Interaction Diagrams II

PB007 Software Engineering I

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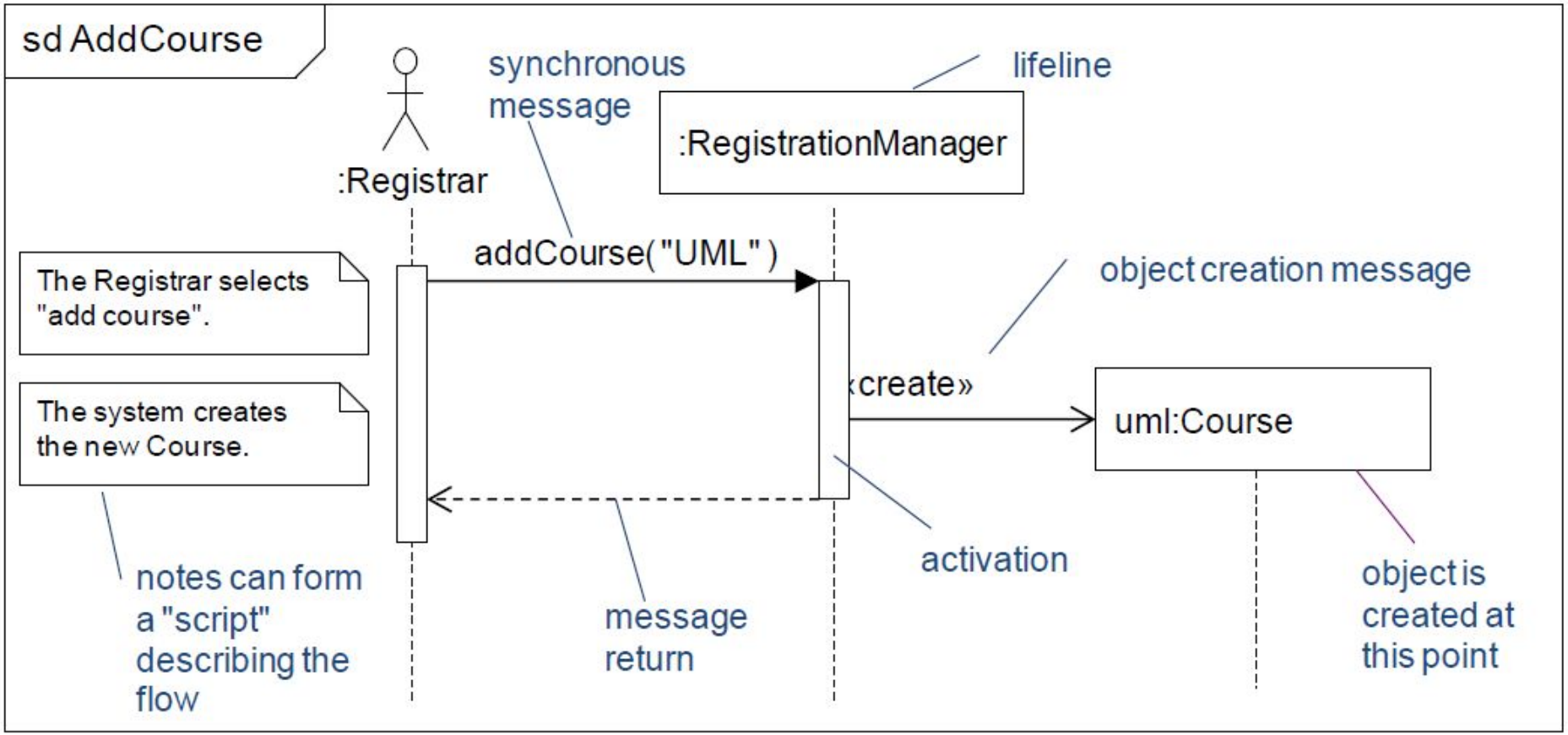
Sequence diagram

Sequence Diagrams show interactions arranged as a time sequence between objects/classes/participants.

