REKAYASA PERANGKAT LUNAK

Lecturer Team for Even Semester Year 2019-2020:

Hetti Hidayati

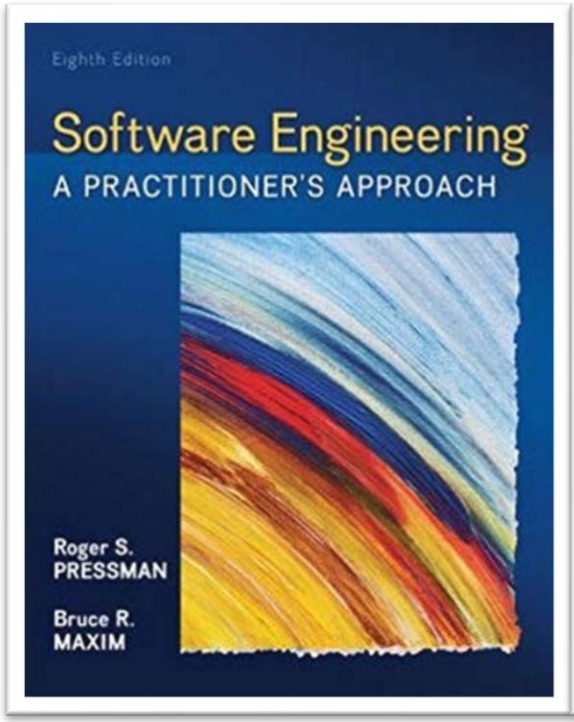
Reza Budiawan

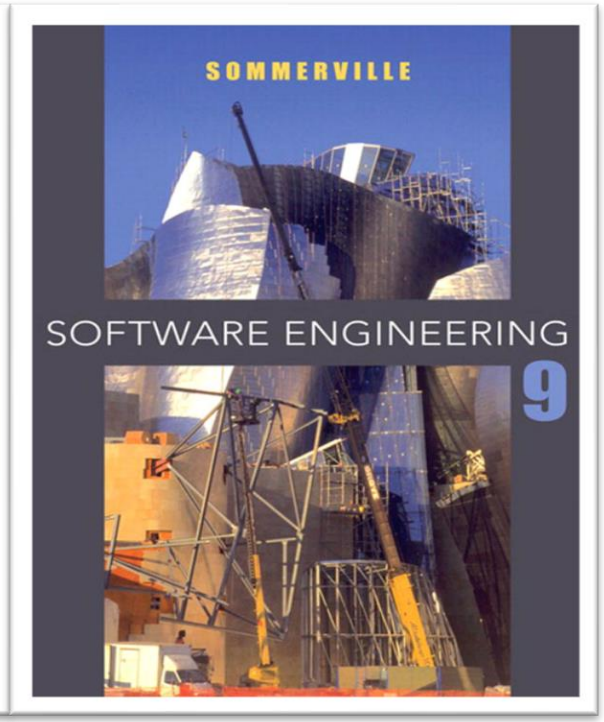
Only for academic purpose at Diploma of Application of Software Engineering, School of Applied Science, Telkom University

