SoftEng306
Software Engineering Design 2

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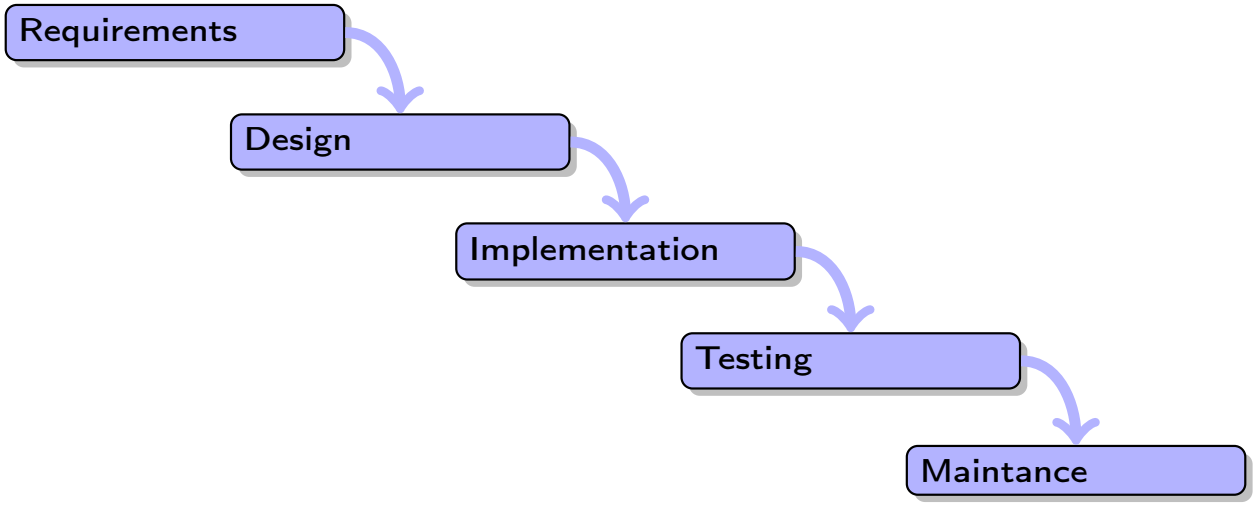
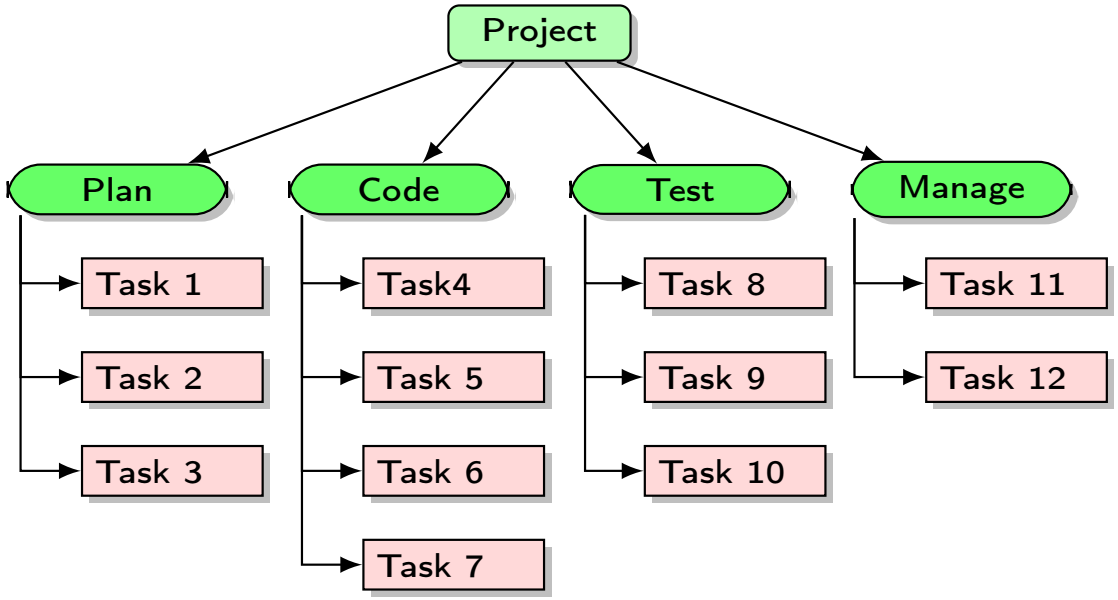
Waterfall model