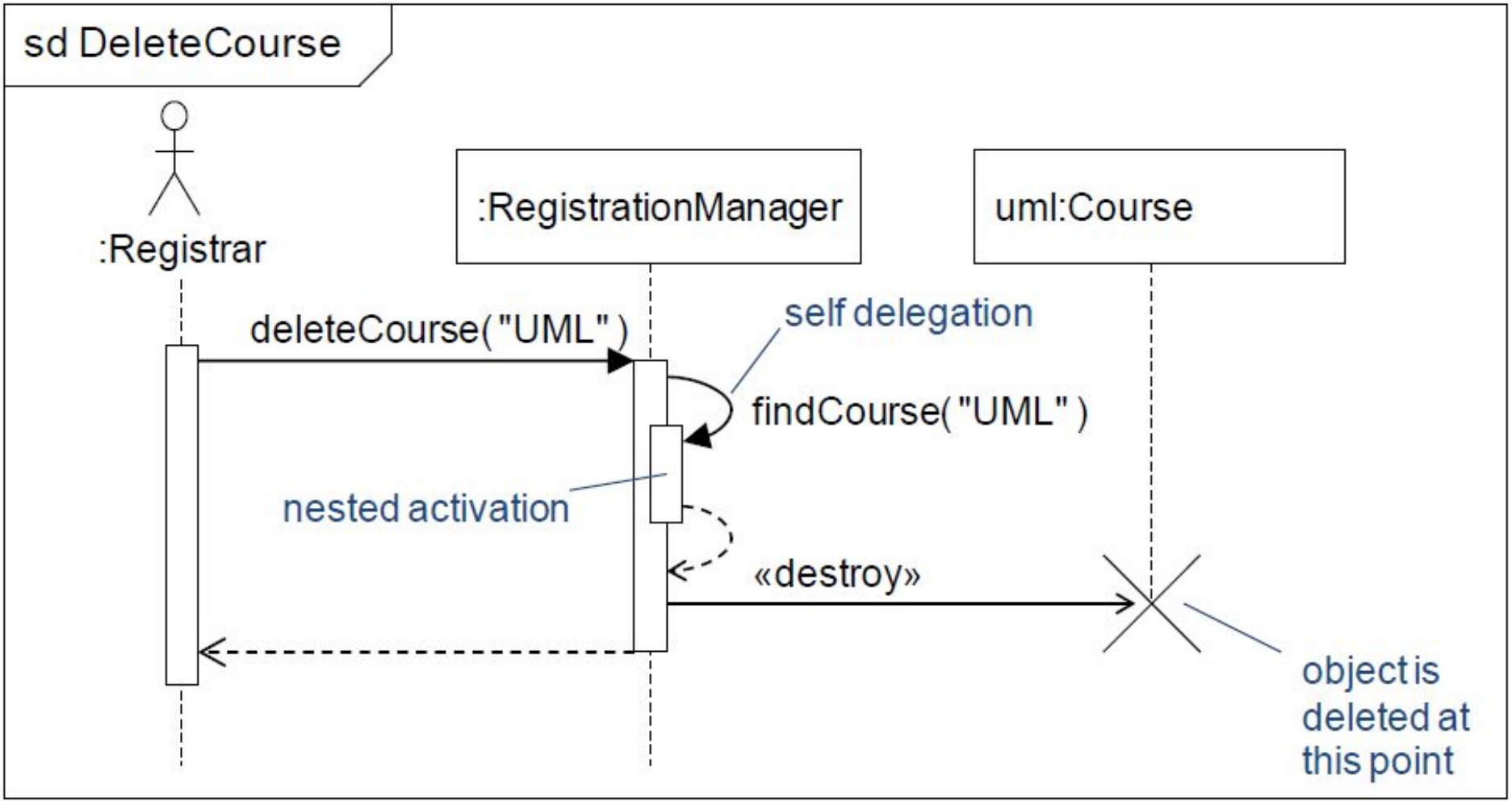
The basic elements:

- Actors, classes, objects
- Lifelines
- Activations (focus of control)
- Messages
- Fragments

