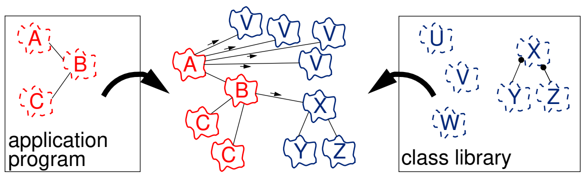
Object-oriented Operating Systems — Choices

Overview

- ❏ Frameworks
- ❏ Framework-documentation
- ❏ Choices — Overview
- ❏ Process management

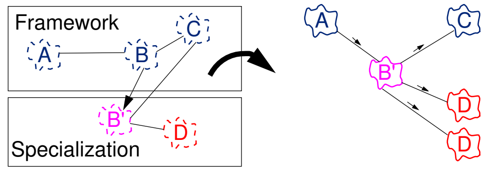
Frameworks

- ❏ Class: design of an object
- ❏ Class library
  - Collection of classes
  - Flow of control: application objects → library objects



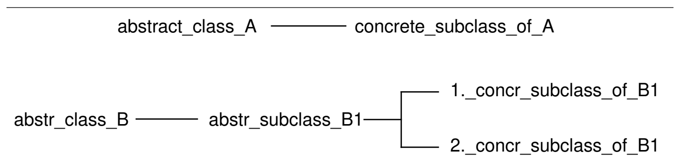
Frameworks (2)

- ❏ Framework = Design of an application
- ❏ Framework: set of classes
  - form an application sceleton
  - application developer may
    – add – substitute – modify components
  - Flow of control:
    framework → application object → framework
    "**don't call us, we'll call you**"

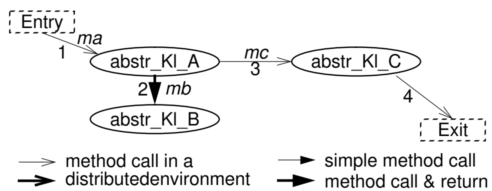


Framework documentation

- ❏ Class hierarchies

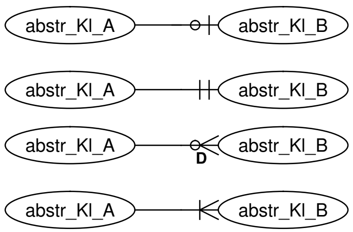


- ❏ Flow of control between abstract classes



Framework documentation

- relationship between abstract classes



optional 1:1 relation

mandatory 1:1 relation

optional 1:n relation (dynamic)

mandatory 1:n relation

Choices — Framework for an OS

Components

- MemoryObject
- Process
- Domain

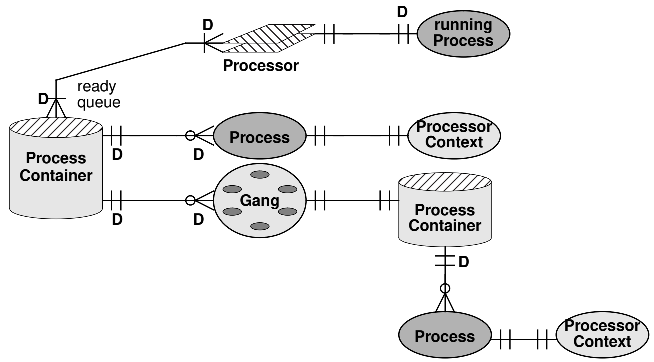
Relations

Process Management

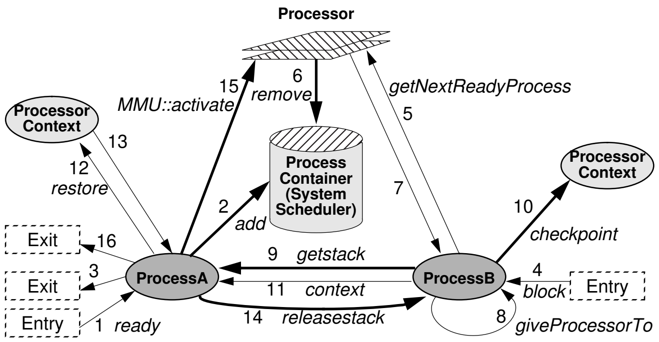
Components

- Process
- ProcessorContext
- Processor
- Gang
- ProcessContainer

Class Relationships



Context Switch

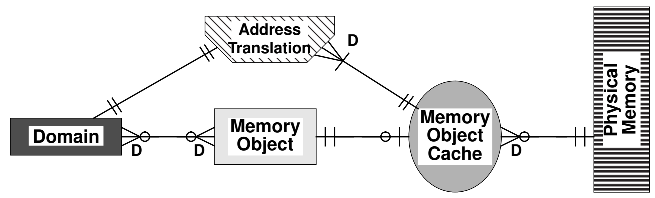


Memory Management

Components

- ❏ MemoryObject
- ❏ Domain
- ❏ PageFrameAllocator
- ❏ AddressTranslation
- ❏ MemoryObjectCache

Class Relationships



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