INF5180: Software Product- and Process Improvement in Systems Development

Part 00:

Project Report

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Project Assignment – Main Task

Task:

- Prepare a (realistic) software process improvement plan for a software/systems development organization

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Project Assignment – Final Deliverable

- When? – May 13 (evening – 19:59)

- How? – PDF by e-mail to dietmarp@ifi.uio.no

- What? – Contents (maximum 20 pages!):
  1. Description of the problem and context (3-5 pages).
  2. Improvement plan (5-7 pages): detailed description of actions to be taken: what, when, who, how?
  3. Underlying rationale of the improvement plan (max 7-10 pages): why?

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Project Assignment – Suggested Structure

- Cover Page

- Table of Contents (TOC)

- Part I: Context and Problem Statement

- Part II: Software Process Improvement Plan (SPI Plan)

- Part III: Discussion of underlying rationale of the SPI Plan

- List of References

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Project Assignment – Part I

- What is the target organization of the SPI initiative?
  - "Name" (anonymize if necessary), Location, Size
  - Number and type of products, customers
  - Type of processes in place

- What are the Problems that trigger the SPI initiative?
  - Examples: Quality, Time-to-Market, Effort/Cost, Customer Satisfaction, Strategic Business Goals (Market Share, …)
  - Alternatively, there could be a decision on a change of technology, process, etc. which is supposed to support certain goals

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Project Assignment – Part II

- What?
  - Activities that prepare the intended change(s) / this typically includes analysis of the current situation, prioritisation of problems, search for and analysis of potential solutions, description of the planned solution (→ "choose models") → PLAN
  - Activities that implement the intended change(s) / this typically includes change of work procedures and responsibilities, as well as training → DO
  - Activities that monitor/control the intended change(s) → CHECK
  - Activities analyse the success of the intended changes (and potential reactions) → ACT
- When?
  - Start/end dates of activities, dependencies between activities
- Who / By Whom?
  - Roles involved in the activities and their responsibilities in the activities
- How?
  - Brief description of activities (as space permits)

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Project Assignment – Part III

- Refers back to Part II
- Examples:
  - Explain motivation/reason for doing a particular activity
  - If there are alternatives on how a particular activity could be done, explain what the alternatives are and why you made your choice

    Example: There are many ways of doing an analysis of the current situation. Depending on the budget available, the available competence, the time frame, the size of the organization and projects, one might choose an assessment, external consultancy, measurement programs, experiments, etc.

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Project Assignment – Evaluation Criteria

- Consistency between stated problem and improvement plan.
- Thoroughness of argumentation in the reasoning about the improvement plan.
- How realistic/executable is the improvement plan?
- Use of syllabus material and other references.
- Structure and readability. Conciseness!
- Formality (language, grammar, correct referencing, etc.)
  - Provide a cover page: name, course id, project title (cover doesn't count for page limit)
  - Provide table and figure captions; describe tables/figures; do proper referencing
  - Follow the formatting rules:
  - Font: 11pt Arial (tables might use smaller font, but not less than 8 pt); line spacing: single spaced; top/bottom/left/right margins: approx. 2 cm; provide page numbers

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Project Assignment – Marking

Maximum marks: 16 (80% of the grade)

- Criteria:
    - Readability and clarity [2 marks]
    - Language and formality (title, captions, referencing, etc.) [2 marks]
    - Structure and flow of argument [4 marks]
    - Contents: completeness, consistency, realism ($\rightarrow$ could it be implemented?) [8 marks]

- Note: There was a mandatory short presentation and a draft report (outline) required (3-4 pages); failing to do the presentation or to submit the outline/draft in time automatically generates a penalty of up to 2 marks!

- Note: The following slide relates to the sum of project report AND oral exam!

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Mapping of Total Marks to Grades (Tentative!)

Grade	Description	General, qualitative description of evaluation criteria	
A	Excellent	*An excellent performance, clearly outstanding. The candidate demonstrates excellent judgement and a high degree of independent thinking.*	≥18
B	Very good	*A very good performance. The candidate demonstrates sound judgement and a very good degree of independent thinking.*	≥16
C	Good	*A good performance in most areas. The candidate demonstrates a reasonable degree of judgement and independent thinking in the most important areas.*	≥14
D	Satisfactory	*A satisfactory performance, but with significant shortcomings. The candidate demonstrates a limited degree of judgement and independent thinking.*	≥12
E	Sufficient	*A performance that meets the minimum criteria, but no more. The candidate demonstrates a very limited degree of judgement and independent thinking.*	≥10
F	Fail	*A performance that does not meet the minimum academic criteria. The candidate demonstrates an absence of both judgement and independent thinking.*	

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