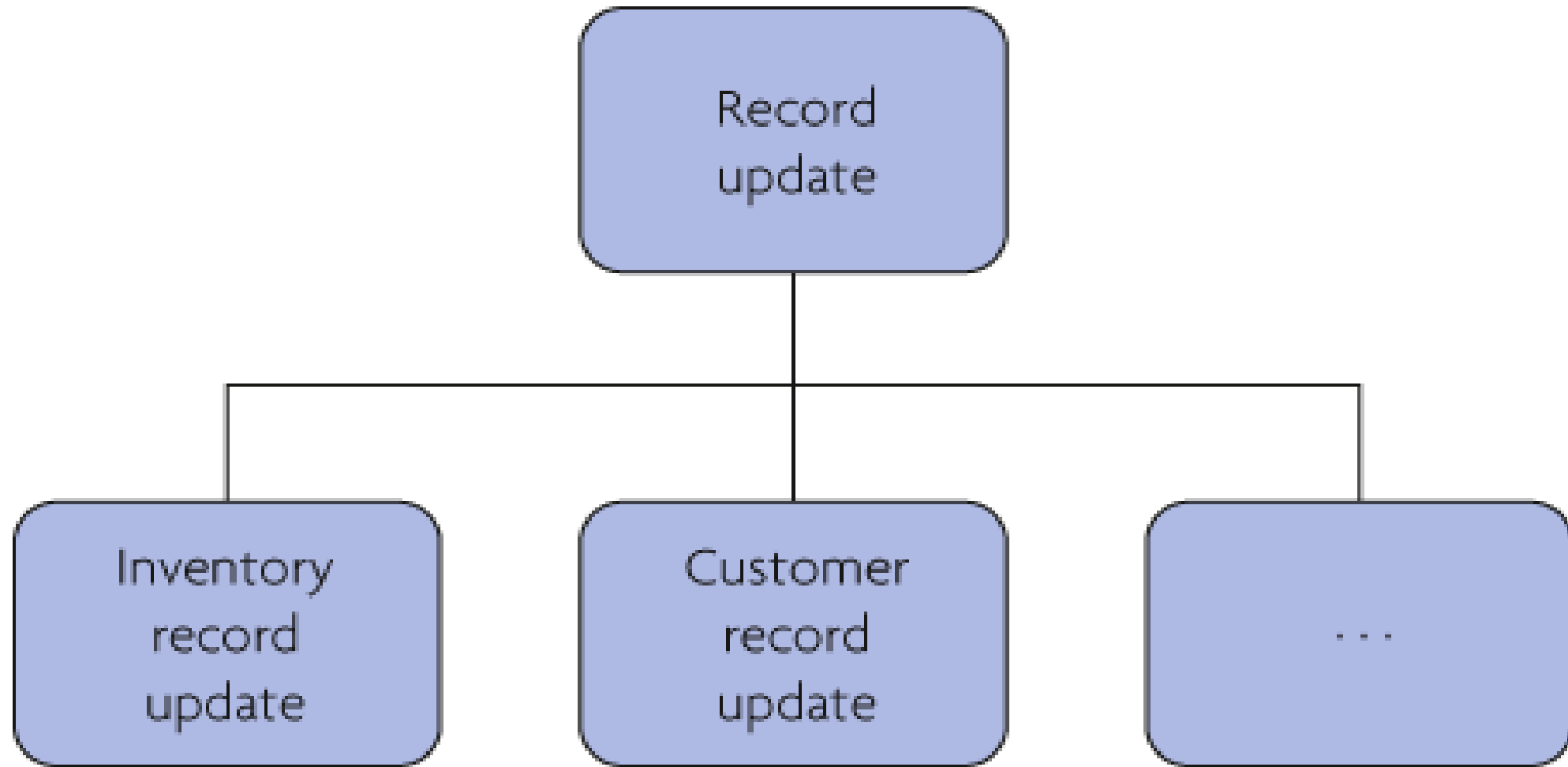# Chapter 13

Object-oriented Techniques

