CSCW-415: Software Quality and Metrics

Labs Lab 4: Goal-Question-Metric (GQM) – Part 2/2

Scenario:

Suppose you are a Software Engineer in an organization. The organization develops multiple software in academic domain. “Maintainability” of the software is very important consideration for the organization. Your boss asks you to help improve the maintainability of the software “A” that our organization develops.

Checklist:

1. # Faults found
2. LOC
3. What are the maintenance staff like?
4. What is the current maintainability?
5. Improve maintainability
6. How much software is being maintained?
7. Function Points
8. Mean Time To Locate (MTTL) faults
9. % Comments
10. Years of Experience
11. Qualification
12. Mean Time To Repair (MTTR) faults
13. # Modules
14. % Effort spent on maintenance
15. Path Count Metrics (# of unique paths through a body of code)
16. Structuredness Metrics (measures the information flow in components i.e., input data, processed data and output data)

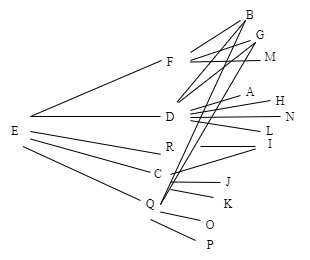
Q. What is the complexity of the software?

R. How good is the documentation?

Instruction: In GQM tree write labels A, B, C, … so on (instead of writing the whole text). Task: Construct a GQM tree for the above scenario and list.

Hint 1: Revisit the definition of maintainability from slides of first week. Re-read GQM if required.

Hint 2: It would be easier to first write Goal, then Questions and then Metrics. Then, think, discuss (with class fellows and with the lab teacher), and update them. Then construct the GQM tree.



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