# Waterfall

Team Niagara_falls

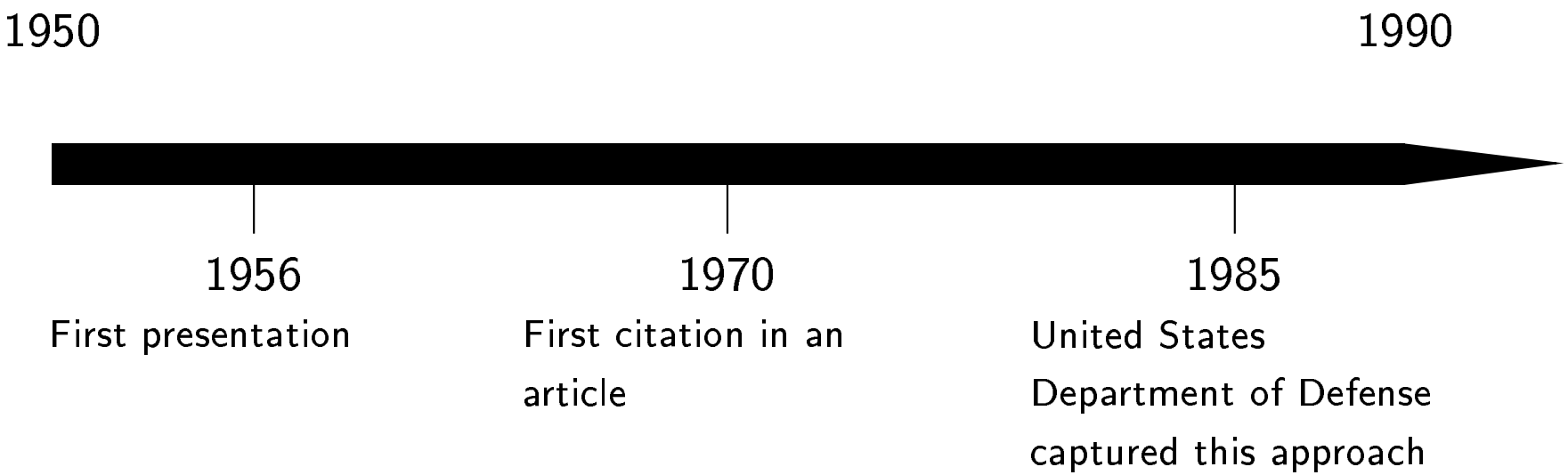
# Introduction and History

## 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

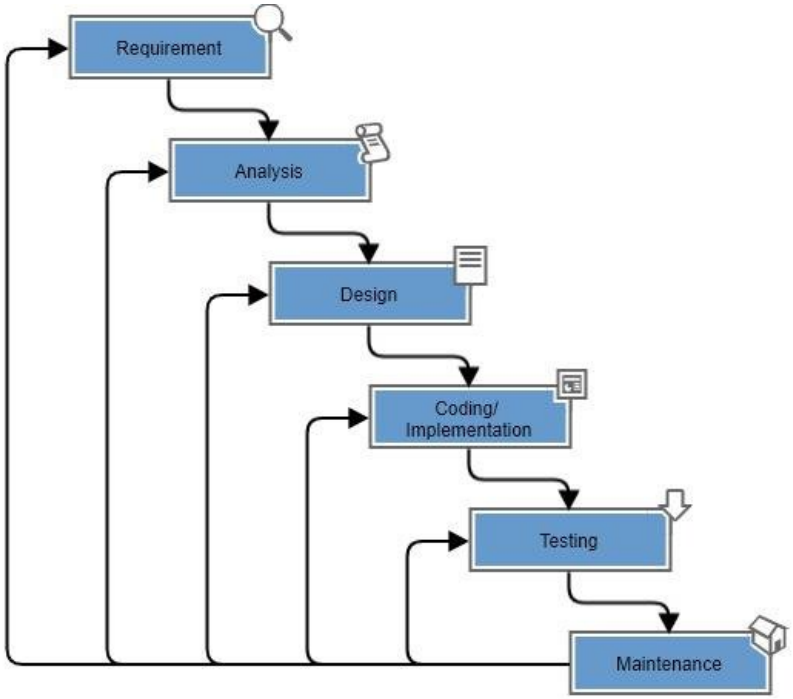



Figure: waterfall model

# Requirement

## system requirement

The first part of this method is about the plan of the product, the price, the deadline and everything out of the product creation

## software requirement

in this phase we need to know what will the product and document everything about it, functionality of the product, interface , support of the product

# Analysis and Design

## Analysis

In this phase we need to understand the project and structure it to generate a model that will be used in the implementation. In this phase we also need to know the technical resources that will be used

## Design

The design is the phase we choose the details about implementation such as the language used, the class and libraries used for next phase

# 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.