Object orientation
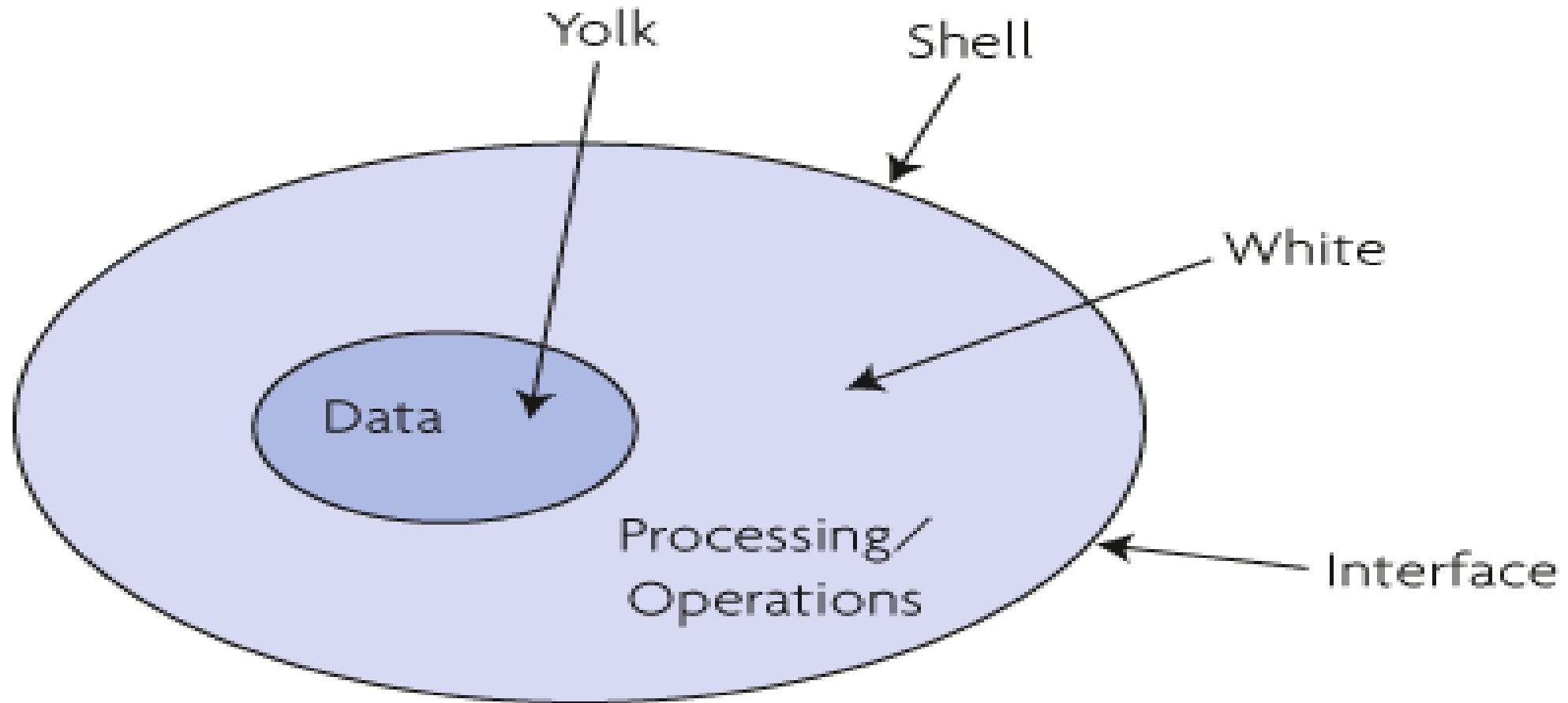
Object oriented programming defines;

