

Rational Unified Process

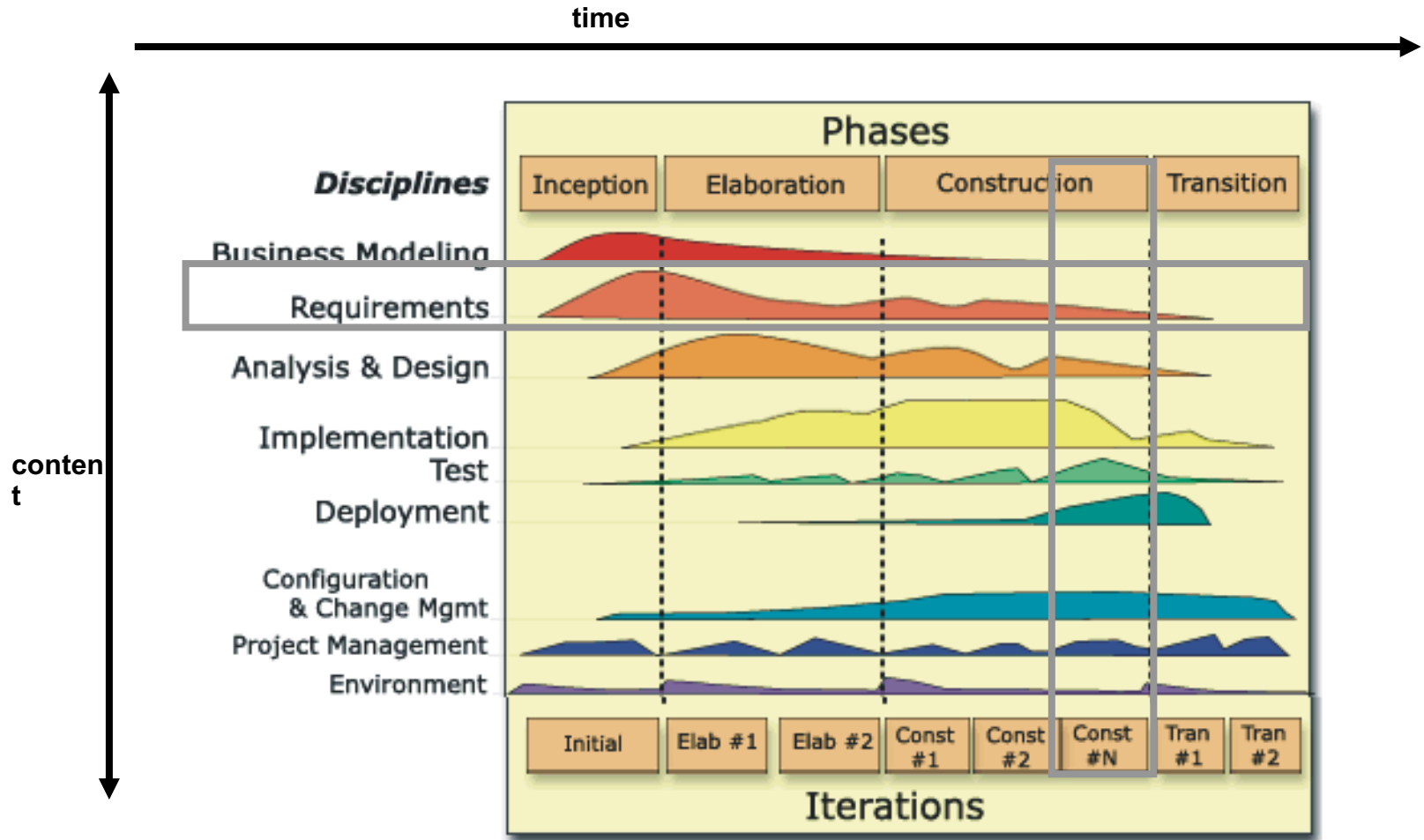