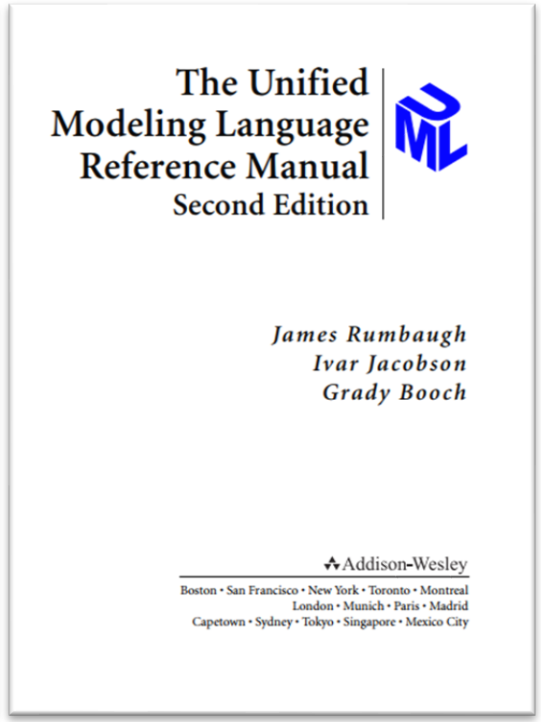
Rules

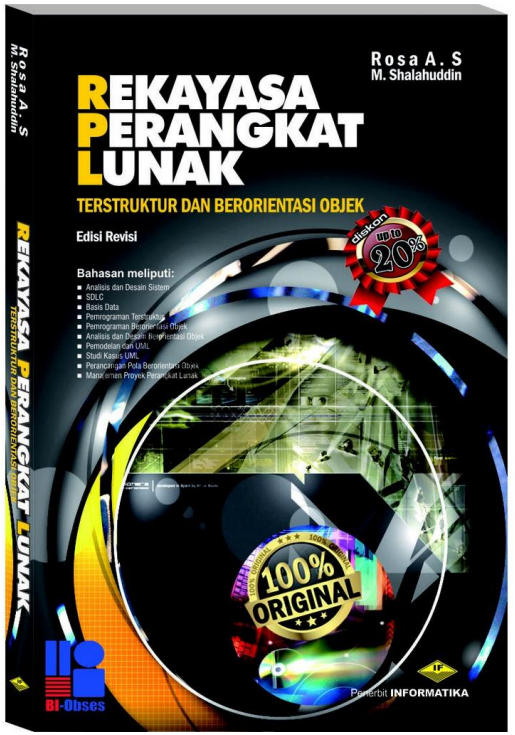
1. Presence's Tapping:
   a) At the beginning
   b) After 1 hour of the class
2. Tardiness tolerance: 15 minutes
3. Uniform rule: based on Tel-U's rule about uniform
4. Total minimal presences: 75%
5. There is a quiz for every meeting except for assessment or presentation schedule's meeting.
6. **All acts of cheating will get an E grade**

RESOURCES


Eighth Edition
Software Engineering
A PRACTITIONER'S APPROACH
Roger S. PRESSMAN
Bruce R. MAXIM


SOMMERVILLE
SOFTWARE ENGINEERING
9


The Unified Modeling Language Reference Manual
Second Edition
James Rumbaugh
Ivar Jacobson
Grady Booch
Addison-Wesley
Boston • San Francisco • New York • Toronto • Montreal
London • Munich • Paris • Madrid
Capetown • Sydney • Tokyo • Singapore • Mexico City


Rosa A. S
M. Shalahuddin
REKAYASA PERANGKAT LUNAK
TERSTRUKTUR DAN BERORIENTASI OBJEK
Edisi Revisi
Bahasan meliputi:
100% ORIGINAL
Penerbit INFORMATIKA