- Method of implementation – by Booch, 1991

- Object

- Encapsulation

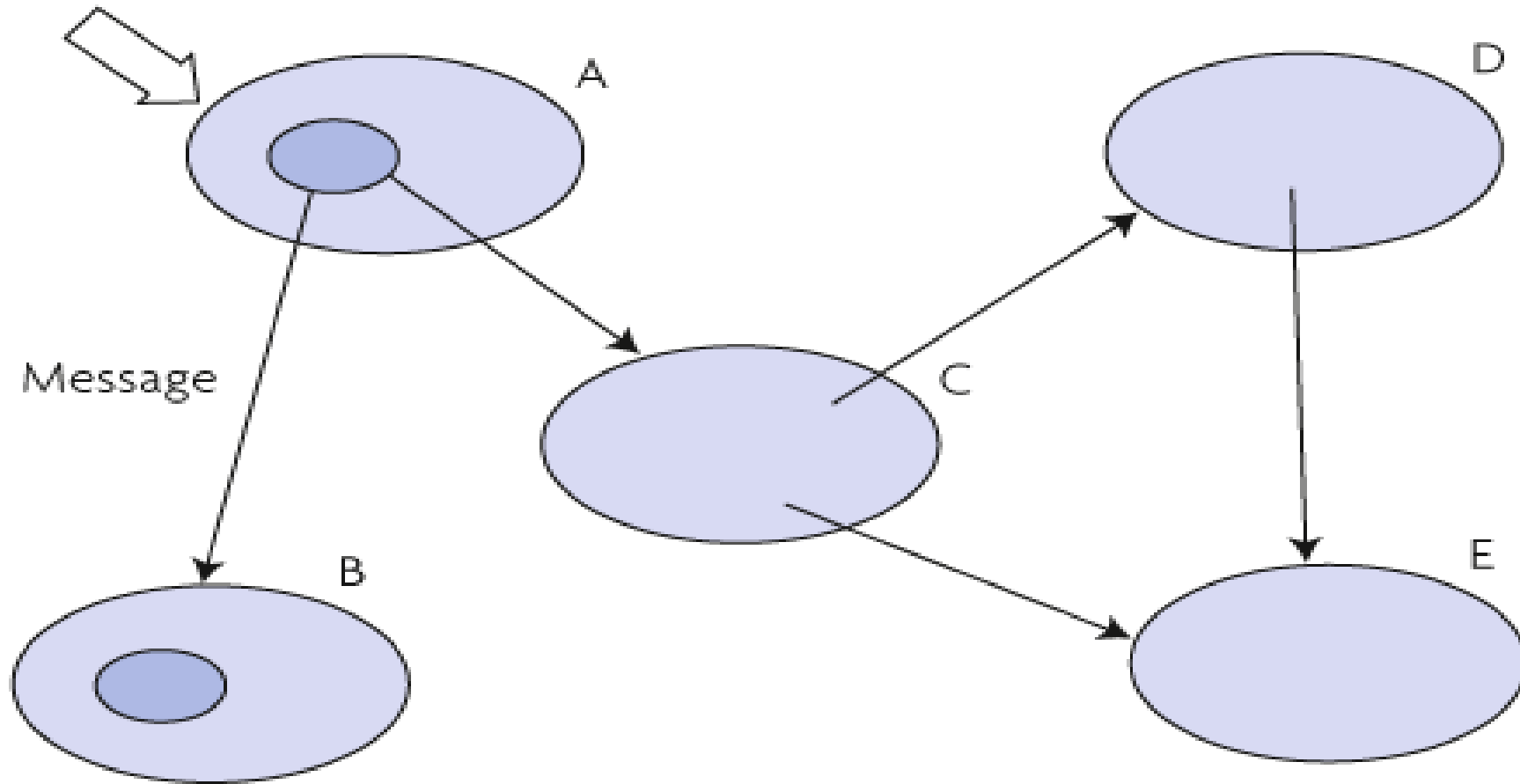# Object orientation

Hierarchy of classes

Object orientation

Objects represented by an egg (modified from Daniels and Cook, 1992)

Object orientation

EVENT

Message

A

B

C

D

E

A network of objects make up a program

Unified Modelling Language (UML)

The seven goals of UML;