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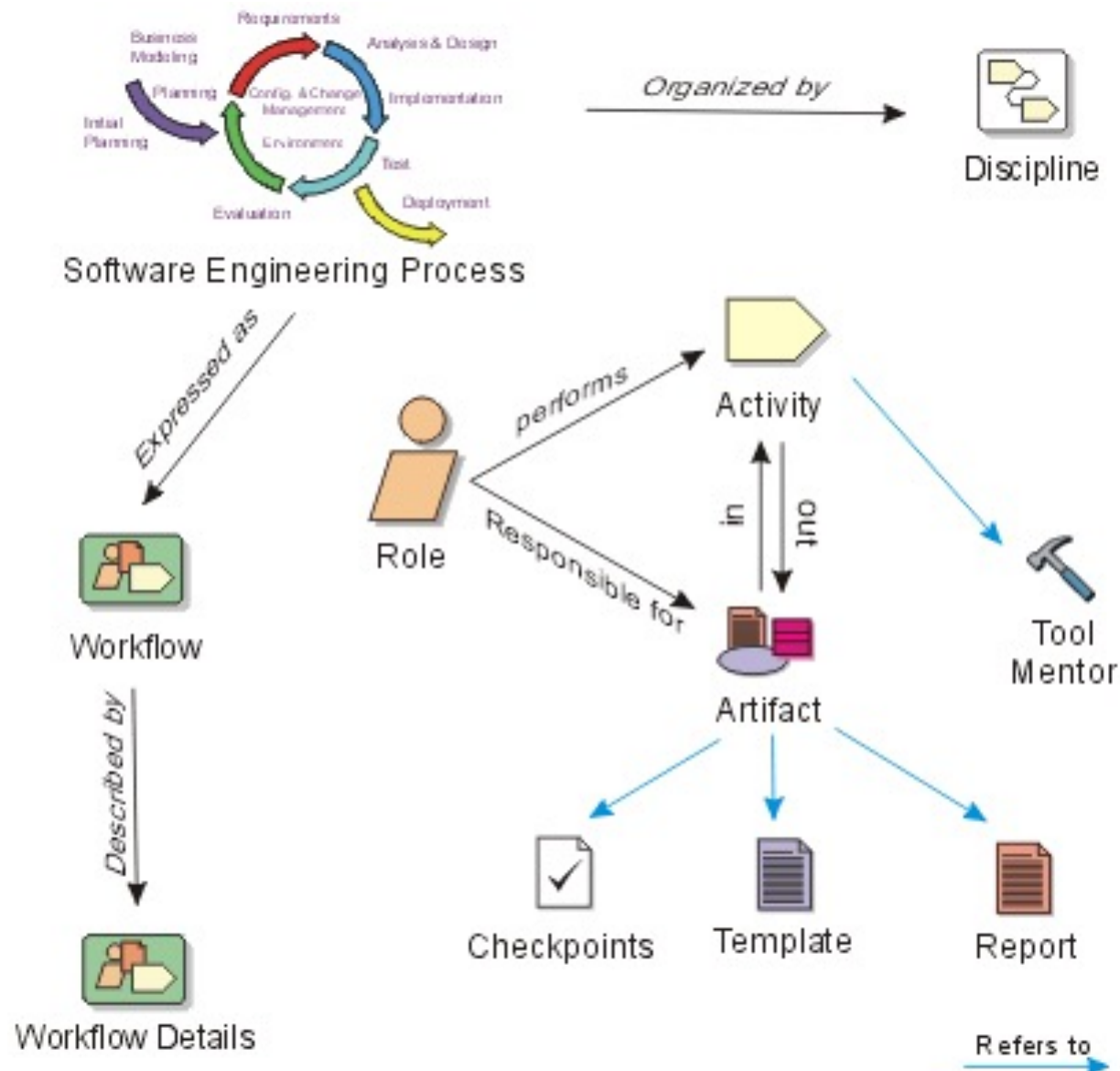
Key characteristics

