

Modellistica Medica

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Lezione 3

Esercitazione

Concetti tecnologici di base:

Software process

UML

Software tools

Basics: 5

1. How does one estimate the maturity of a software organization?
2. What is the “software process”?
3. Why is the software process important?
4. Please name some phases of the software process
5. Please name at least 5 domains in the software process
6. Please name at least 5 typical products of software process
7. What is the CMM? What is ISO 15504?
8. How many levels does the CMM (ISO 15504) define? Please list them
9. What is the basic principle of an iterative and incremental software process?
10. What is SPI?

Basics: 6

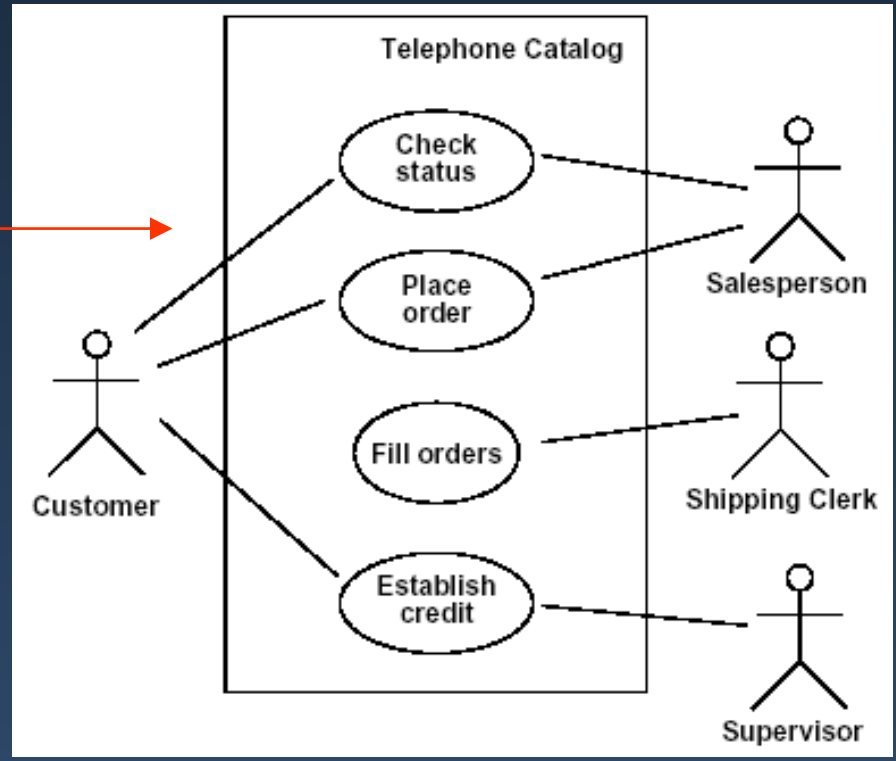
1. Please name at least 3 software process models
2. What is the USDP? Please describe it briefly
3. What is the RUP? Please describe it briefly
4. What is XP? Please describe it briefly
5. How does the RUP relate to CMM? To ISO 15504?
6. What is the OMG?
7. What is the UML?
8. What defines the scope of a software project?
9. How do you validate an OO design?
10. Please mention 4 typical levels of testing

