Waterfall

Team Niagara_falls

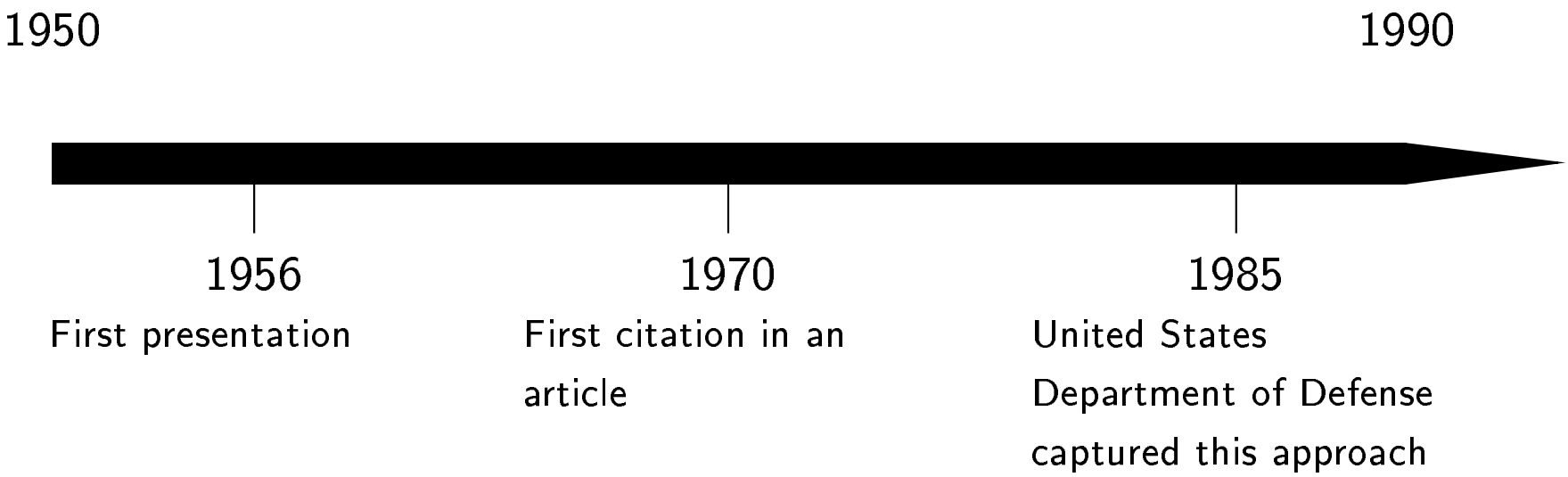
Introduction and History

Introduction

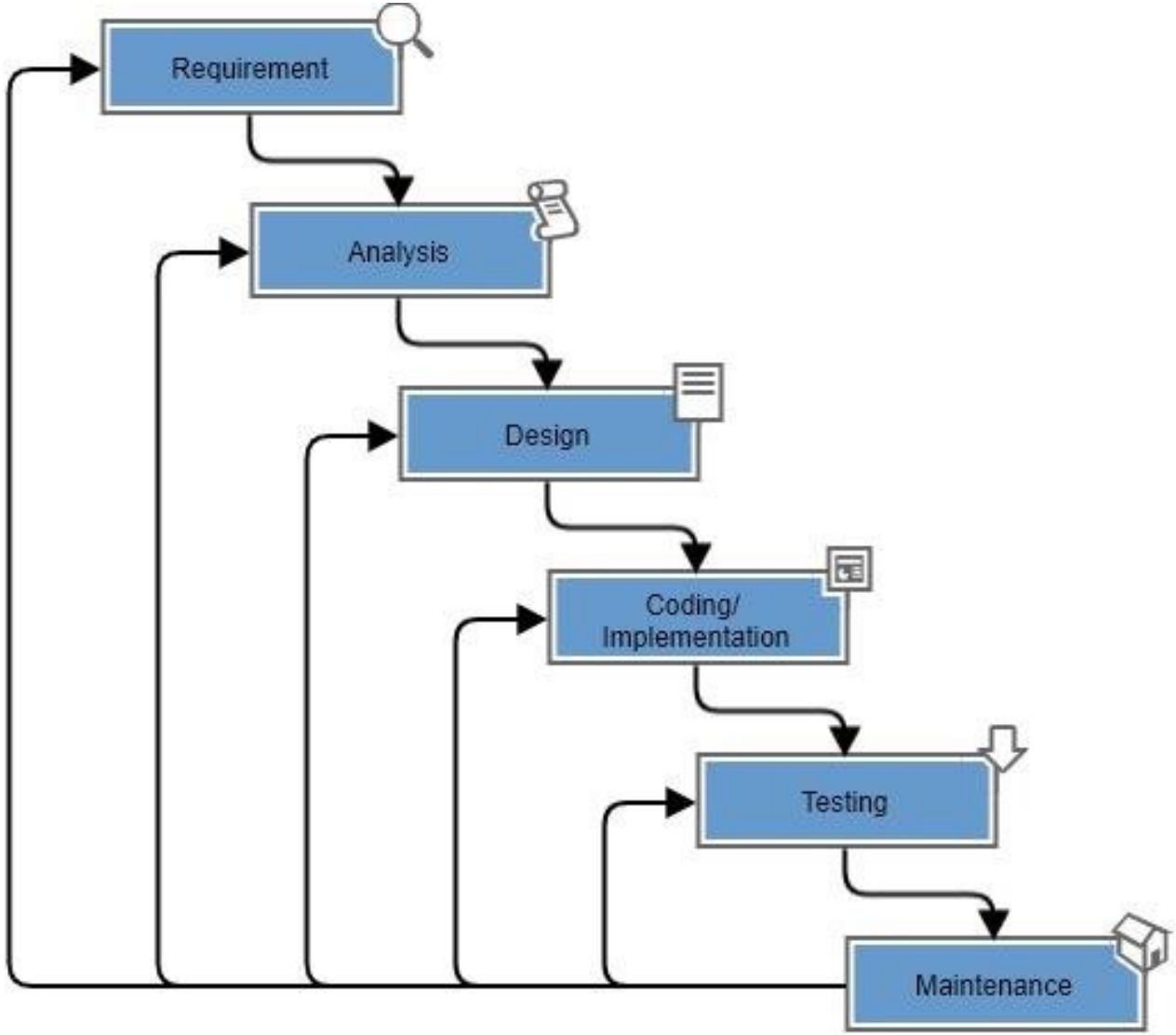
- Linear sequential phases
- Used in engineering design
- In software development:
  - earliest SDLC approach
  - the less iterative and flexible approaches

Introduction and History

History



Waterfall method



Requirement

system requirement

- Deadline
- Budget

software requirement

- Functionality
- User interface
- Support

Analysis and Design

Analysis

- Structure
- Create a model
- Technical resources

Design

- language
- Class
- Libraries
- Main function

Coding

Coding

At this stage we start implementing the project,using the model and logic found during the last phase.The project will most likely be coded in smaller components before being put together.

Testing

After coding we need to test our product to see if it works well,do some quality insurance and debug.

Last operation

Deployment

The product is judged finished and deployed into action.

Maintenance

Correction of bug and performance maintenance to improve or fix the final product. That can lead to a series of patches.

Advantages

Simple and easy to understand

Its linear and sequential nature makes it easy to comprehend, especially for stakeholders who are not familiar with software development processes.

Clear milestones and deliverables

Each phase has well-defined deliverables and milestones, making it easier to track progress and manage expectations.

Early detection of issues

Because requirements are established upfront, any potential issues can be identified early in the process, reducing the likelihood of major changes later on.

Structured approach

The rigid structure ensures that each phase is completed before moving on to the next, which can provide a sense of security and stability.

Criticisms

Limited flexibility

The linear nature of the Waterfall model makes it difficult to accommodate changes once a phase is completed.

Late testing

Testing occurs towards the end of the development process, which means that defects may not be discovered until late stages, leading to higher costs and risks.

Client involvement limited to early stages

This involvement typically occurs primarily in the requirements phase, which can lead to misunderstandings or mismatches between client expectations and the final product.

References

- wikipedia/waterfall_model
- techtarget/waterfall_model
- ryte/waterfall_model
- tutorialspoint/waterfall_model