INTRODUCTION

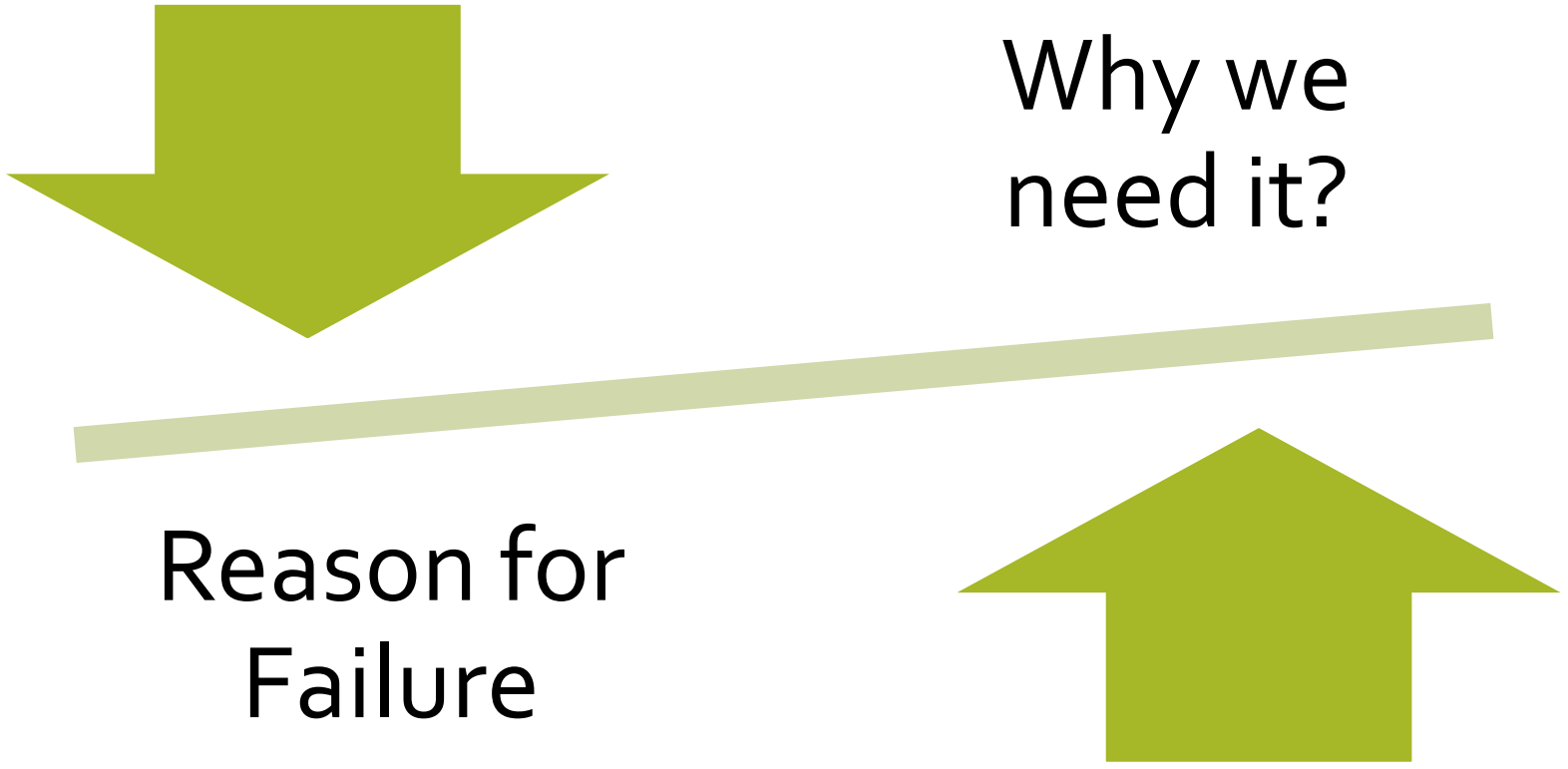
Software Engineering

Definition

- **What is it?** Software engineering encompasses a process, a collection of methods (practice) and an array of tools that allow professionals to build high-quality computer software.
- **Who does it?** Software engineers apply the software engineering process.
- **Why is it important?** Software engineering is important because it enables us to build complex systems in a timely manner and with high quality.
- **What are the steps?** By applying an agile, adaptable process that leads to a high-quality result that meets the needs of the people who will use the product.
- **What is the work product?** Work product is the set of programs, content (data), and other work products that are computer software.

WHY??

Why???

