

**Master in Software Engineering**  
**Software Methodologies Course**  
**Part 3: Introduction to Software Engineering**  
**Homework**

- 1) Give 2 examples for each category of Software Application classification. Order the examples according to their complexity. Motivate the ordering by characterizing the complexity.
- 2) Choose one of the famous “software disasters”<sup>1</sup> and briefly describe:
  - what happened
  - why did it happen. Categorize the causes of the incident using the table “Root Causes of Software Development Problems” presented at the course
  - what should have been done to prevent it.
- 3) Describe the most complex software product in which you were involved personally. Insist on:
  - project purpose and desired objectives.
  - organization of the team. State the responsibilities of each member.
  - distinguishing the separate stages in the lifecycle of the project. Enumerate the activities performed in each one
  - to which process model taught at the course was your project most similar. What were the differences between that model and your own?
  - how could your project process have been improved?
- 4) Which of the software engineering paradigms and related methodologies presented in this chapter do you think would be most effective? Why?
- 5) Provide three examples of software development projects that would be amenable to prototyping.
- 6) Propose a specific software project that would be amenable to the incremental model. Present a scenario for applying the model to the software.

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<sup>1</sup> See Ariane 5, Airbus 380 delivery delays, Integrated National Crime Information System, IBM Workplace OS