- Provide users a ready-to-use, expressive, visual modelling language

- Provide extensibility and specialization mechanisms

- Be independent

- Provide a formal basis for understanding

- Encourage the growth

- Higher-level development

- Integrate best practices and methodologies.
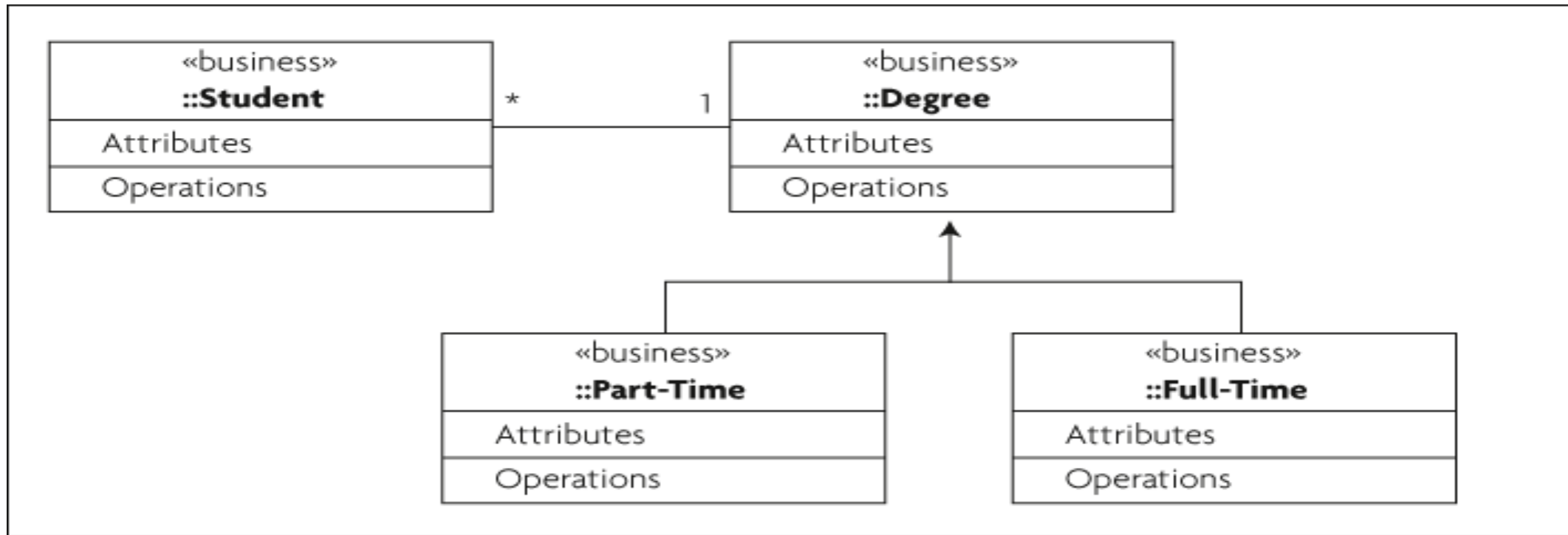
Unified Modelling Language (UML)