- Iterative and incremental process
- Rational Unified Process was developed hand-in-hand with UML.
- Driven by use cases
 - The identification of use cases and typical usage scenarios is the activity that drives all development process, from requirements analysis to final system testing.
- Architecture-centric
 - Promotes the initial definition of a robust software architecture that helps the development parallelization, reuse and maintenance.

Iterations, phases, disciplines

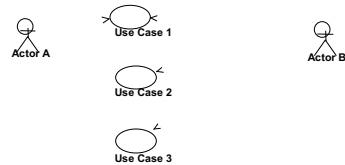


Roles, workflows, activities, artifacts

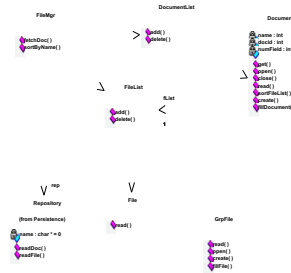


Visual Modeling Using UML Diagrams

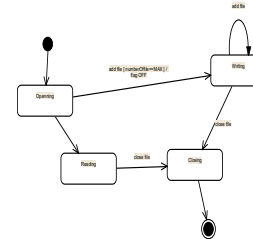
Use-Case Diagram



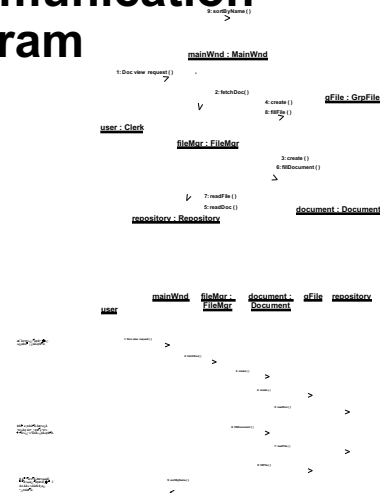
Class Diagram



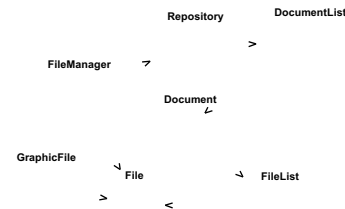
State Machine Diagram



Communication Diagram

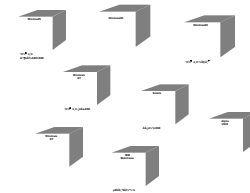


Sequence Diagram



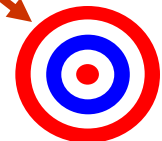
Component Diagram

Deployment Diagram



Forward and
Reverse
Engineering

Target
System



Inception phase

- Establishing the project's software scope and boundary conditions, including an operational vision, acceptance criteria and what is intended to be in the product and what is not.
- Discriminating the critical use cases of the system, the primary scenarios of operation that will drive the major design tradeoffs.
- Exhibiting, and maybe demonstrating, at least one candidate architecture against some of the primary scenarios.
- Estimating the overall cost and schedule for the entire project (and more detailed estimates for the elaboration phase that will immediately follow).
- Estimating potential risks (the sources of unpredictability)
- Preparing the supporting environment for the project.

Elaboration phase

- Defining, validating and baselining the architecture as rapidly as practical.
- Refining the Vision, based on new information obtained during the phase, establishing a solid understanding of the most critical use cases that drive the architectural and planning decisions.
- Creating and baselining detailed iteration plans for the construction phase.
- Refining the development case and putting in place the development environment, including the process, tools and automation support required to support the construction team.
- Refining the architecture and selecting components. Potential components are evaluated and the make/buy/reuse decisions sufficiently understood to determine the construction phase cost and schedule with confidence. The selected architectural components are integrated and assessed against the primary scenarios.