- Design process taken from mature industries
- Not really specific to software engineering
- Needs stable requirements and scope
- Project is in distinct phases and moves to next phase only after completion (pure waterfall model)

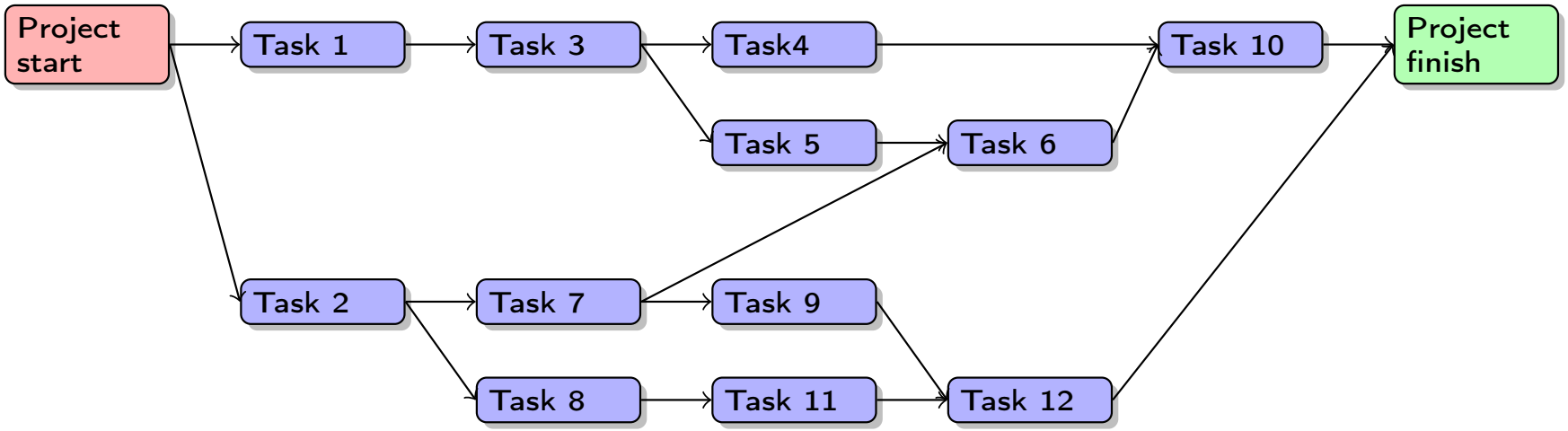
Work breakdown structure (WBS)

- structural – part-whole relation
- decomposition of a project into smaller components
- hierarchical structure, often depicted as a tree
  - often 3 levels
- 100% rule
- sub-components need to be complete
- no overlap
- outcomes, not actions



Project network

- causal, chronological – before-after relation
- based on tasks/components of WBS
- flow chart
- requires analysis of dependences
- allows to see which tasks can be done at same time