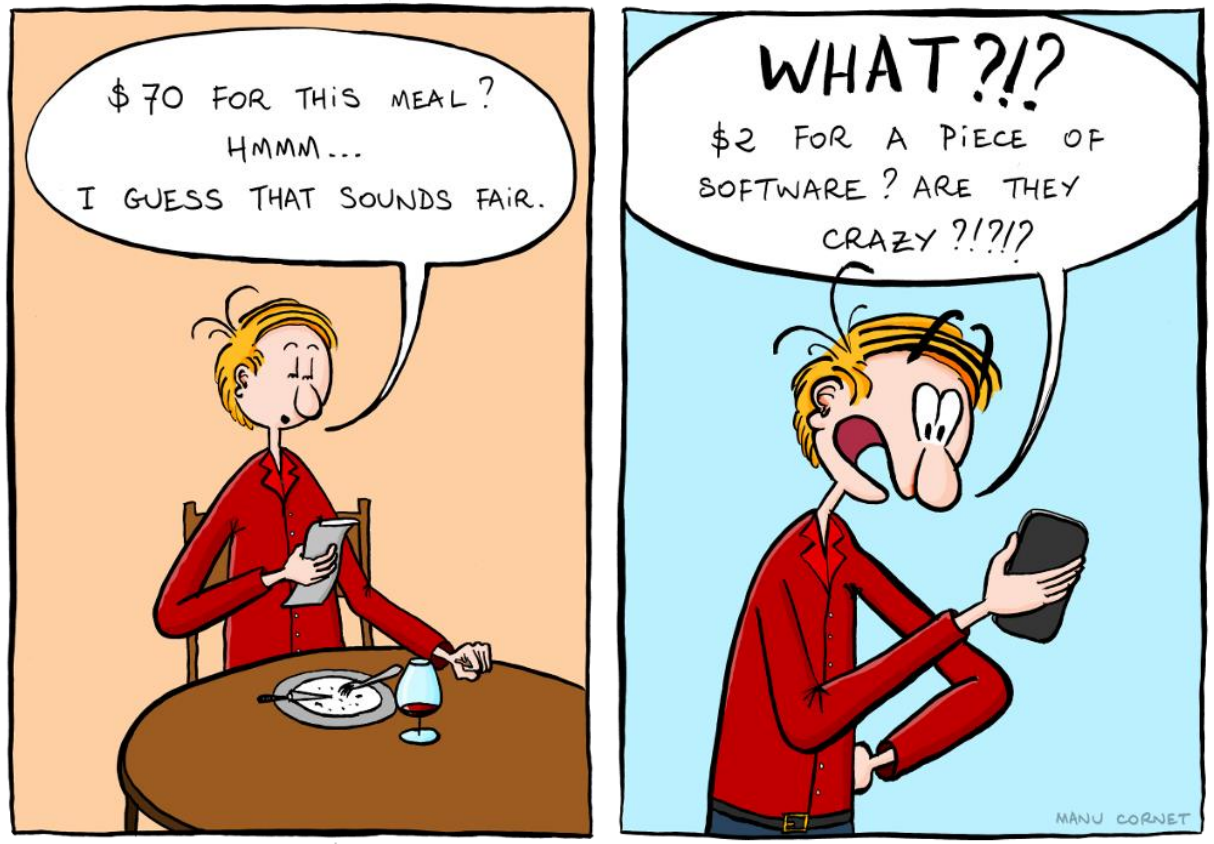


Reasons for the failures

