Summer Semester 2015 **Part Prof. Wanner**		No. of pages: 6 Page no.: 1
Examination: Software Engineering 2		Time: 120 min
Aids: One double sided sheet A4		Semester: ST
Name:	First name:	Matricul.-No.:

Note: The area left blank on the sheets usually is sufficient for the answer of the questions in terms of catchwords and/or for the solutions. Therefore write your name, semester and your matriculation number on each sheet and use these sheets for the delivery of your answers and solutions.

The stated points for each exercise are tentative and are subject to change.

Exercise 1 (9 Points)

a) Draw a sketch of the maven build lifecycle. Annotate all important parts.

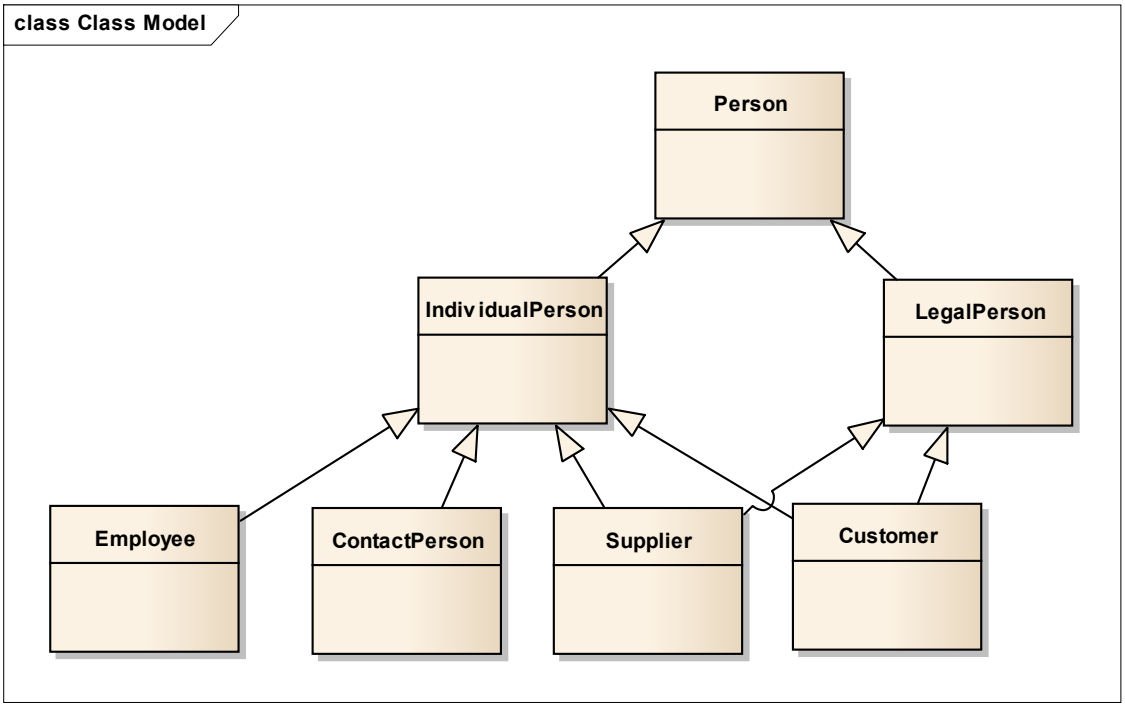
b) What is the POM in Maven?

c) What is the main difference of the build system Gradle compared to Maven?

Summer Semester 2015 Part Prof. Wanner	No. of pages: 6 Page no.: 2
Examination: Software Engineering 2	Semester: ST
Name: First name:	Matricul.-No.:

Exercise 2 (16 Points)

a) Given is the following UML-diagram. What is the problem? Which architectural principle should be applied? Which pattern do you use to solve the problem? Draw a UML-sketch of your solution. What are the advantages and disadvantages of the solution?