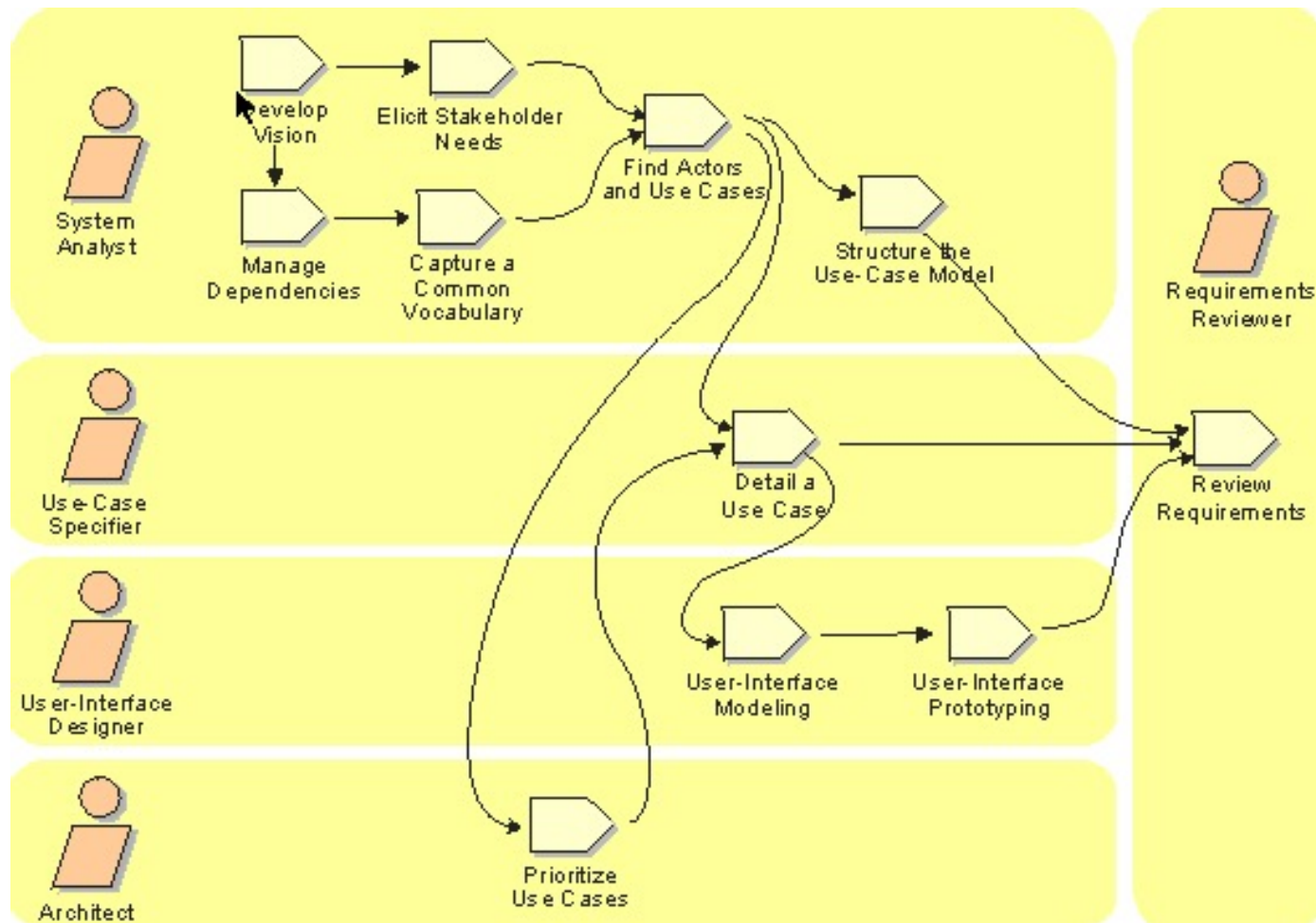
Construction phase

- Resource management, control and process optimization
- Complete component development and testing against the defined evaluation criteria
- Assessment of product releases against acceptance criteria for the vision.