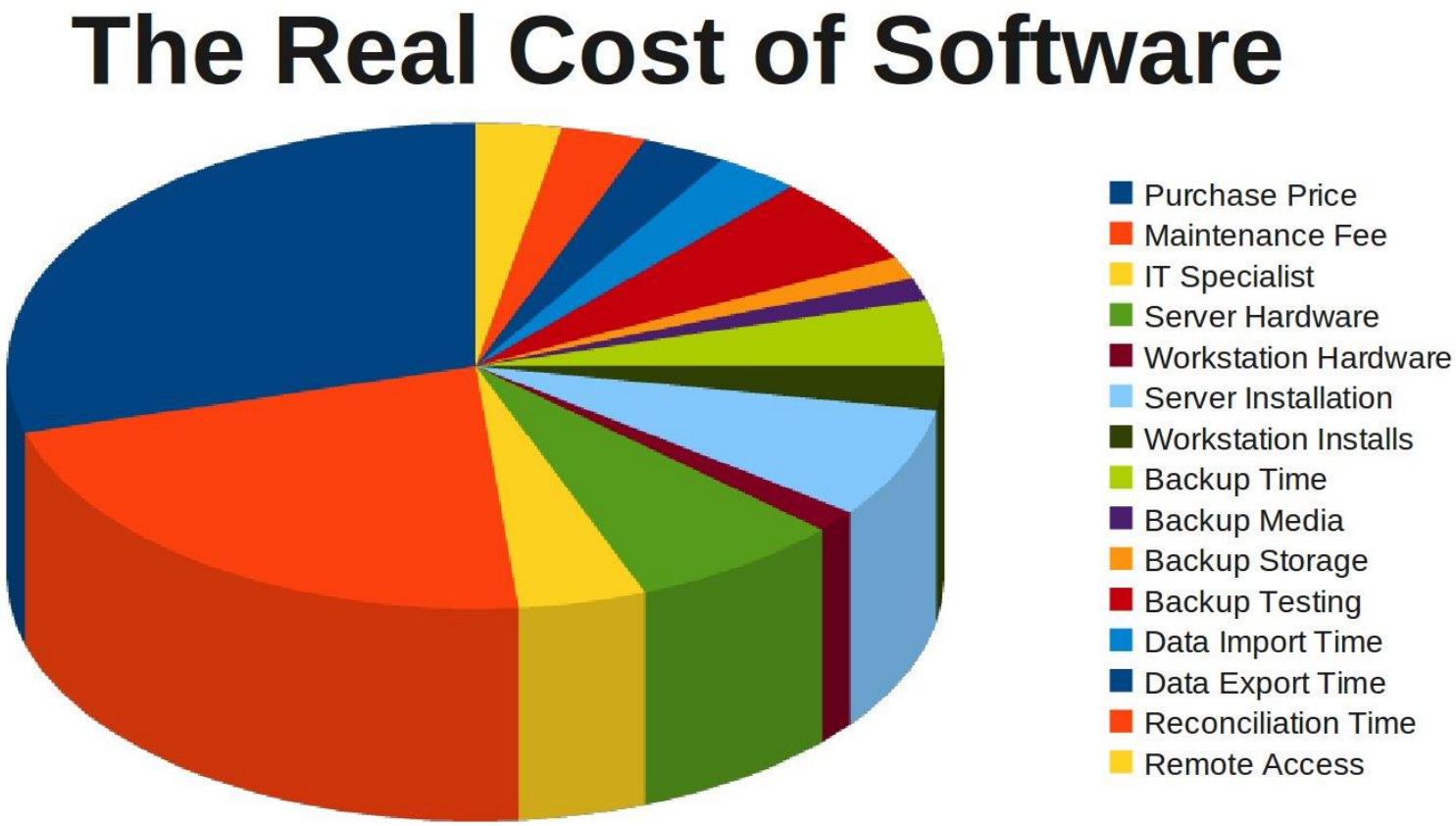
- Software Requirements
- Software is not tangible
- Time & Cost