Class diagram

«business»
::**Student**

RegNumber
Name
Course

ChangeCourse
Defer
TerminateReg
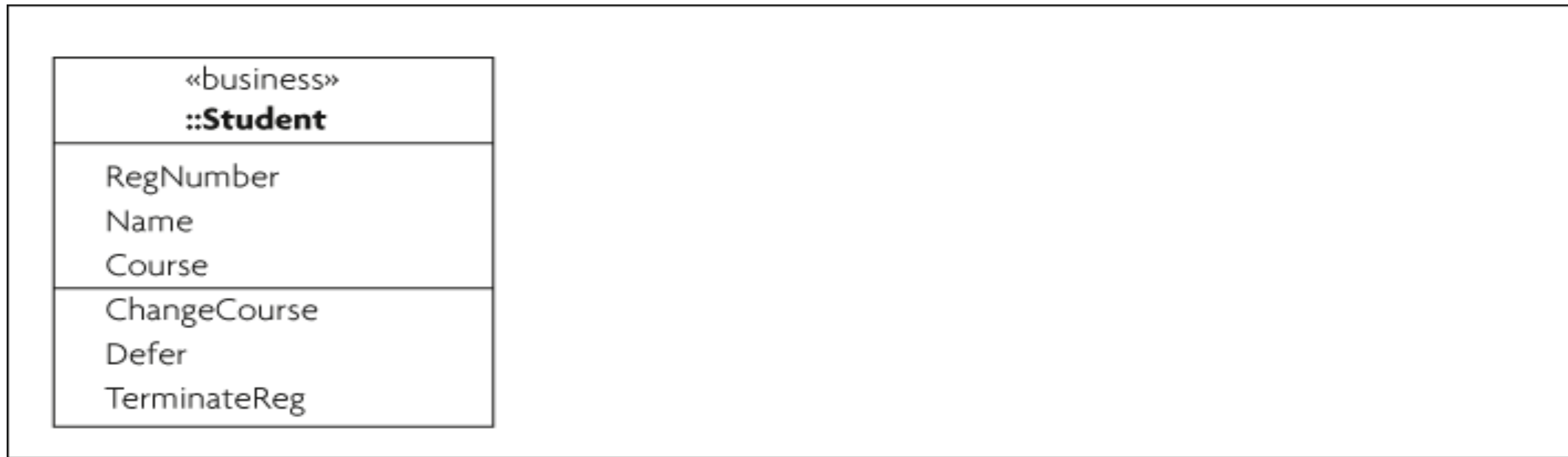
Class Diagram
Student
Page 1 of 1

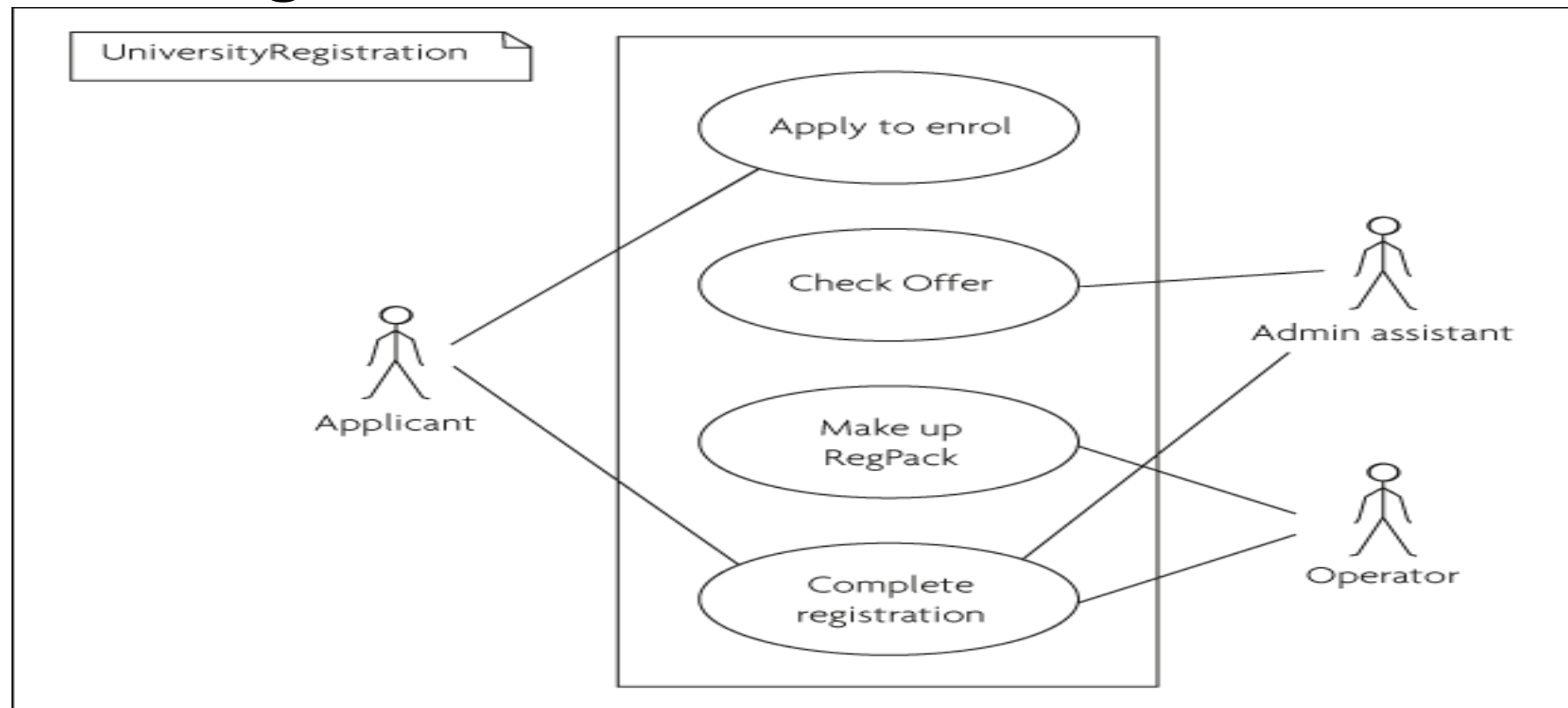# Unified Modelling Language (UML)

