

# SE 339 – Software Architecture and Design

## Course Overview

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# Goal

- What is the course about?
- What are the rules of the course?

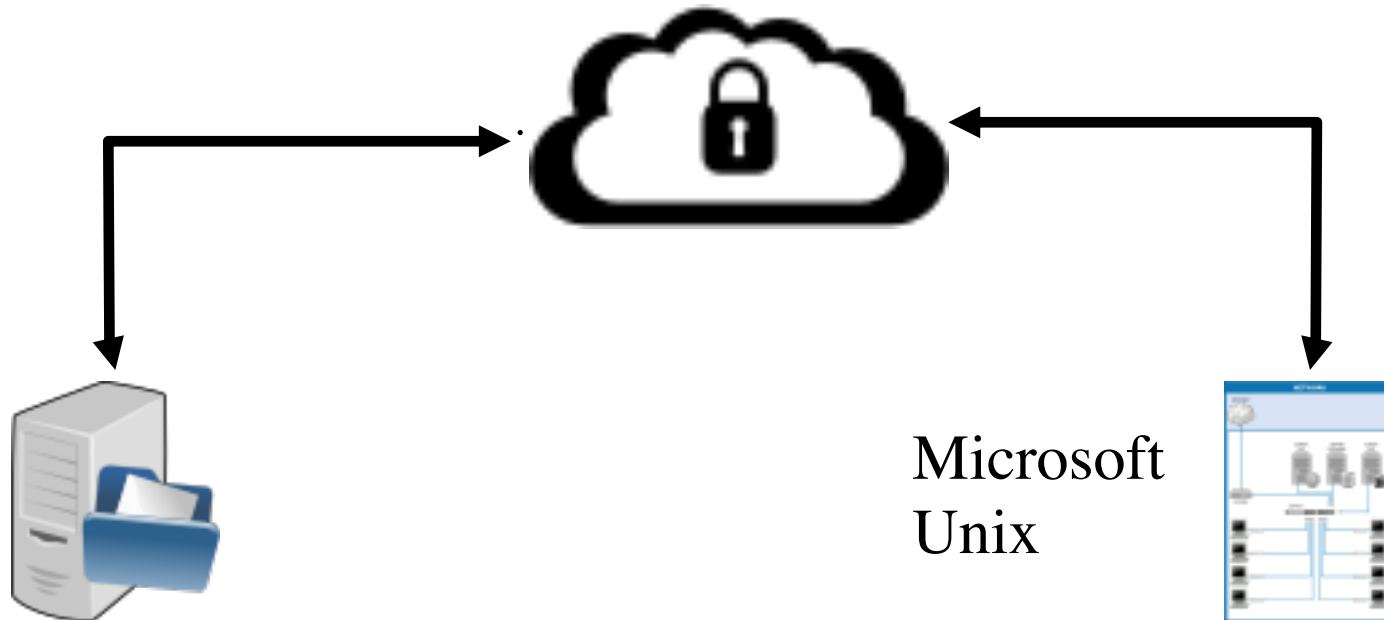
# Clusters of Architectures

1. System architecture
2. Software architecture
3. Enterprise architecture
4. Information and process architecture
5. Other
  - Service architecture
  - Solution architecture
  - Infrastructure architecture

# Why Do We Need Software Architecture?

- No or 'bad' architecture causes often project failure

# Why Do We Need Software Architecture?



# Why Do We Need Software Architecture?



Why are you  
using RSA for  
encryption?

That is an  
architecture  
decision



# Why Do We Need Software Architecture?



What will you do about the performance problem?

The developer is working on it. They will figure it out.



# Main Roles of Software Architect

- Coordinate the technical aspects of the project
- Give expert advices
- Set the technical strategy for the project