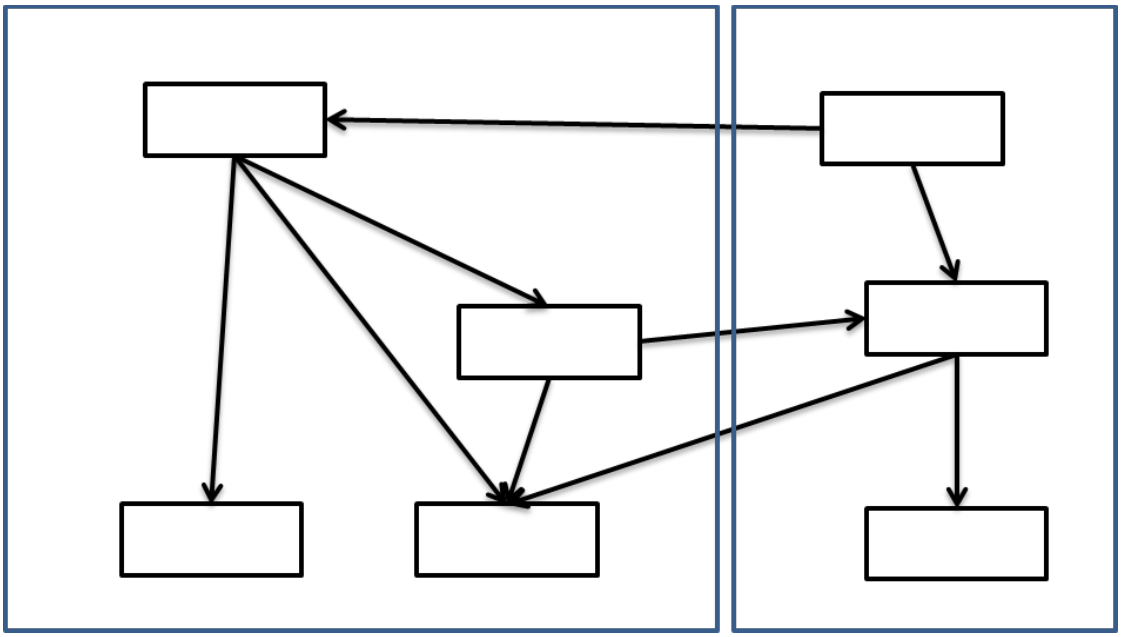


b) Given is the following UML-diagram. What is the problem? Which architectural principle should be applied? Draw a UML-sketch of a possible solution. What is the advantage of the solution?

Summer Semester 2015 Part Prof. Wanner		No. of pages: 6 Page no.: 4
Examination: Software Engineering 2		Semester: ST
Name:	First name:	Matricul.-No.:

Exercise 3 (12 Points)

a) Given is the following dependency graph of a system with two subsystems. Calculate the CD (Component Dependency) of all components and also calculate the CCD and the ACD.



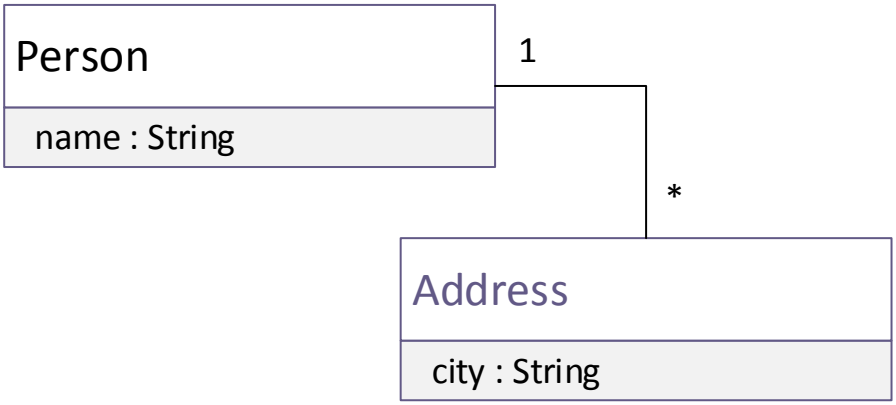
b) Optimize the system by decoupling the two subsystems (eliminate the cycles).

c) Calculate the CD, the CCD and ACD of your solution for b) (treat interfaces like classes).

Summer Semester 2015 **Part Prof. Wanner**	No. of pages: 6 Page no.: 6
Examination: Software Engineering 2	Semester: ST
Name: First name:	Matricul.-No.:

Exercise 4 (14 Points)

a) Draw the metamodel for the following UML-model. Only include the necessary parts!



b) What is the problem of "Roundtrip Engineering" between Model and Code?

c) There are two solutions to manually integrate code into generated files. Name those two solutions and give their advantages and disadvantages.