Software Requirement

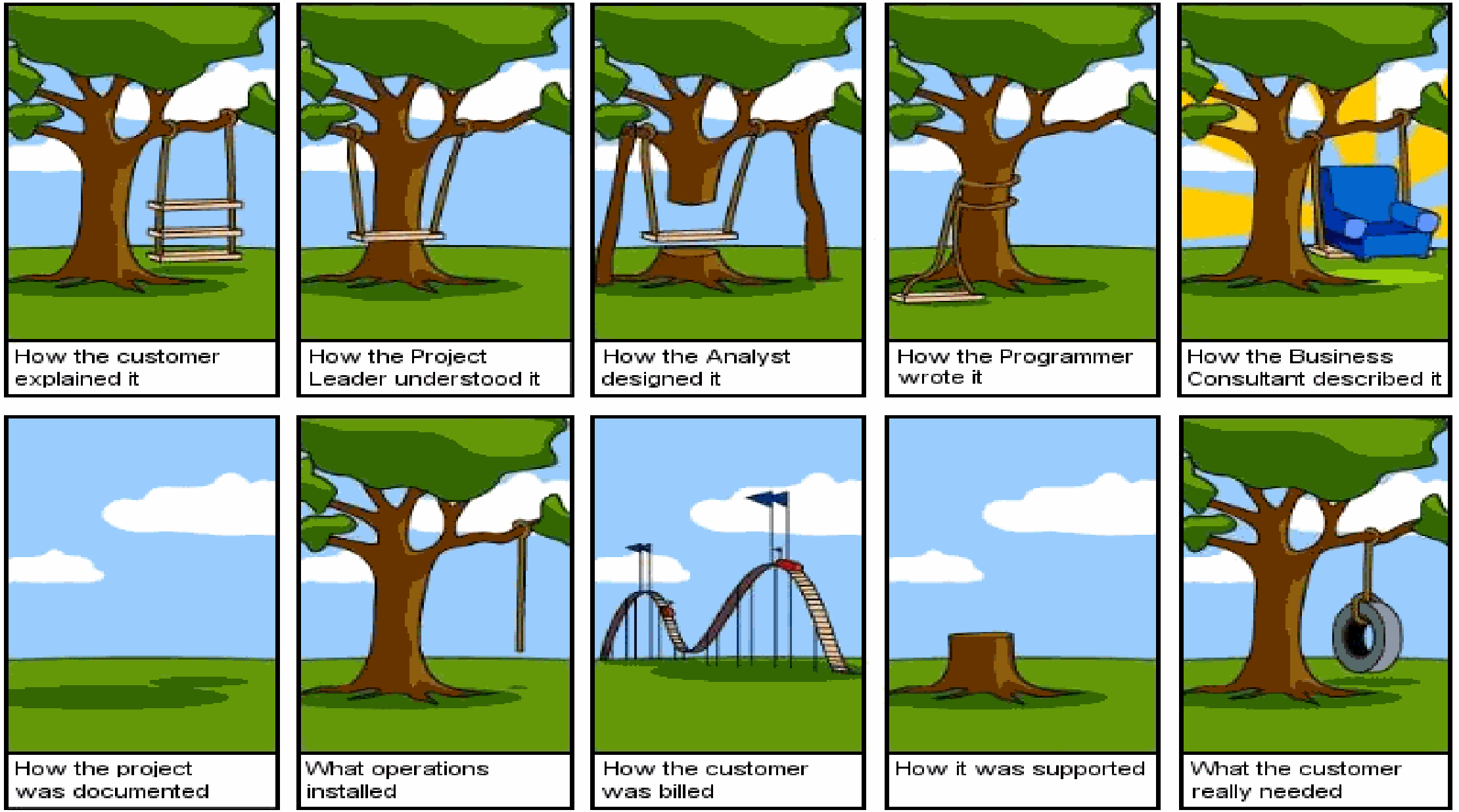
Software is not tangible



Time & Cost


The Real Cost of Software
Purchase Price
Maintenance Fee
IT Specialist
Server Hardware
Workstation Hardware
Server Installation
Workstation Installs
Backup Time
Backup Media
Backup Storage
Backup Testing
Data Import Time
Data Export Time
Reconciliation Time
Remote Access

