SOFTWARE LIFE-CYCLES

Elements and Definitions

Life Cycle
ANSI / IEEE Std 729-1983

• A life-cycle is
  – a period of time that
  – starts when a software product is
    conceived and
  – ends when the product is no longer
    available for use.

=> Organised in phases

Phases of a Life-Cycle

• Requirements
• System Design
• Detailed Design
• Implementation
• Testing & Installation
• Operations & Maintenance
• Retirement

• Phases are activities
  – that transform inputs into outputs and
  – interact so that the transformation goes
    from abstract needs to
    correct source-code.

=> results (= inputs & outputs): documents
=> verify transformations at milestones
Documentation

- internal technical documentation
- external technical documentation
- end-user documentation
- for each version and release

==> supported by standards

internal technical documentation:
- the results of each phase
- the rationale and assumptions behind the decisions made in each phase
- layouts and results of tests
- error & fixes log

external technical documentation:
- system structure
- required environment
- instructions for installation
- maintenance & operation
- guidelines for trouble shooting

end-user documentation:
- user handbook
- quick reference
- guided tour
- standard set-up

Milestone

- A scheduled event
  - for which some project member or manager is accountable and
  - that is used to measure progress.

==> supported by standards

- A milestone includes typically
  - a formal review,
  - the issuance of documents and
  - the delivery of an (intermediate) product.
Standards

• Project independent
  – rules and procedures
  – embedded in a common system of terms
  – and quality criteria
  – that ensure inter-project adaptability
  – and compatibility of solutions.
• Important organisations: ANSI, IEEE

End of Section 2b

coming up:
alternatives to the waterfall model