



2017-2018

Cycle Ingénieur – 2^{ème} année

Département Informatique

Verification and Validation

Overall Motivation

Burkhardt Wolff

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Université Paris-Sud / Orsay



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Why is it important to get software right?

- ❑ Since information technology becomes more and more pervasive, the risks become more important
 - Reliability, Safety and Security becomes more critical :
 - ❑ transport systems (Cars, Métros, TGV), aviation controls, aerospace, ...
 - ❑ critical industriel processes, nuclear power plants, weapons, ...
 - ❑ medical technologies: tele-surgery, radiation control ...
 - ❑ critical telecommunication infrastructures and networks,
 - ❑ electronic commerce

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- The more likely reason is:
it is so expensive if you don't !!! (It's the economy, stupid !)
- 50 % of the overall costs were spent for test and verification in large software projects ... So, if the development of MS Vista cost 8 billion \$...
- Another reason is:
We want to build more complex systems, and validation and verification techniques are a limiting factor!
We simply can't do it without !

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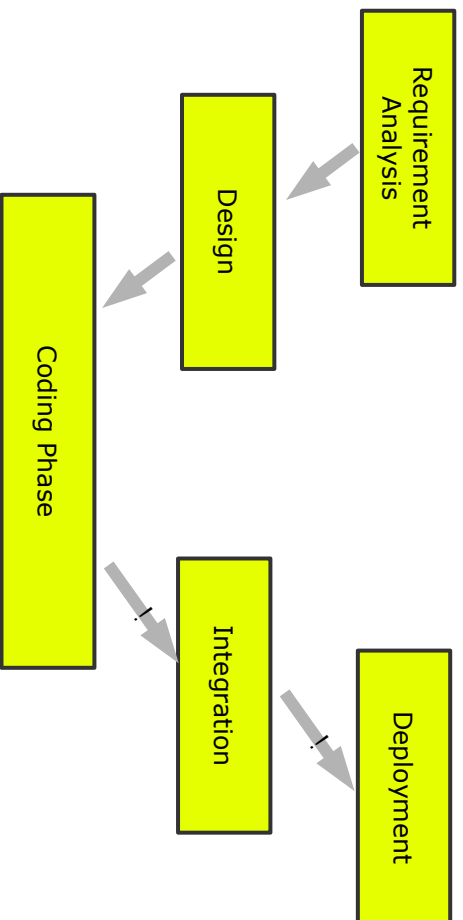