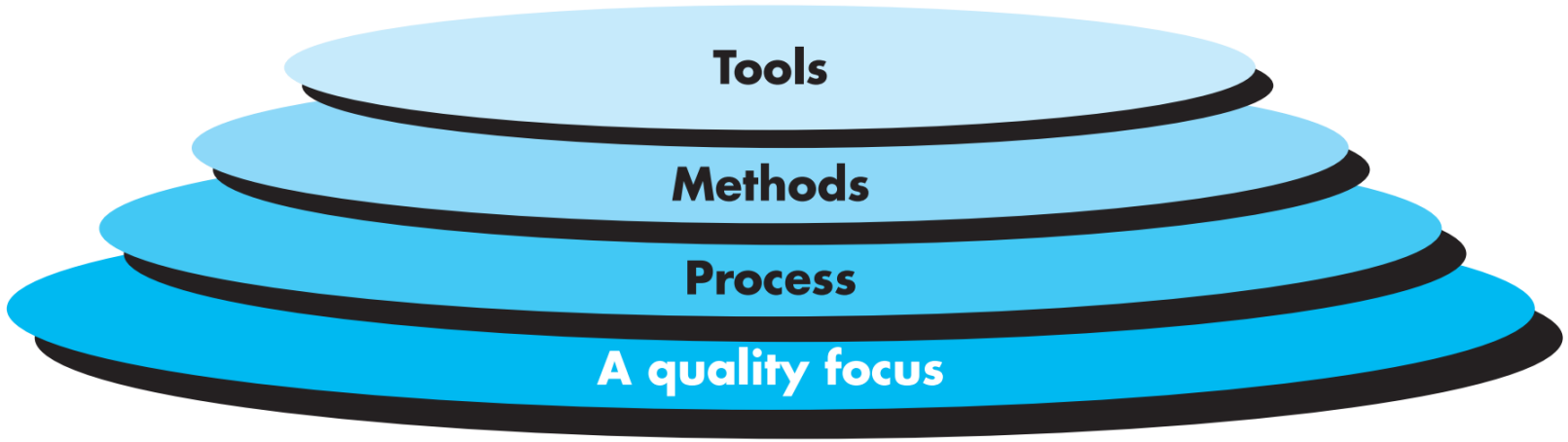
Problem's Conclusion



SOFTWARE PROCESS

Layered Technology

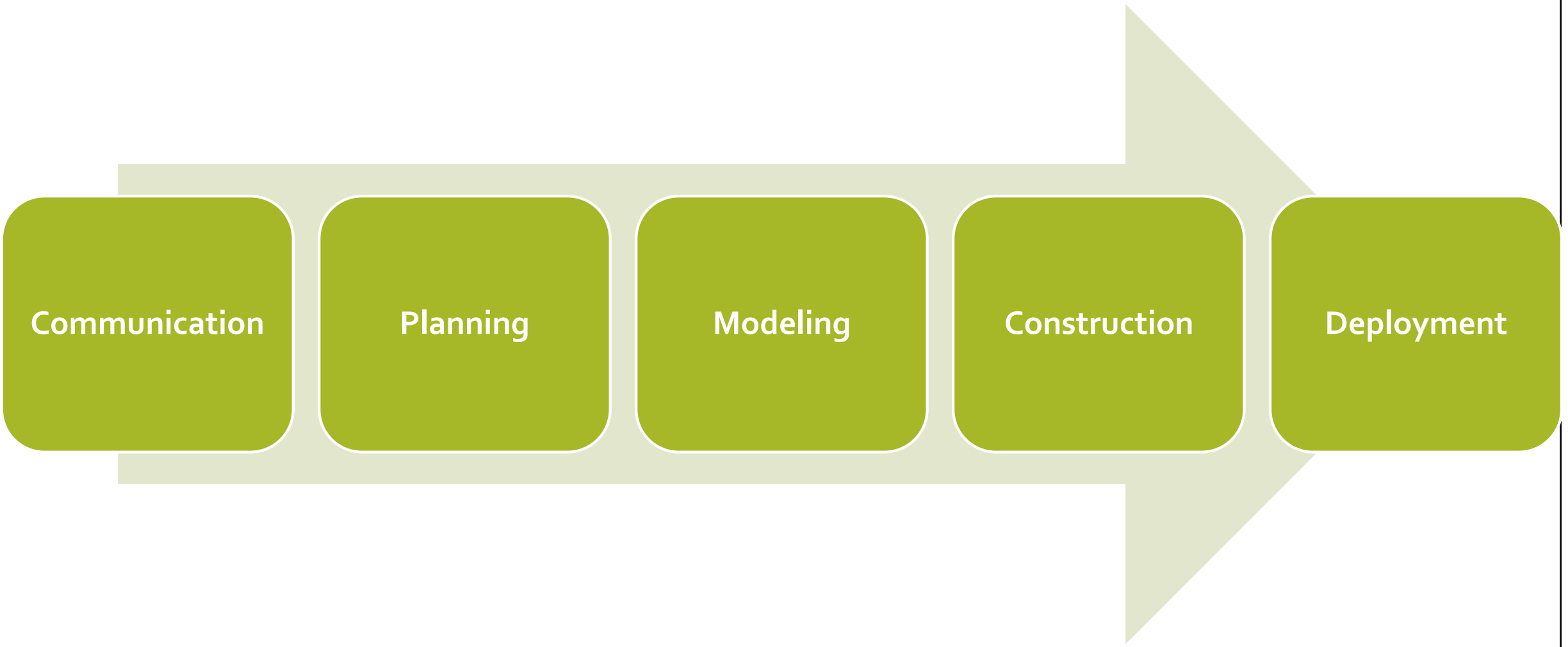
- Software engineering is a layered technology
- The foundation for software engineering is the process layer.



Definition

- A process is a collection of activities, actions, and tasks that are performed when some work product is to be created.
- In the context of software engineering, a process is not a rigid prescription for how to build computer software. Rather, it is an adaptable approach that enables the people doing the work (the software team) to pick and choose the appropriate set of work actions and tasks.

Process Framework



Umbrella Activities

a) **Software project tracking and control**
b) **Risk management**
c) **Software quality assurance**
d) **Technical reviews**
e) **Measurement**
f) **Software configuration management**
g) **Reusability management**
h) **Work product preparation and production**

General Principle

David Hooker has proposed seven principles that focus on software engineering practice as a whole.

1. The First Principle: **The Reason It All Exists**
2. The Second Principle: **KISS (Keep It Simple, St*pid!)**
3. The Third Principle: **Maintain the Vision**
4. The Fourth Principle: **What You Produce, Others Will Consume**
5. The Fifth Principle: **Be Open to the Future**
6. The Sixth Principle: **Plan Ahead for Reuse**
7. The Seventh Principle: **Think!**

QUIZ TIME!!

Quiz 1

VIDEO TIME!!

Video Time

- Cara Belajar Efektif
- Deliberate Practice
- Pygmalion Effect

CARA BELAJAR EFEKTIF

DELIBERATE PRACTICE

Pygmalion Effect

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