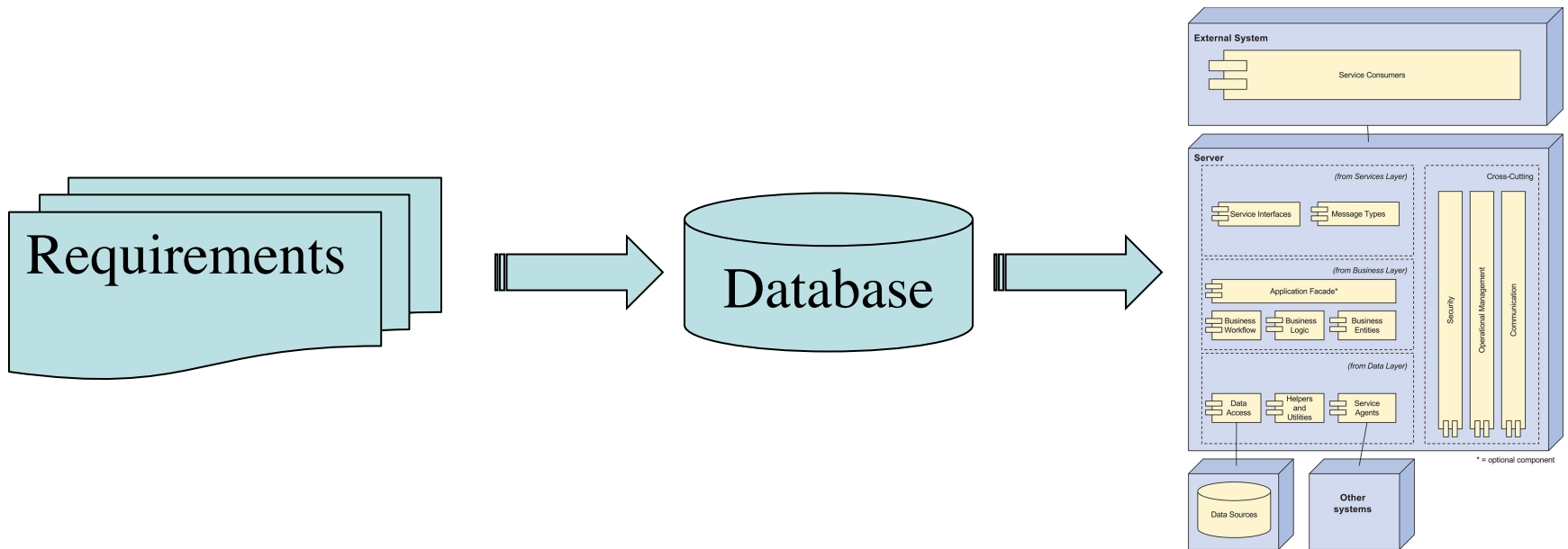
# Role of Software Architect



- Which one do you trust to be a software architect?

# Course Approach

## Early approach



- The architecture becomes obsolete in few months

# Course Approach

We will focus on the process of designing an architecture

We will not focus on architecture styles and patterns – you will learn some

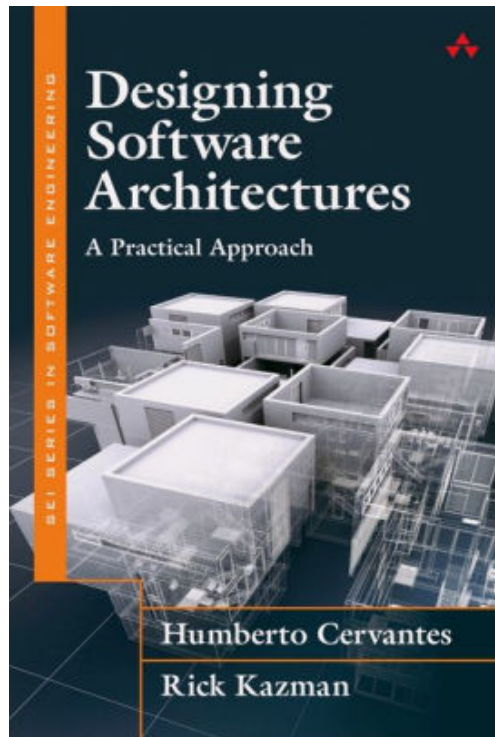
# Expected Outcomes

1. Understand what a software architecture is and explain why it is important
2. Ability to elicit software architecture drivers
3. Ability to use architecture styles, patterns, and tactics
4. Ability to use the attribute-driven method to design software architecture
5. Ability to evaluate software architecture

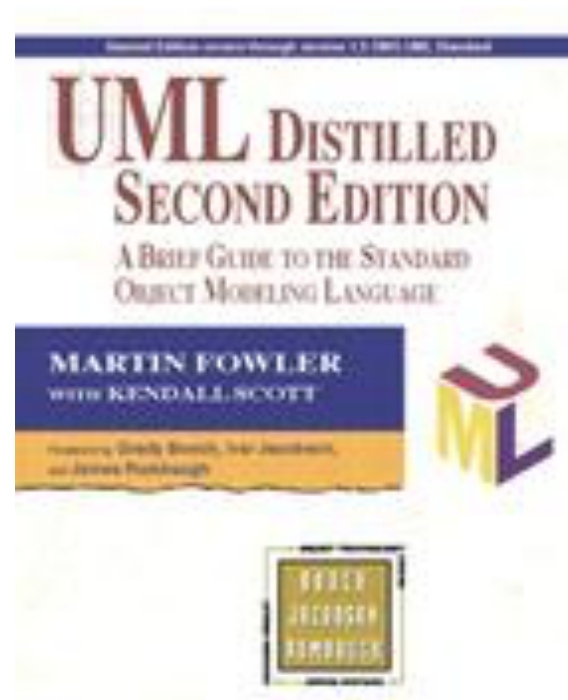
# Relation to Practice

- We will have invited lectures from the industry
  - John Deere
  - Kingland
  - Workiva

# Books



Required



Optional



Optional

# Practice Quiz

First participation quiz on canvas – Let's do it.

Quiz on the course expectation

End

Any question?