Transition phase

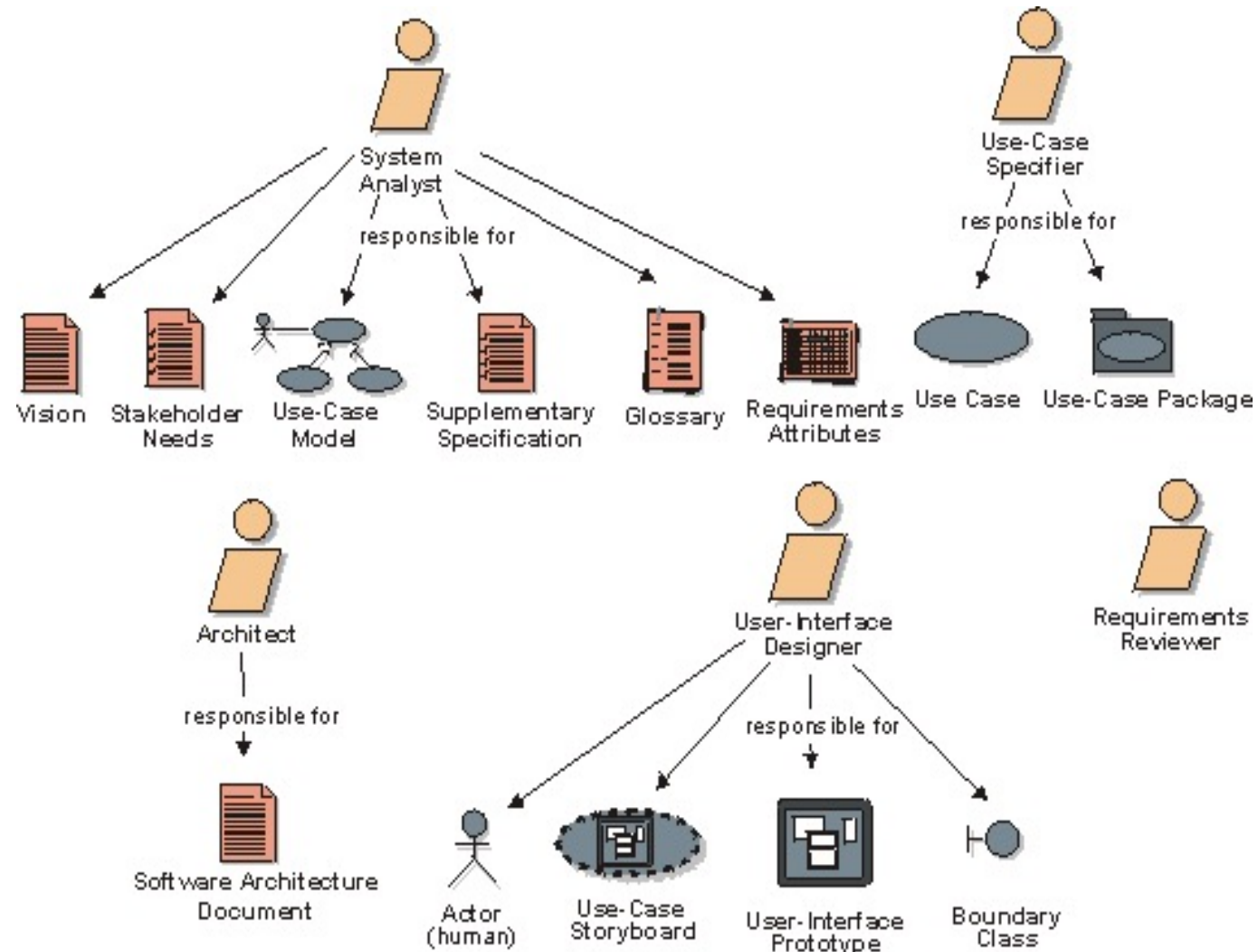
- Executing deployment plans.
- Finalizing end-user support material.
- Testing the deliverable product at the development site.
- Creating a product release.
- Getting user feedback.
- Fine-tuning the product based on feedback.
- Making the product available to end users.

