

# Best Practices of Programming

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# Outline

- 1 Requirements Analysis
- 2 Design
- 3 Implement
- 4 Test
- 5 Maintain

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# Fibonacci Sequence Generator

## Requirement

Write a program to print Fibonacci sequence. The length of output sequence is specified by the first command line parameter.

# Checklist

## Functional Requirements

- Are all the inputs to the system specified, including their source, accuracy, range of values, and frequency?
- Are all the outputs from the system specified, including their destination, accuracy, range of values, frequency, and format?
- Are all output formats specified for Web pages, reports, and so on?
- Are all the external hardware and software interfaces specified?
- ...

# Checklist

## Non-functional Requirements

- Is the expected response time, from the user' s point of view, specified for all necessary operations?
- Is the level of security specified?
- Are minimum machine memory and free disk space specified?
- ...

# Checklist

## Requirement Quality

- Are the requirements written in the user' s language? Do the users think so?
- Does each requirement avoid conflicts with other requirements?
- Do the requirements avoid specifying the design?
- Are the requirements clear enough to be turned over to an independent group for construction and still be understood? Do the developers think so?
- ...

# Reference

- Code Complete 2
- Software Requirements(Developer Best Practices)



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