Class diagram

Class Diagram
Student
Page 1 of 1

Unified Modelling Language (UML)

Use case diagram
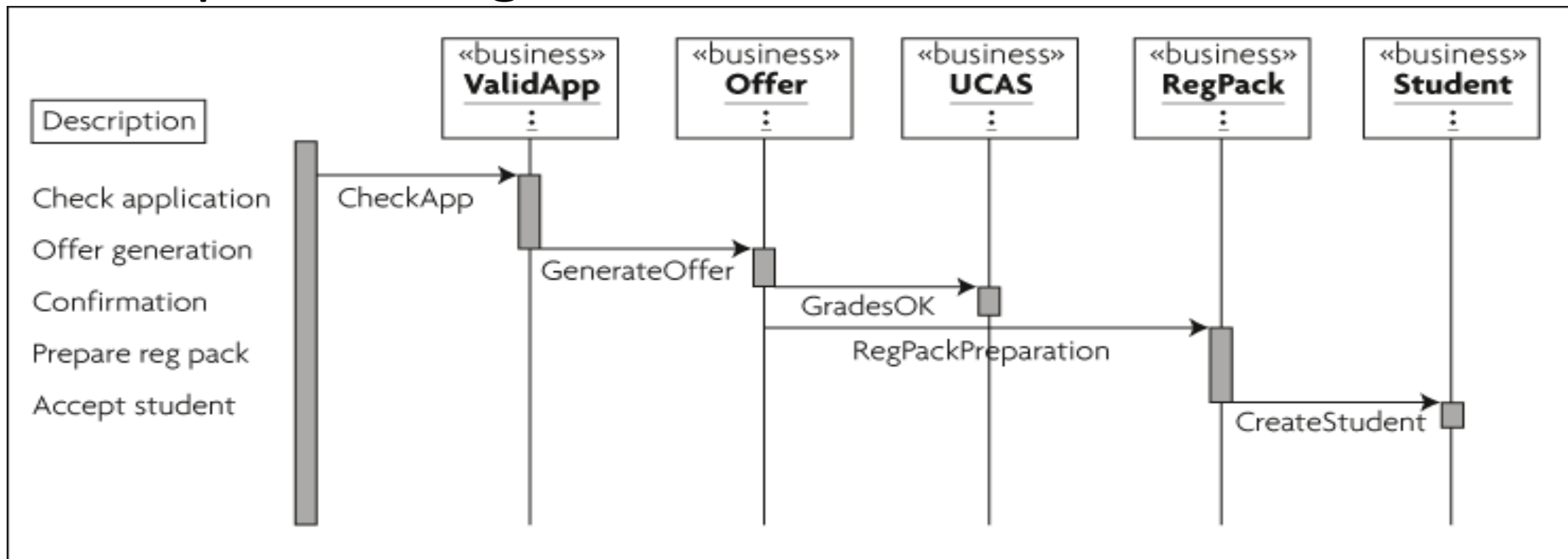

Use Class Diagram
Student
Page 1 of 1

Unified Modelling Language (UML)