Basics: 7

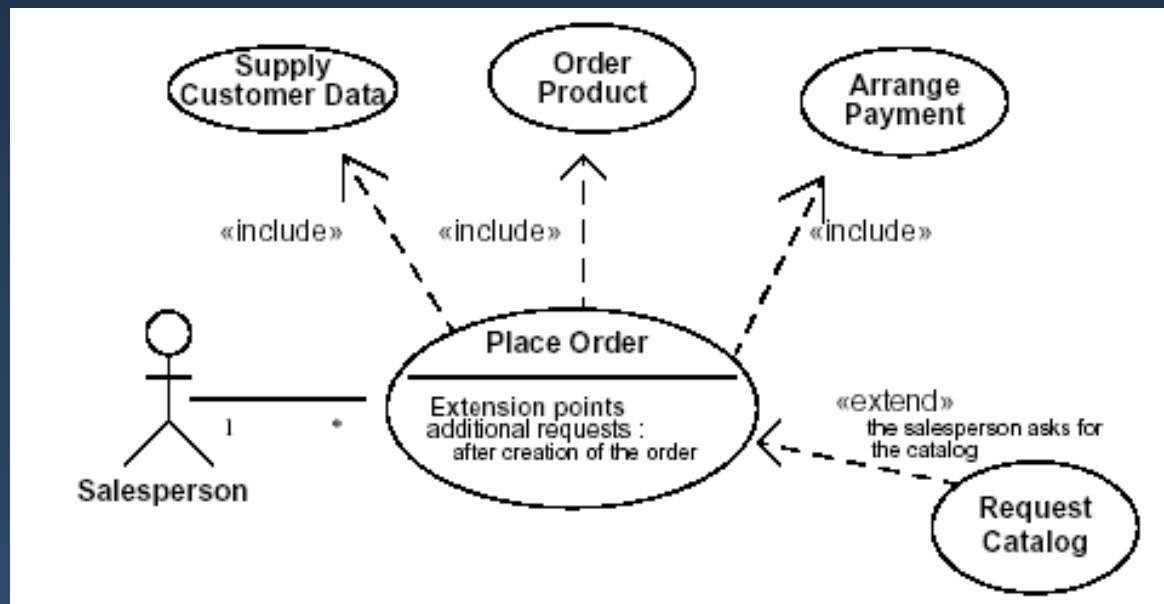
1. What is configuration management? How do you do it?
2. What is CVS? Did you ever use it?
3. What is change management? How do you do it?
4. What is a platform?
5. What is a supported platform (for a software system)?
6. Are you familiar with GNU make? Did you ever write a makefile?
7. Have you ever used DDD? Workshop?
8. What is Insure++? Did you ever use it?
9. What is Code Wizard? Did you ever use it?
10. Are you familiar with any project management tools?

Basics

What is?

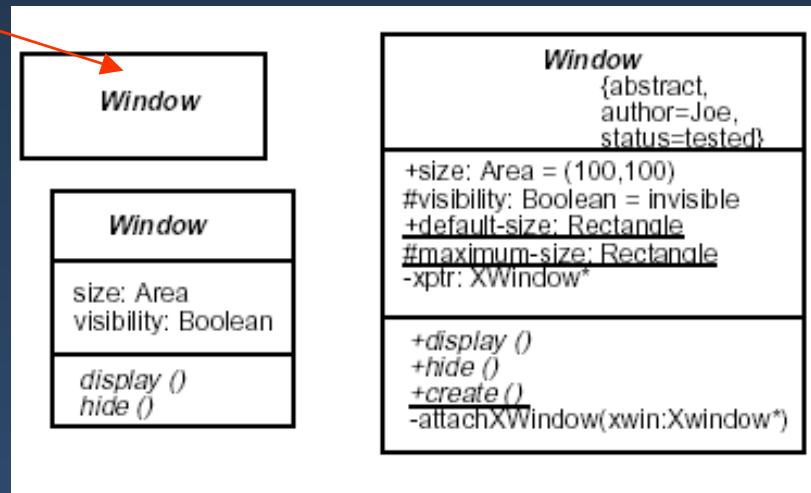
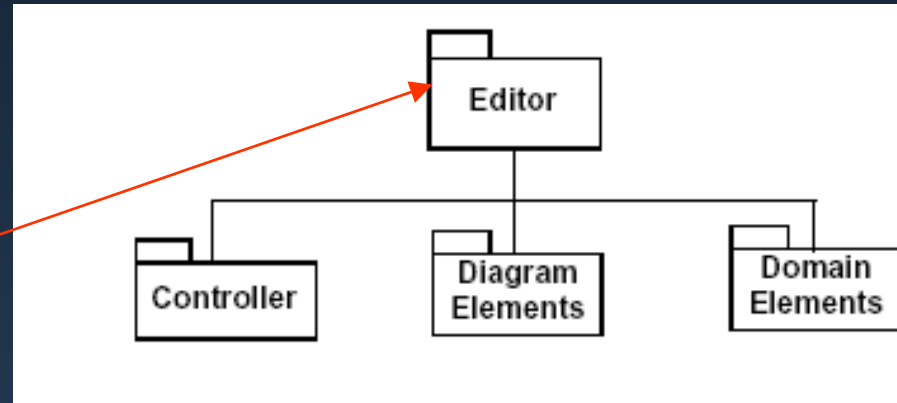


