

DESIGN PATTERN FORMALIZATION

ABSTRACT

Design patterns are very useful in software engineering. We would like to automate as much as possible the use of design patterns. Thus, we need to formalize design patterns. We can formalize design patterns according to several distinct aspects: Intent, static structure, dynamic structure...

Your work consists in:

- Detailing the need to formalize design patterns.
- Detailing the aspects according to which we can formalize design patterns.
- Analyzing, for each possible aspect, previous researches, what we can do, and the limitations of the approaches.

(End of the 30 hours theory.)

- Representing and validating different design patterns according to different aspects, using the previously surveyed formalisms.

(End of the 15 hours practice.)

REFERENCES

- The Gang of Four ; *Design Patterns – Elements of Reusable Object-Oriented Software* ; Addison Wesley, 1995.
- (Contact the tutors for more references: Numerous works exist!)
- ...

TYPE OF WORK

State of the art and synthesis (possibly followed by a Spec-Train)

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