Sequence diagram - example



Sequence diagram - example II



Sequence diagram - Combined Fragments

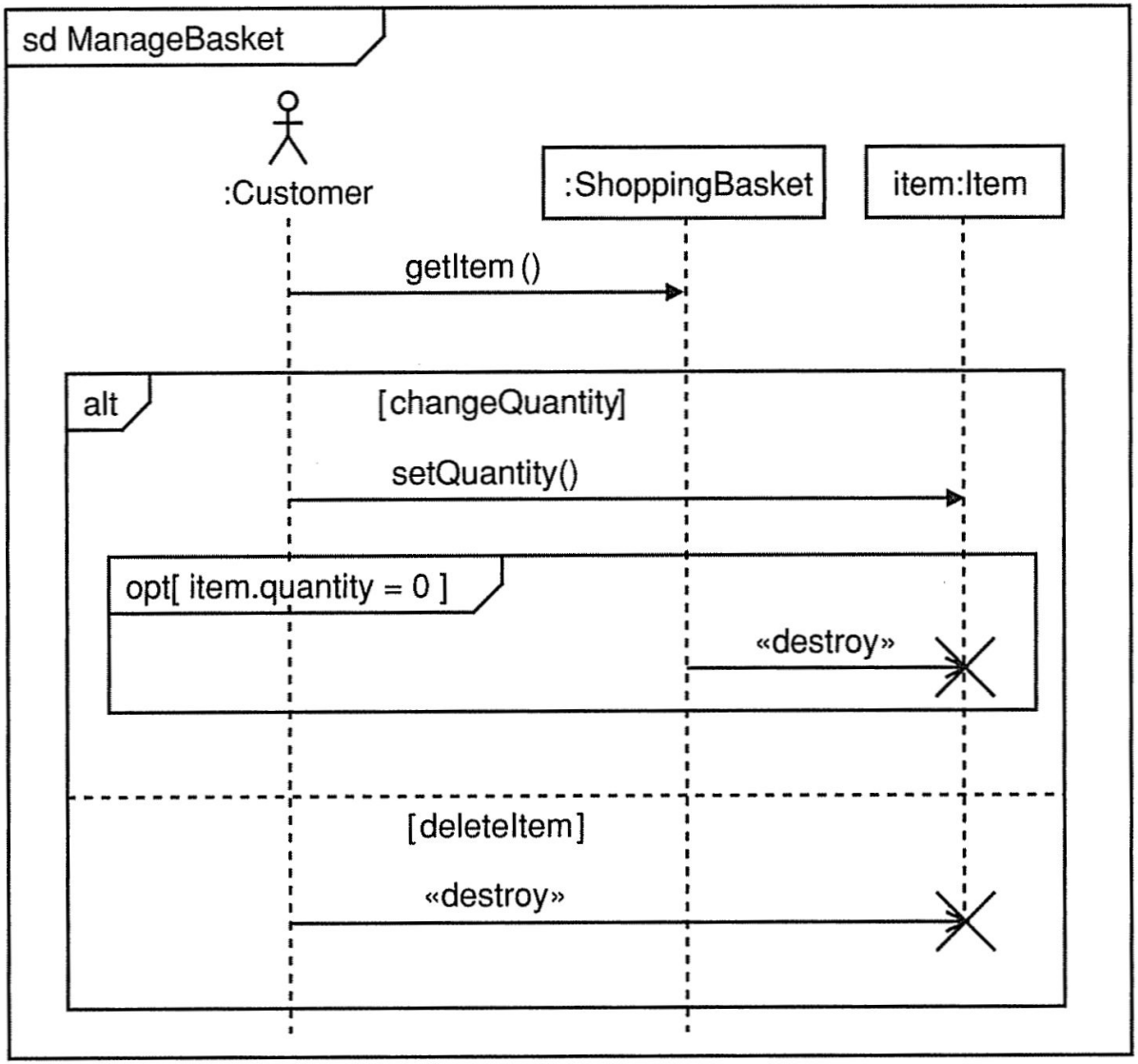
Combined fragments divide the sequence diagram in more areas with different behavior.

Each combined fragment is marked with an *operátor*, one or more *operands*, and *condition(s)*.

