

Exercises 3

27th September

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**Story (tasks 1-2):**

There is an SPI project running and you—as the process engineer—are conducting some interviews with the agents, who are the process users. The context in this case is a small or medium-sized company, which is responsible for the development of software projects.

**Interview Statements:**

**Mrs. A:** My area of responsibility is the project management for software projects in general. My main focus is planning in addition to organizational activities. We have a corresponding software process in which I make project planning, cost estimations and collecting the project risks in an Excel list. I also monitor and control project progress. Usually, I've got a form that I prepare weekly and monthly to give a status report to the management. The organization of the project itself, I have in a folder in which all team members including the contact information, and their responsibilities, and so on are stored...

**Mr. B:** Basically, I care only about the architecture. I use the “Enterprise Architect” in which I model the customers’ requirements into UML models. This is not always easy going because customers usually poorly structure their requirements (although there are exceptions, but...). We first translate the requirements always in a list (we is Mr. C and myself) and then get them from the database into in the UML model in which we can refer and manage the requirements. Actually, the architecture always contains the functional aspects (usually done by Mr. C and Mrs. D), some interfaces, components, and so on. For the latter part, I usually ask the developers for support, mostly Mr. E.

**Mr. C:** I analyze the customer requirements and try to figure out the functional and technical requirements. I also structure the requirements so Mr. B can design the architecture. Therefore, I use a simple, self-tinkered database in which I store the documents of the client. The requirements themselves are stored as individual records with links among them.

**Mrs. D:** Actually, I supposed to develop, but I almost did not come to it! I usually sit down with the men's B and C and try to understand the customer requirements and to design the architecture that our development teams and Mrs. A also understand, what the customer really wants... In addition, I support Mrs. A assembling the deliveries for the customer (which includes documentation and stuff...).

**Mr. E:** I’m the head of the development team, but I, however, work on the definitions of the tests. I usually write the test cases with which we feed the JUnit framework and collect all the test protocols to give them Mrs. A for their reports.

- 1) Given the story and interviews described on the first page, analyze all the statements and:
  - a. Extract the stakeholders/roles (you need to “define” role names, may be representing/abstracting the interviewees).
  - b. Extract the considered artifacts, described by the interviewees.
  - c. Make the assignment of the responsibilities (which role is responsible for which artifacts)
- 2) Compare the interview statements from the description with the structured interview form presented in the lecture. What information is missing? Where would you need further information to start process modeling?
- 3) Looking at the eight-step approach: Suppose that for a certain process modeling effort, the goal “process automation” was chosen in step 1. What would be the consequences for step 3?
- 4) Suppose now that the selected goal was “process guidance.” What would be the consequences for step 3 in this case?
- 5) Steps 7 and 8 of the presented descriptive process modeling approach are concerned with analyses. What are the differences between these two steps? Why are they separate from each other?
- 6) You have just finished creating a detailed model for the development processes of a medium-sized software company. One aspect of the process you have learned about during your process modeling work is that the company uses a version management system to store the source code of all of their products, as well as many documents related to the said products. You know that most people in development-related roles rely quite strongly on this system for their daily work. Indeed, people in the company normally collaborate around products by storing them in this system, so that other people have access to them and can change them if necessary.

How could you use the version management system data (content, logs, etc.) determine whether your process model reflects your real software processes? Suggest concrete ways in which data stored in the version management system could be used to check the accuracy of your new process model.