Requirements



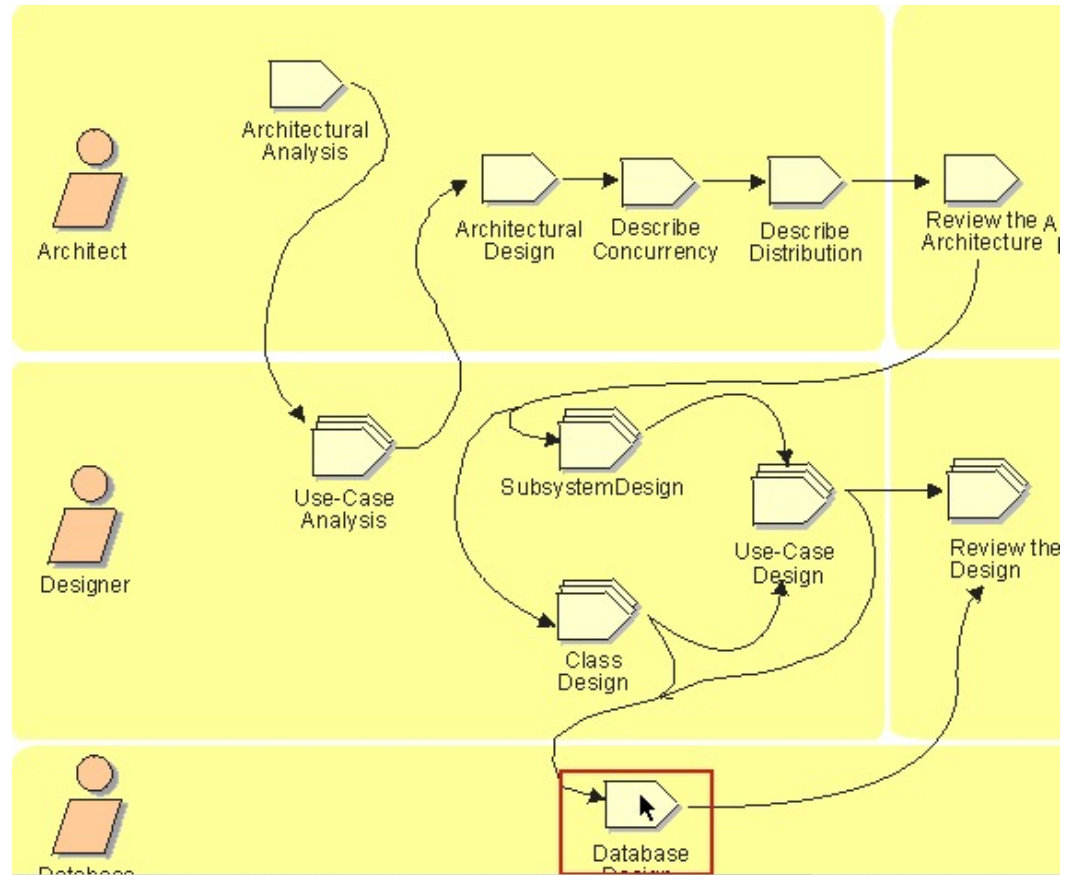
from **Rational Unified Process**

Requirements



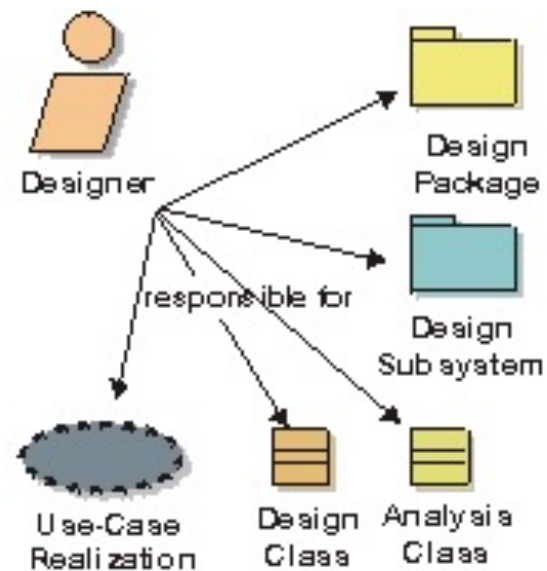
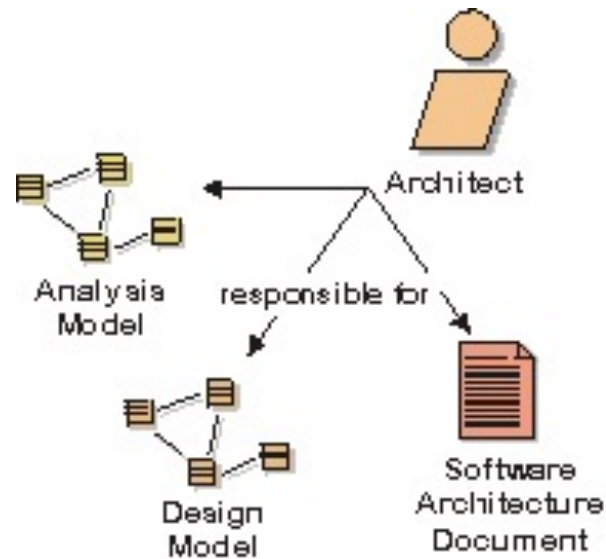
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Design