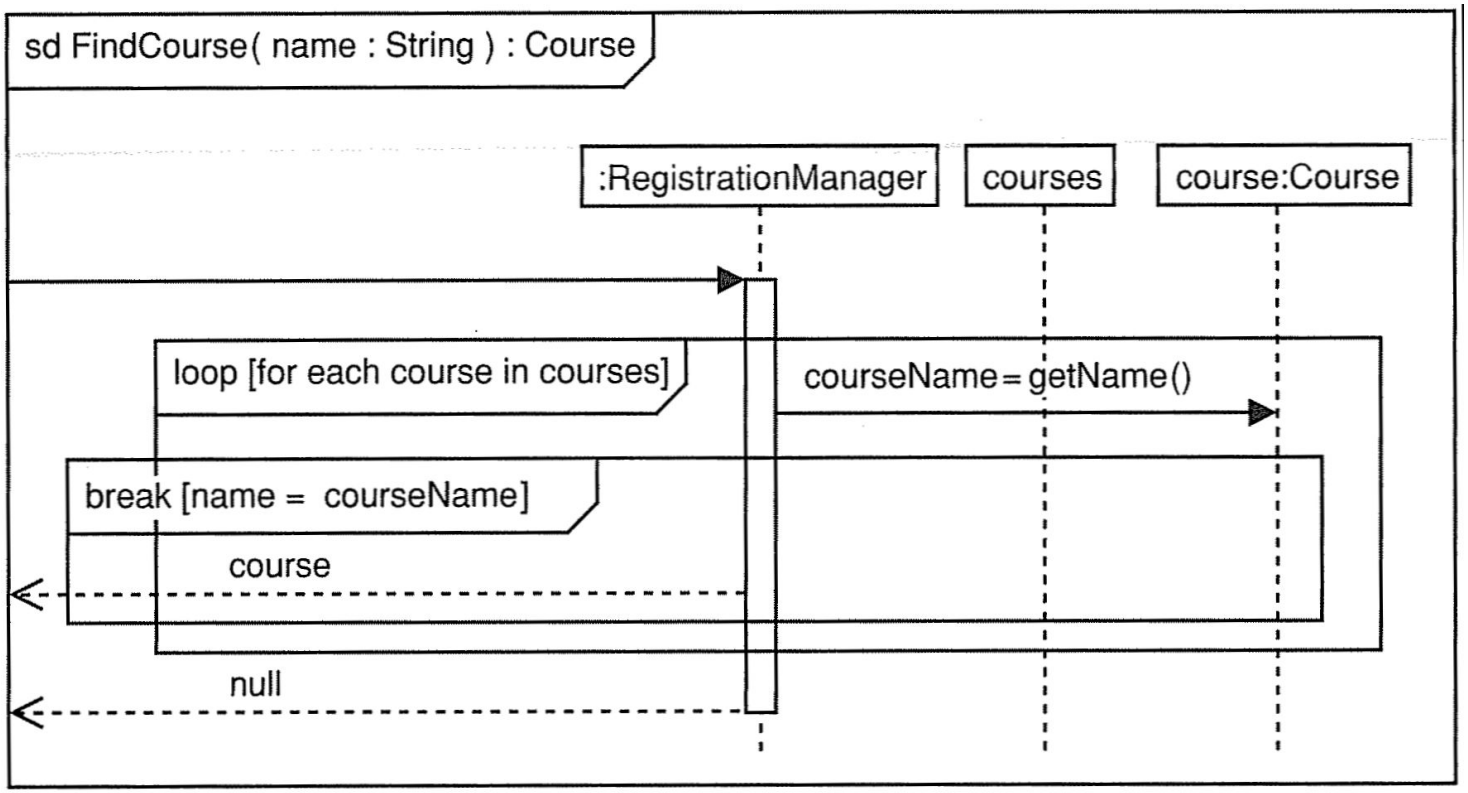
The most important operators are:

- **opt (option)** - has one operand, which is triggered only if the defined condition is met
- **alt (alternatives)** - the operand whose condition is evaluated to true will be launched.
- **loop** - repeated execution of the operand
- **break** - operand is executed if it meets any conditions and terminates the execution cycle

