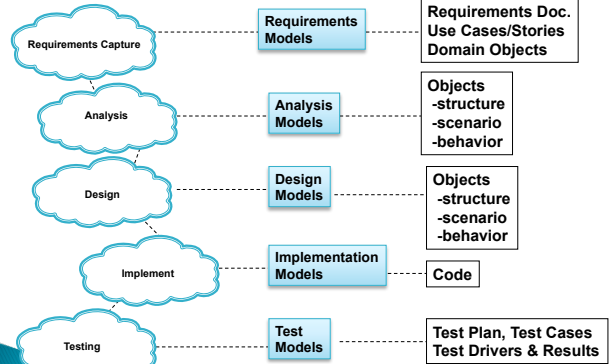
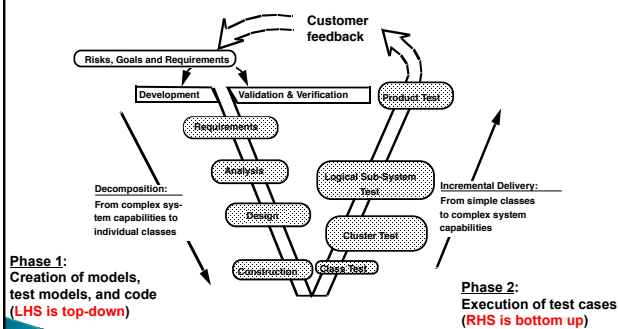


# Activities, Process, and Models

## OO Development Overview

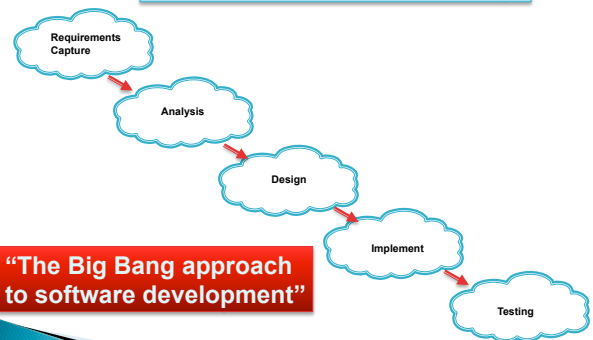


## A Certification Iteration



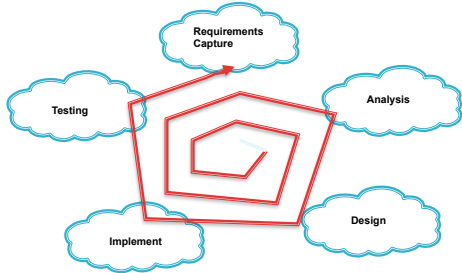
## Waterfall Development

Activities carried out one after the other as steps



## Incremental-Iterative Development

### The Spiral Model



Can have macro and micro iterations but needs to **converge**

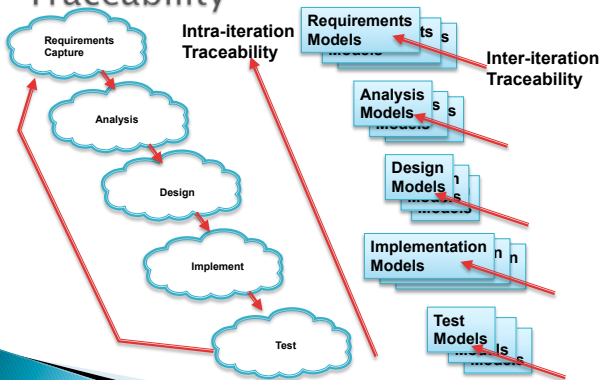
5

## Aiming for Traceability

- ▶ Traceability is required to achieve convergence:
  - We must document the *continuity* that must exist between the work-products of different activities.
    - At least required for **regression testing**
    - In turn, continuity enables completeness and consistency checks.
- ▶ Within a particular activity, the work-products must be **consistent**:
  - e.g., the structural, scenario and behavior models must be consistent
    - For example, if an interaction diagram shows an object receiving a message, then the statechart of this object must reflect this possibility
- ▶ Work-products must also be **complete** with respect to the current requirements.

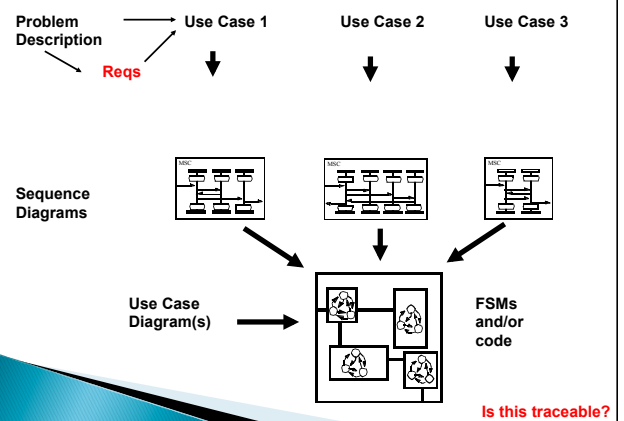
6

## Traceability

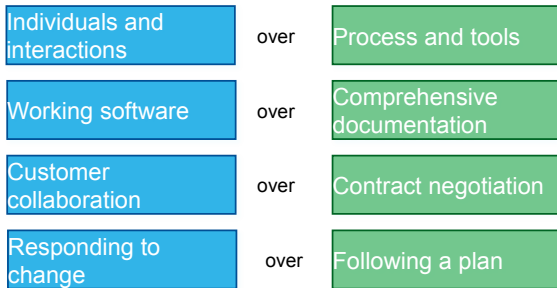


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## UML's Scenario Driven Modeling Approach



## The Agile Manifesto—a statement of values



Source: [www.agilemanifesto.org](http://www.agilemanifesto.org)

## The Core of Agile Modeling

### Some Core Principles

- Assume Simplicity
- Expect Incremental Change
- Enabling the Next Effort is Your Secondary Goal
- Model With a Purpose
- Use Multiple Models
- Maximize Stakeholder Investment
- **Value Quality first**
- Get Rapid Feedback
- **Software Is Your Primary Goal**

### Some Core Practices

- Active Stakeholder Participation
- Apply the Right Artifact(s)
- **Collective Ownership**
- Create Several Models in Parallel
- Create Simple Content
- Depict Models Simply
- Display Models Publicly
- **Model in Small Increments**
- Model With Others
- **Prove it With Code**
- Use the Simplest Tools

## Scrum