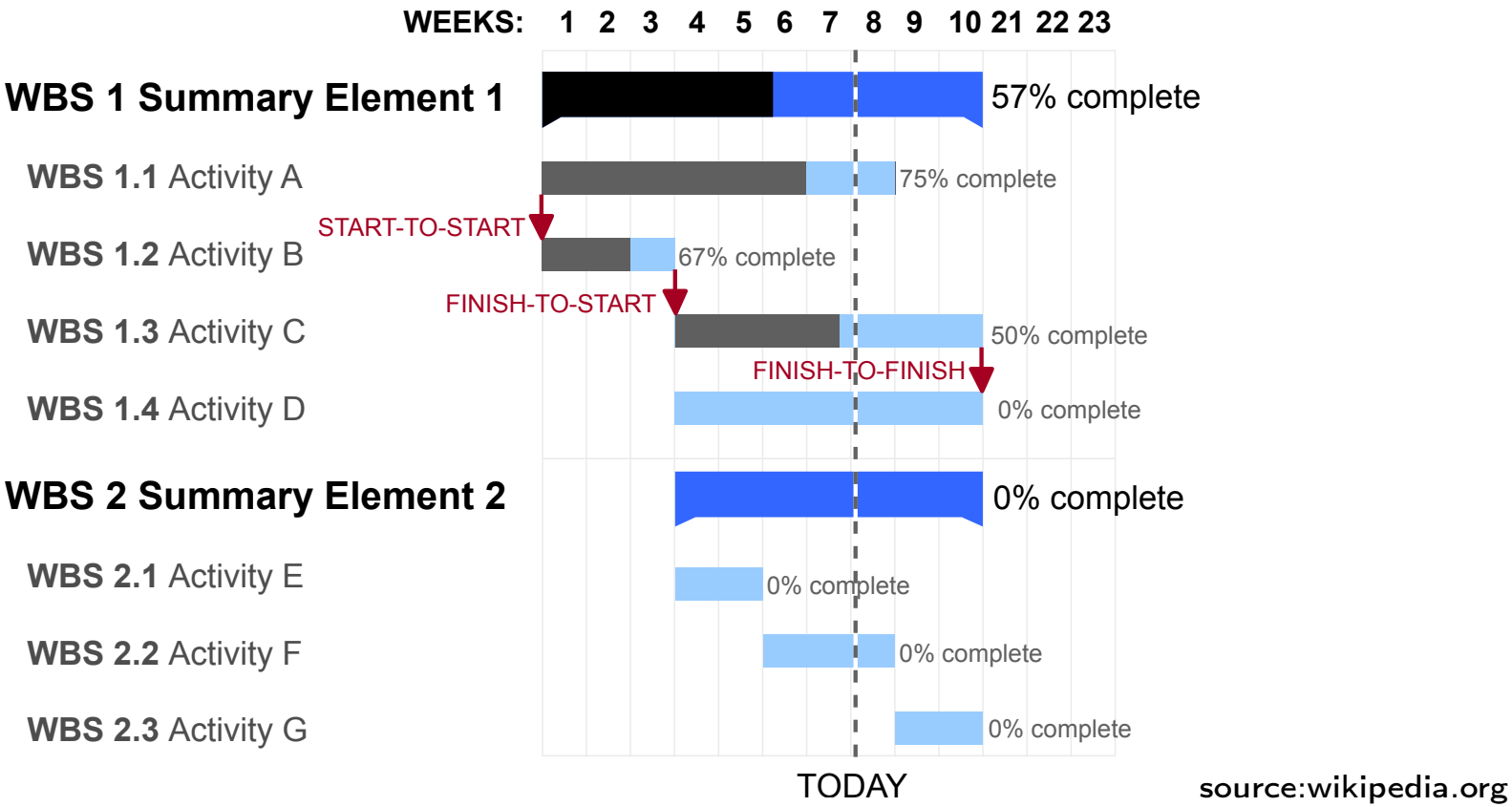
Times and resourses

With WBS and network diagram we now have tasks and their causal relations. For detailed planning we need to

- estimate needed time for each task
- estimate needed resources
  - people
  - computers
  - repositories
  - storage space
  - ...
- critical path: longest path through network diagram
  - project cannot be done quicker

Gannt chart

- detailed schedule of project tasks
- essentially project network with start and finish dates
- use tools like MS Project or LibreProject to create Gantt chart



source:wikipedia.org