Sequence diagram - Combined Fragments II



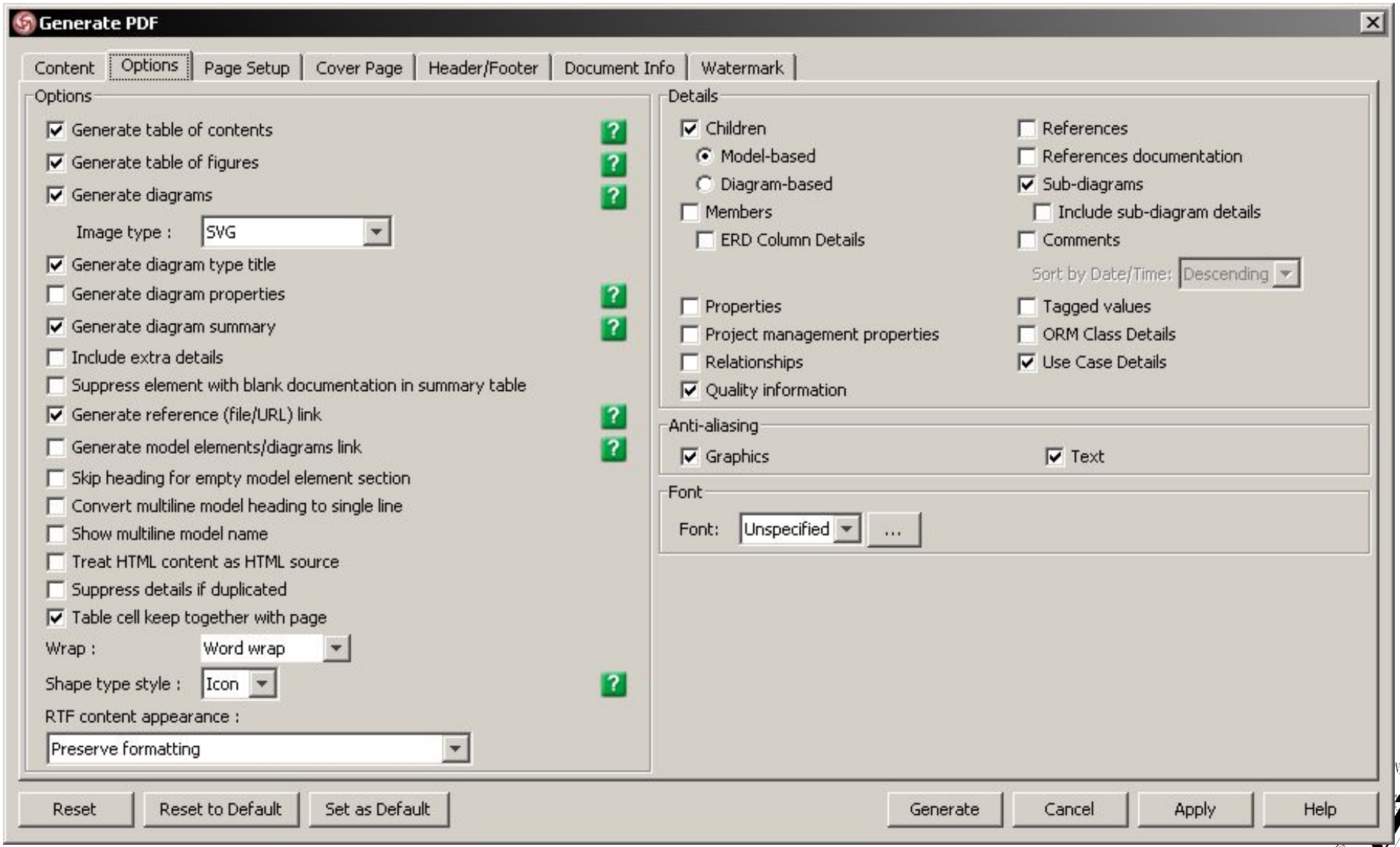
Sequence diagram - Combined Fragments III



Additional Resources

- dis.um.es/~jnicolas/CSW/transparencias/Capitulo01p05LarmanDiagInteraccion.pdf
- www.agilemodeling.com/artifacts/communicationDiagram.htm
- www.agilemodeling.com/artifacts/sequenceDiagram.htm
- www.cs.umd.edu/~mvz/cmsc435-s09/pdf/cell-phone-sequence-chart.pdf

Tasks

- Complete the remaining sequence / diagrams, so that you will have 2 communication diagrams and 3 sequence diagrams.
- Update the sequence / communication diagrams implemented so far according to the feedback.
- During the implementation of the sequence diagrams, update the class diagrams if changes are needed.
- Upload the **PDF report** into the folder (**Week 11**).
  Deadline: Saturday, 17.12.16 23:59

Customization of Pdf Report