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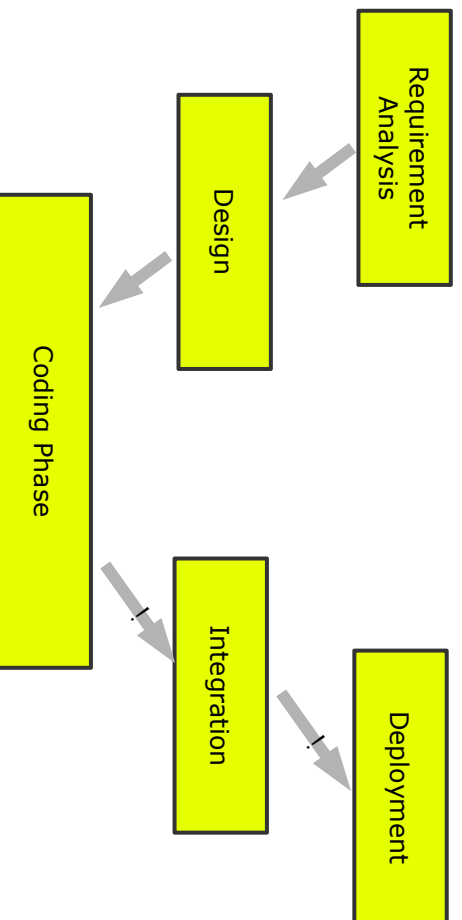
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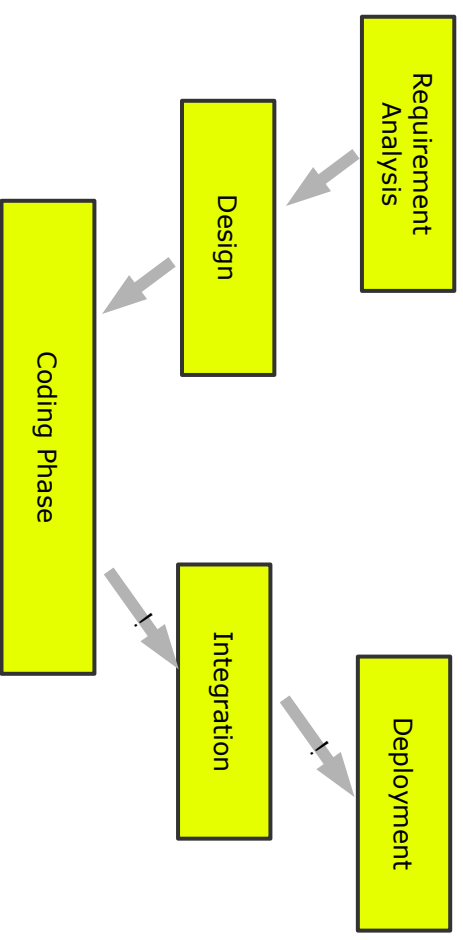
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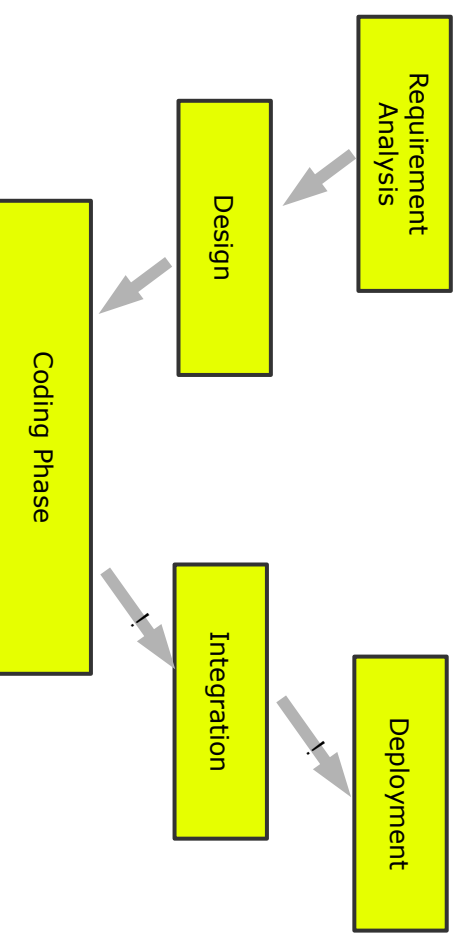
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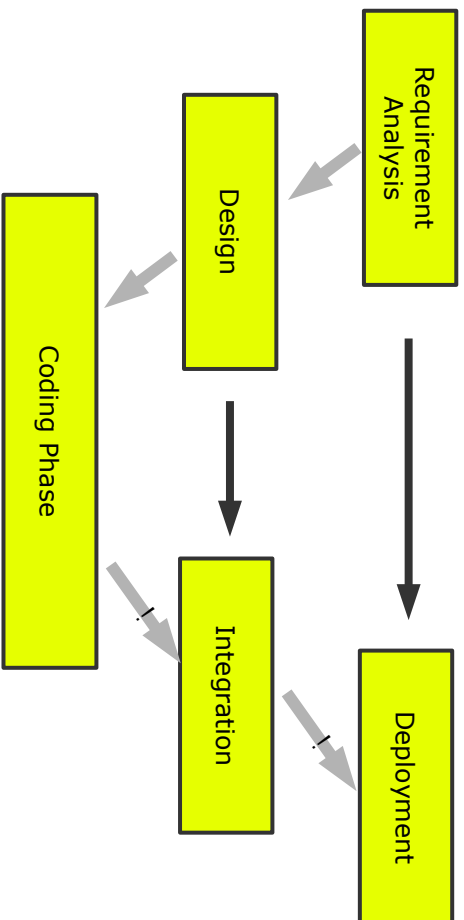
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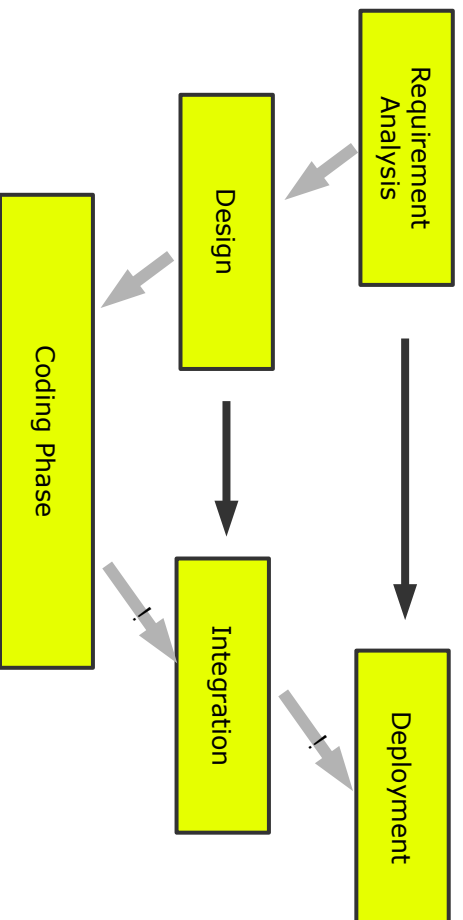
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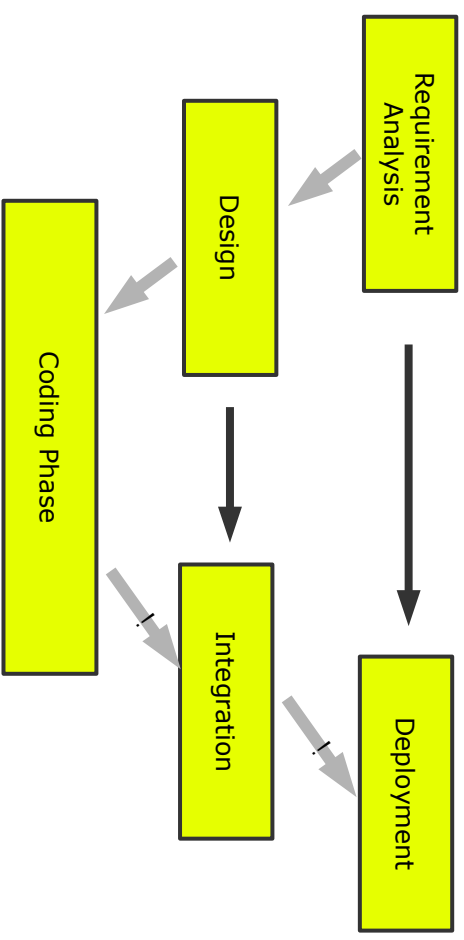
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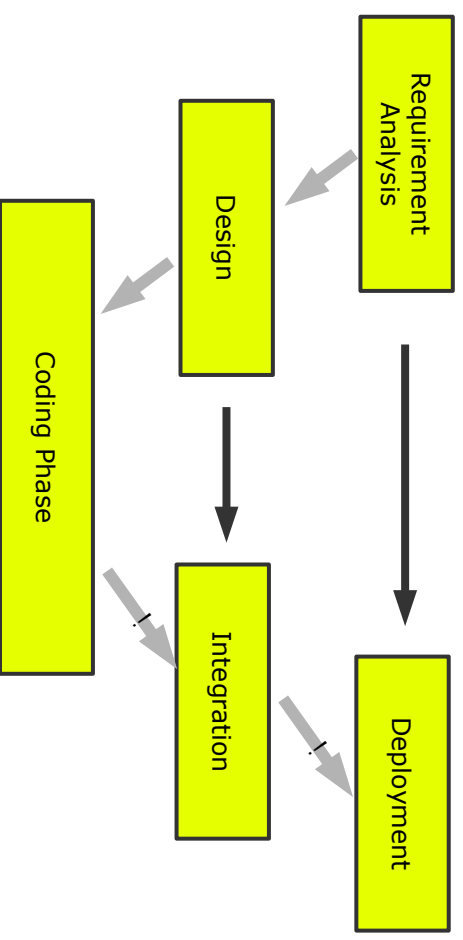
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