

The Unified Process

- History.
- Phases and Milestones.
- Workflows.

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History (1 of 2)

- 1967: Ericsson software engineering process.
 - Component-based.
 - Divide-and-conquer.
 - "traffic cases."
- 1987: Ivar Jacobson, Objectory.
 - Workflows: requirements, analysis, design, code, test.
 - Document driven: customized templates.

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History (2 of 2)

- Rational.
 - Iterative development process.
 - Acquired Objectory in 1995 and formed Rational Objectory Process (ROP).
 - Complementary approach:
 - Evolved into Rational Unified Process in 1998.
 - Process model.
 - Templates.
 - 1999: Jacobson published *Unified Software Development Process*.

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4 Sequential Phases (1 of 2)

- Inception.
 - Establish goals.
 - Build business case.
 - Identify essential system requirements.
 - Initiate risk management.
- Elaboration.
 - Develop architecture.
 - Capture functional requirements as use cases.
 - Identify non-functional requirements.
 - Plan the construction.
 - Continue risk management.

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4 Sequential Phases (2 of 2)

- Construction.
 - Build the system.
 - Maintain architectural integrity.
 - Incremental, iterative.
- Transition.
 - Final testing (system testing, acceptance testing, beta testing).
 - Do user training, documentation, installation, consultation.
 - Perform post mortem review.

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Milestones

- Mark the end of phases.
- Measurable.
- Binary.
- May be documents or events.

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Who-What-When-How

- Workers (roles). ← who
- Activities (tasks). ← how
- Workflows (sequences of tasks). ← when
- Artifacts (products of activities). ← what

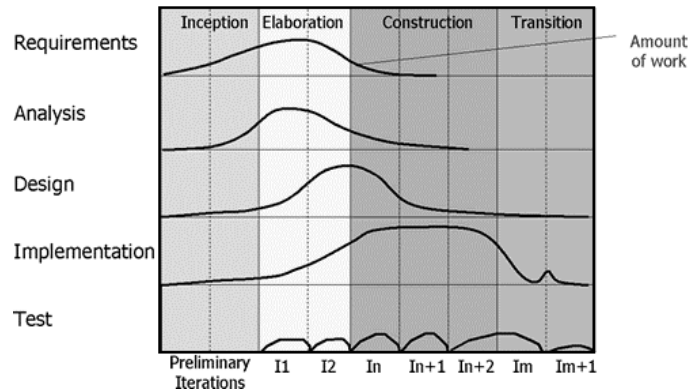
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Core Workflows

- Requirements.
- Analysis.
- Design.
- Implementation (code).
- Test.

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Workflows x Phases



Source: <http://www.clearviewtraining.com/example1/index.htm>

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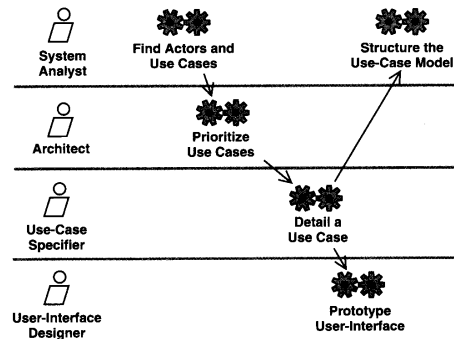
Dependencies

- Activity specifies:
 - What must be done.
 - Input artifacts.
 - Output artifacts.
 - Who (which worker role) performs the activity.
- Each workflow is a sequence of activities.
 - The sequence is determined by the dependencies between input and output artifacts.

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Example (1 of 2)

- Requirements Workflow

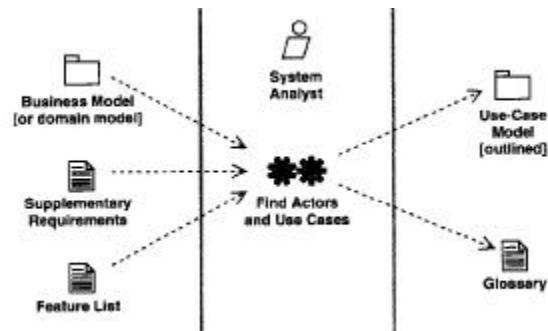


Jacobson, et. al., *The Unified Software Development Process*, Addison-Wesley, 1999.

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Example (2 of 2)

- Inputs/outputs of an activity.



Jacobson, et. al., *The Unified Software Development Process*, Addison-Wesley, 1999.

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