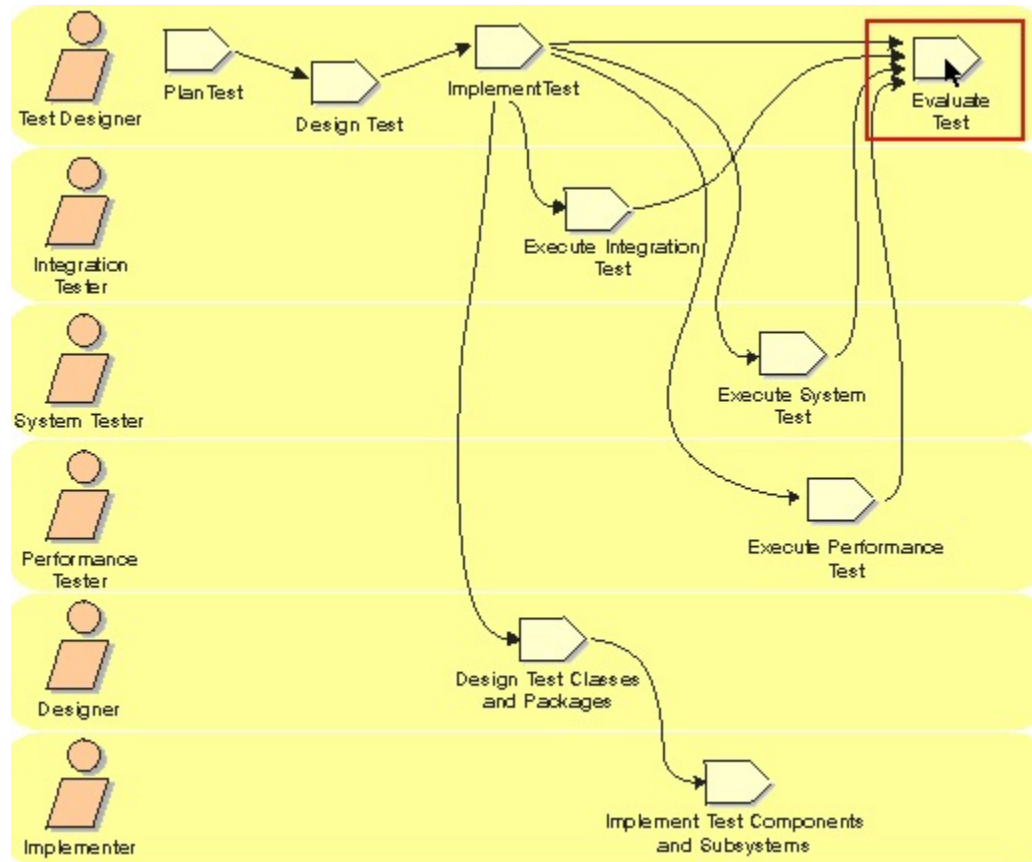
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Design

