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Practice sheet 8   **GQM: Reading**   due on 07.12.2015

> Please make sure to always prepare your answers and solutions in a way that you are able to present them to your classmates and discuss your solution process effectively. Remember to always list any used material and references.

Outlook

For practice sheets 8 to 10 you will carry out your own study with the Goal Question Metric approach. You will work in pairs again.

Roadmap for the next 3 practice sheets:

No. & Time span	Tasks	Content of the tutorial
PS 8 by 07.12.2015	Read up on GQM in research	Present GQM
PS 9 by 14.12.2015	Choose OSS project, formulate possible goals (according to GQM)	Preliminary results: Discussion of possible goals and difficulties of goal formulation.
PS 10 by 04.01.2016	Continue and finish study.	PechaKucha: Final presentation

Learning aims

- Develop measures, understand and discuss measurement in software development processes with the help of the Goal Question Metric approach (GQM).

- Gain experience with measuring and measures in the software development process by using the Goal Question Metric approach in an OSS project.

Task 8-1: GQM Paper

Read up on the answers to the following questions. The article mentioned in the lecture by Victor Basili and David Weiss on the goal question metric approach (GQM) may be useful: *A Methodology for Collecting Valid Software Engineering Data*. You can find the article on the lecture's website.

1. Why is it reasonable to proceed top-down instead of bottom-up when collecting data in software engineering settings?

2. Why is measuring important in the software engineering process?

3. Which information sources may help to develop the goals' elements?

4. Which pitfalls remain for the data analysis despite the Goal Question Metric approach?

Task 8-2: Autonomous Research

Do some research: Find and read a paper from within the field of Computer Science that deals in some form with GQM. Possible sources for finding such papers include:

- FU digital library (free access through the FU net): http://vs13.kobv.de/V?portal=FUBERLIN&institute=FUBERLIN&func=quick

- Google Scholar: http://scholar.google.com/

Be prepared to talk about the paper in the tutorial. Consider the following aspects:

1. Core issue and objective of the research project: What is being examined?

2. What has been the motivation for the research project?

3. What kind of research strategy did the researchers follow?

4. Results and conclusions of the paper

5. Who benefits from the research project (concerns the practical or social applicability of the results)?

6. Contents you found particularly interest or surprising

7. Formulated goal with the elements *object of measurement*, *goal*, *quality focus*, *perspective*, and *context*.

8. What is said concerning the activities during the six GQM steps?

9. Which unsolved questions are to be answered through the data analysis?

10. What kind of data was collected and how?