Interaction diagram

- Static

- Two type

  - Sequence diagram

  - Collaboration diagram
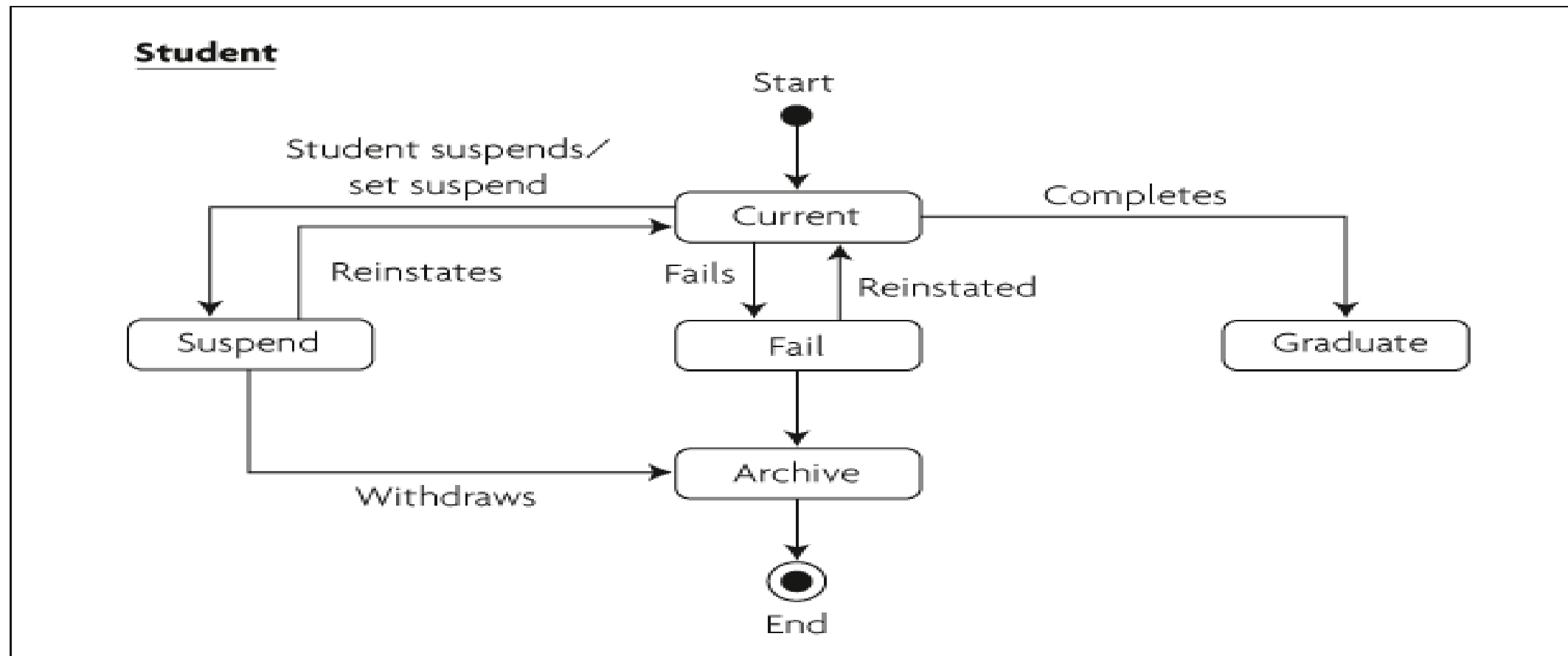
Unified Modelling Language (UML)

The sequence diagram

Sequence Diagram
Student
Page 1 of 1

Unified Modelling Language (UML)

Statechart diagram

Unified Modelling Language (UML)

Activity diagram