Department of Computer Science 3
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Model Based Software Engineering, SoSe 14
www.se-rwth.de/teaching/ss14/mbse

Exercise Sheet 6

Exercise Sheet 6: Sequence Diagrams

Exercise 6.1: A sequence diagram's profile

Create a profile for sequence diagrams (SD) which includes the following items:

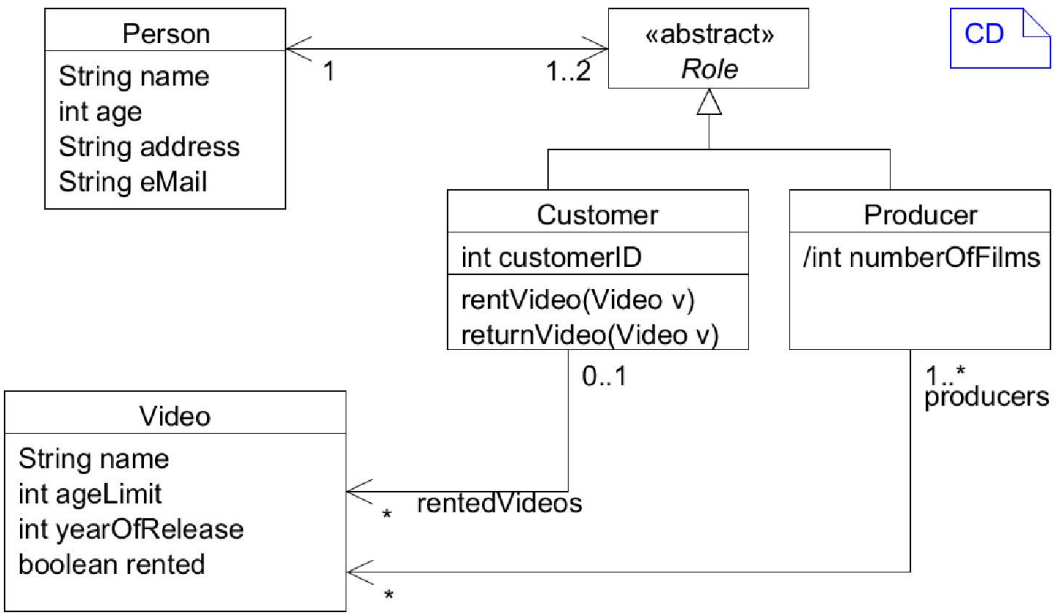
a) A SD's **central syntactic elements**, including an explanation of their semantics;
b) A SD's **purpose** with regard to modeling a software system.

c) Name and explain the possible markers for interaction lists introduced in the lecture.
d) Which types of recursion have been explained in the lecture? Please name them and explain their semantics.


Write your statements/answers in your own words.

Exercise 6.2: Modeling Sequence Diagrams

Look at the following class diagram and operational sequence description.
With regard to those, model sequence diagrams **according to all** possible interaction sequences.



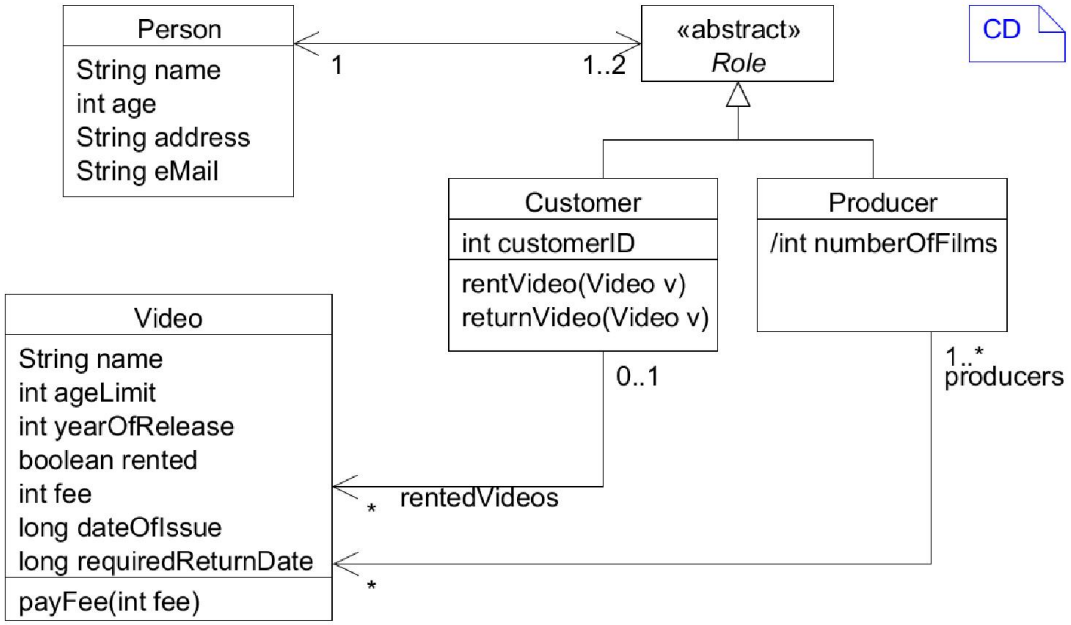
In the rentVideo method an examination of the age against the age limit takes place. Afterwards the video is checked for not being rented. If everything is ok, the video is rented otherwise the method just stops.

Exercise 6.3: Search, find and name the bugs

Look at the following class diagram, the operational sequence description and the corresponding (yet buggy) **SD.**

a) Name all **syntactic** bugs in the SD.
b) Name all **semantic** bugs in the SD.

Identical bugs count as one bug.



In the returnVideo method an examination of the return date against the current date takes place after the video is checked for being rented by the returning person. If everything is ok, the video is returned otherwise the method stops immediately if the return is requested by the wrong person or sets the fee necessary to be paid by the customer (1 Euro per day beyond the return date).