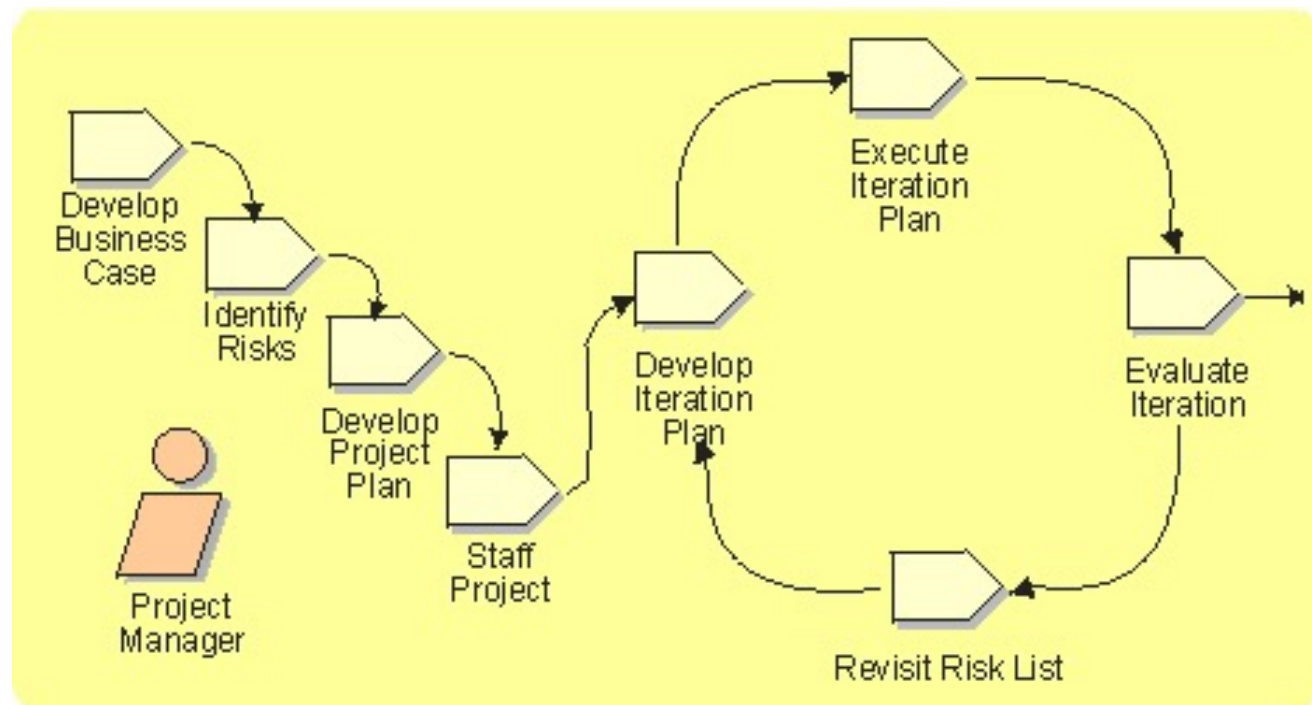


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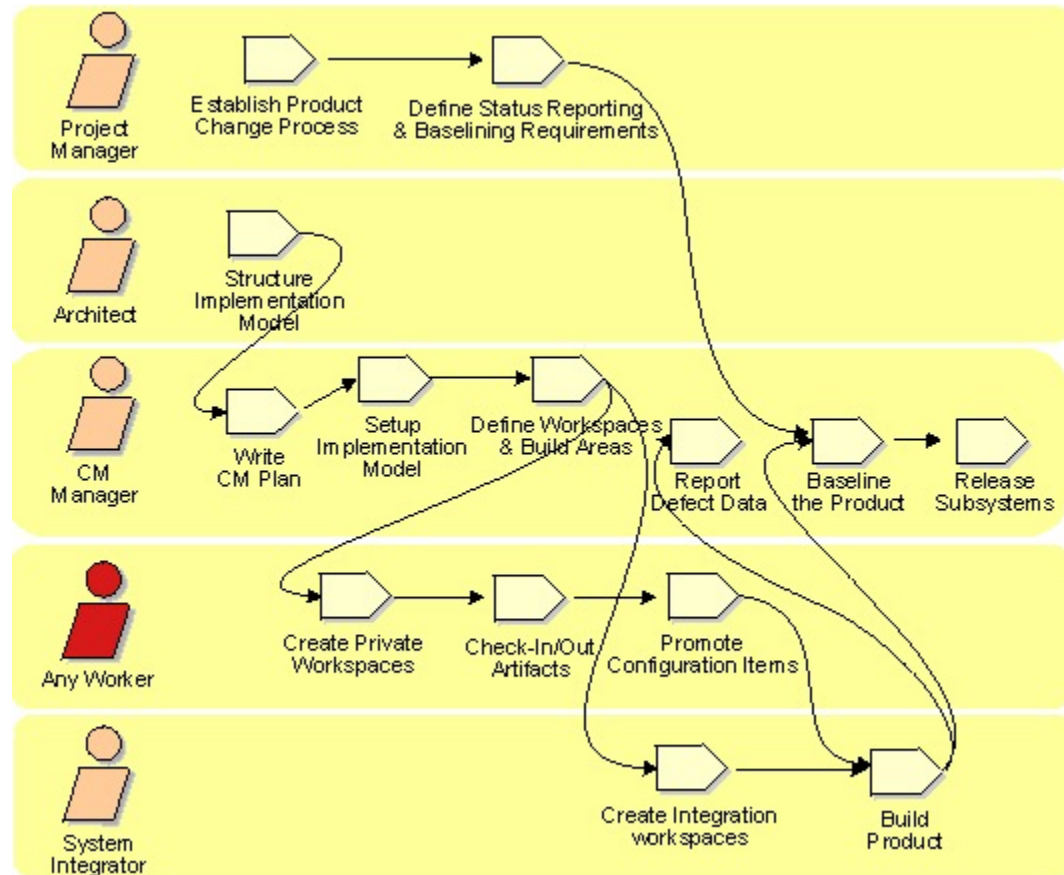
Test



Project management



Configuration & change management



References

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