Please explain

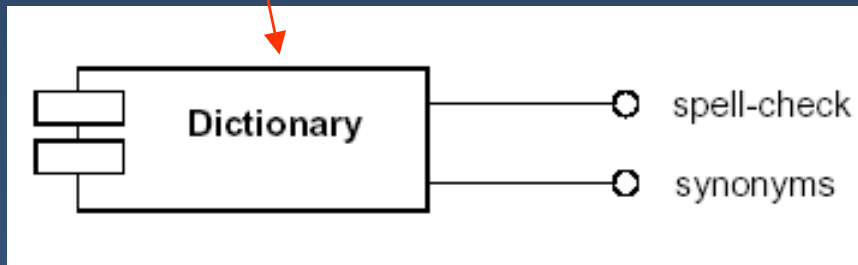


UML

What is?

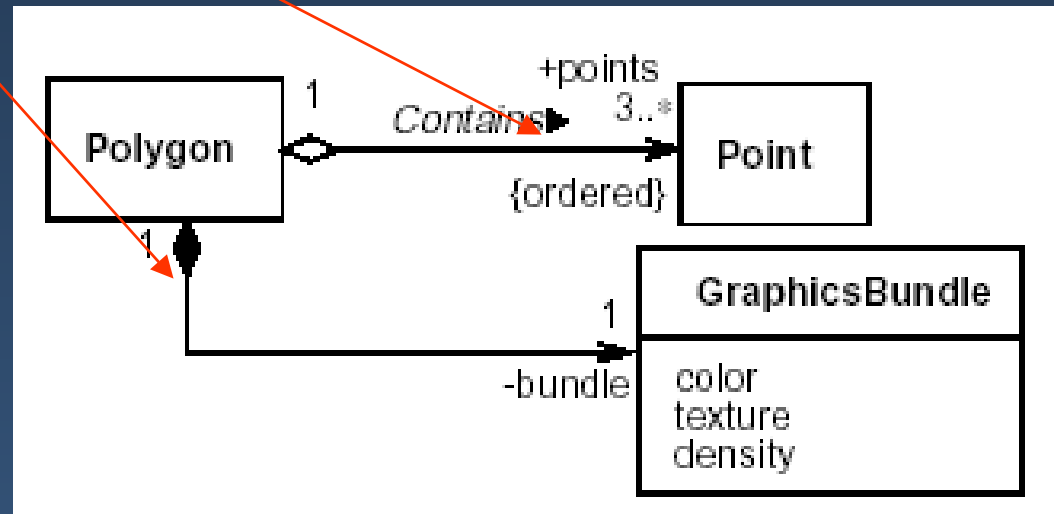
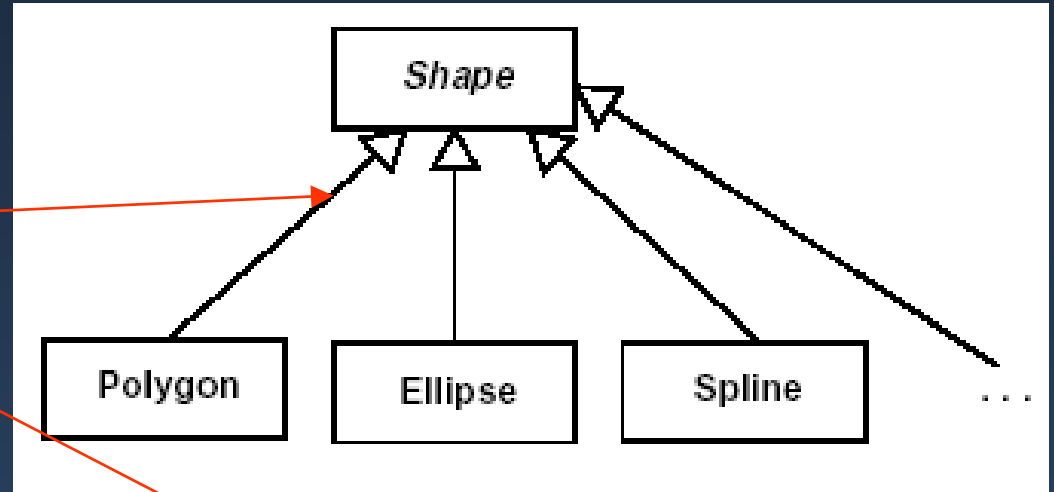


What do
+,- #
mean?



