SOFTWARE LIFE-CYCLES

The Waterfall Model

A Case Study

The Waterfall Life-Cycle

- is the ancestor of all other models
- still prevalent in practical application
- exists in many variations
- supported by a multitude of tools

- no at all a perfect solution

Life-Cycle?

- A project is a set of activities, interactions and results ... 

- A life-cycle is the organisational framework for a project.

The WATERFALL MODEL

- set of activities: sequential phases

- transformation of results includes verification

The WATERFALL MODEL

- completeness of activities: Maintenance
Cost Ratio of Errors

\[
\text{Requirements : Maintenance} = 1 : 200
\]

Activities during Phases

- Requirements: establish your customer's needs
- System Design: develop the system's structure
- Detailed Design: develop module structures
- Implementation: write source-code
- Testing: check what you have developed
- Installation: bring the system into production
- Maintenance: correct, adapt, improve

Results of Phases

- Requirements: software requirements specification
- System Design: software design chart; interfaces
- Detailed Design: module specifications
- Implementation: programs, files, etc...
- Testing: test suits and test results
- Installation: run-time version of the system
- Maintenance: new version or release of the system

=> Documents

Alternative Life-Cycles

- Phases remain similar
- Results remain similar
- INTERACTION changes

End of Section 2a

coming up:
more about life-cycles ...