Please explain

What is?



UML

What is?

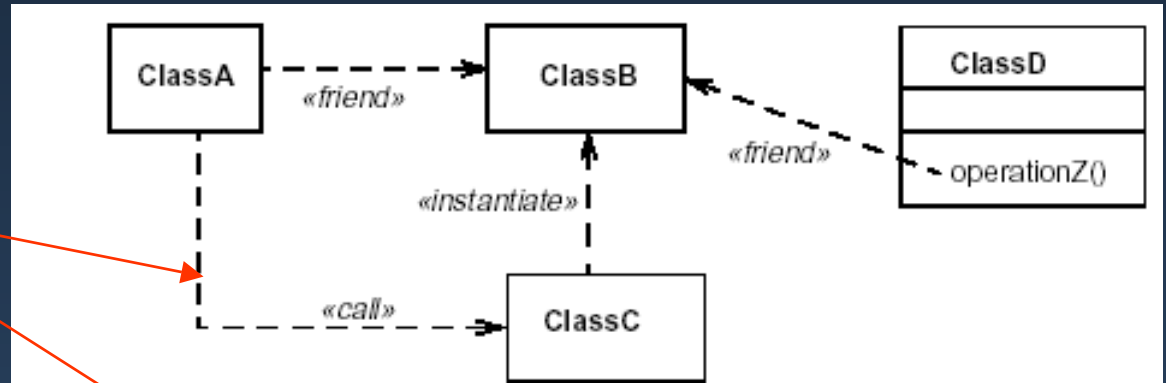
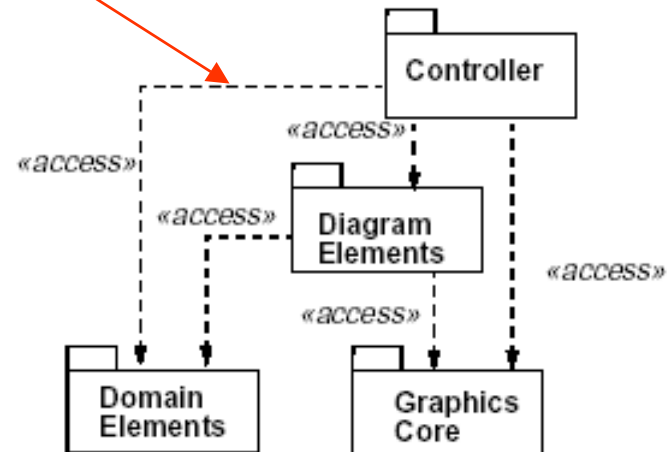
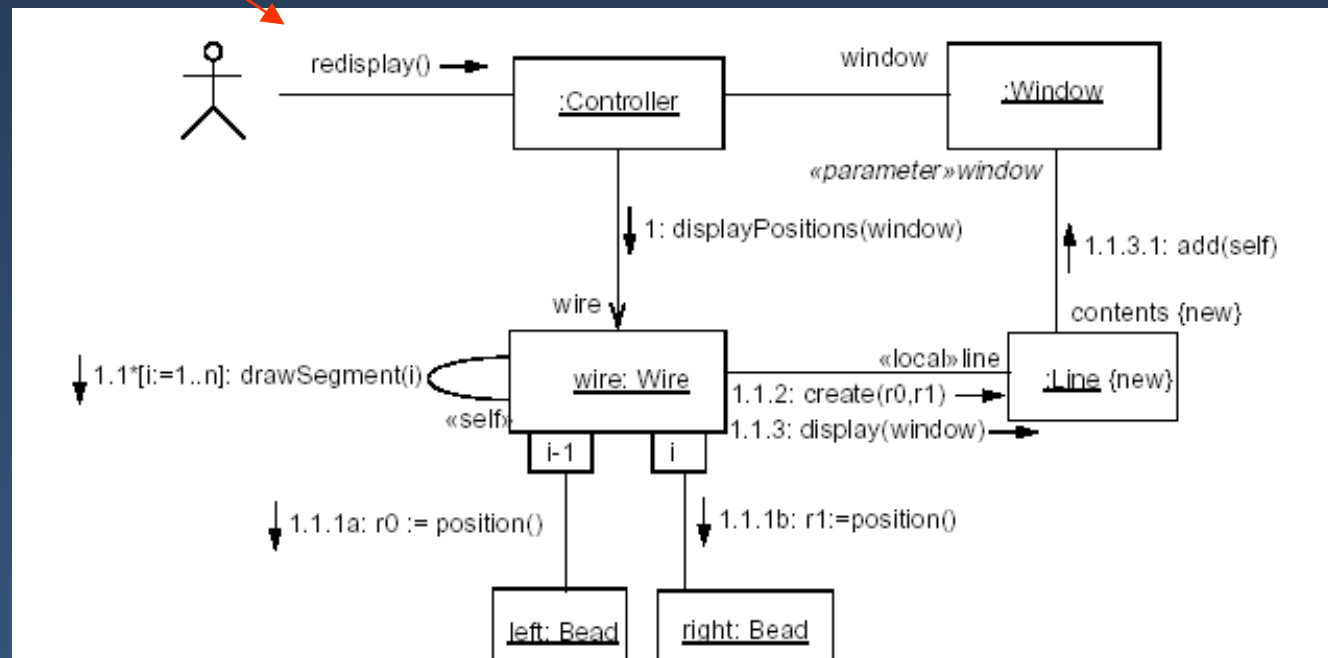
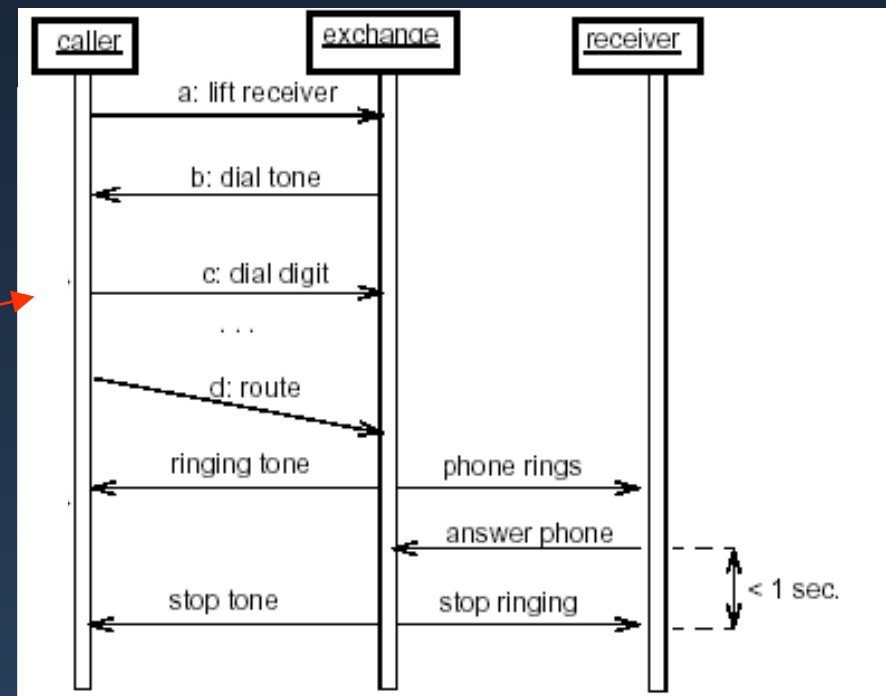


Figure 3-35 Various Dependencies Among Classes



UML

What is?



Background: 2

1. How do you ensure that the software you develop is adequate for medical application?
2. Which is the most common software process?
3. What is the software process of your organization/project?
4. Where is it documented?
5. Do you adopt a software process framework?
6. Which one? Did you tailor it to your organization/project?
7. What metrics do you collect?
8. At what CMM/ISO 15504 level is your organization?
9. What is the order of magnitude of the number of organizations at CMM level ≥ 3 worldwide?
10. How long does it usually take approximately for an organization to move one CMM level forward?