

# Software Architecture Design of Software Developed in Student Engineering Teams

Ihor Polataiko

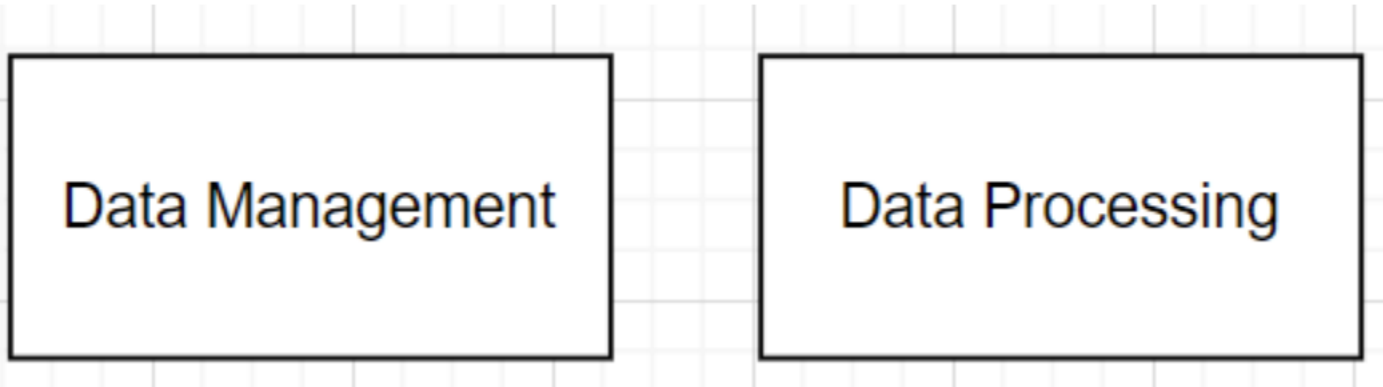
# Introduction

- Software, developed by the teams, that form student software engineering organization should be of high enough quality.
- Most of the significant reworks to the code changes were due to design decisions.
- Upfront architecture process for each project (project duration: 3-5 months).

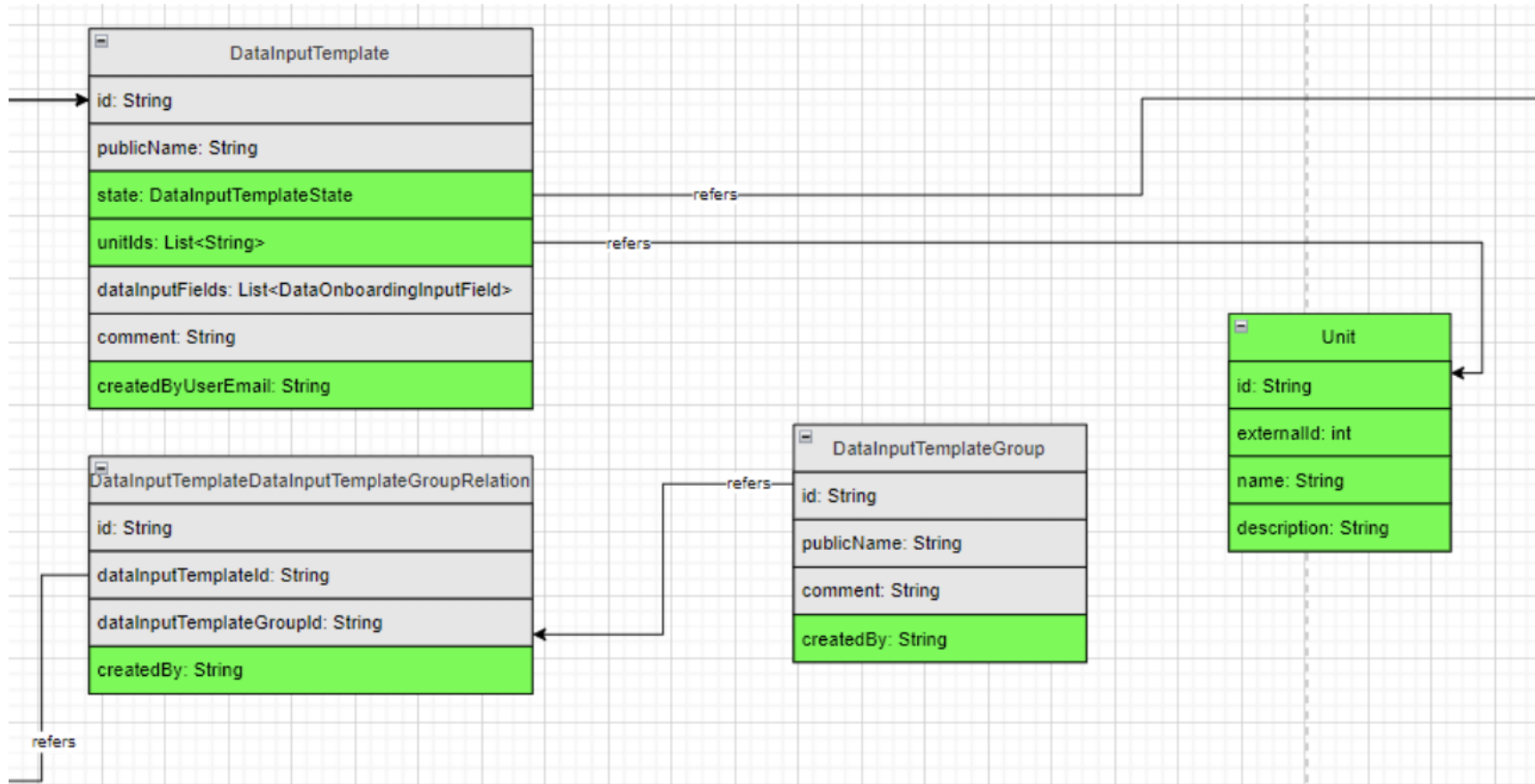
# Architectural template

- An architectural template helps to unify the form in which the decisions regarding the architecture and design are presented.
- Decisions are made in the group meetings, where all the team members are included.

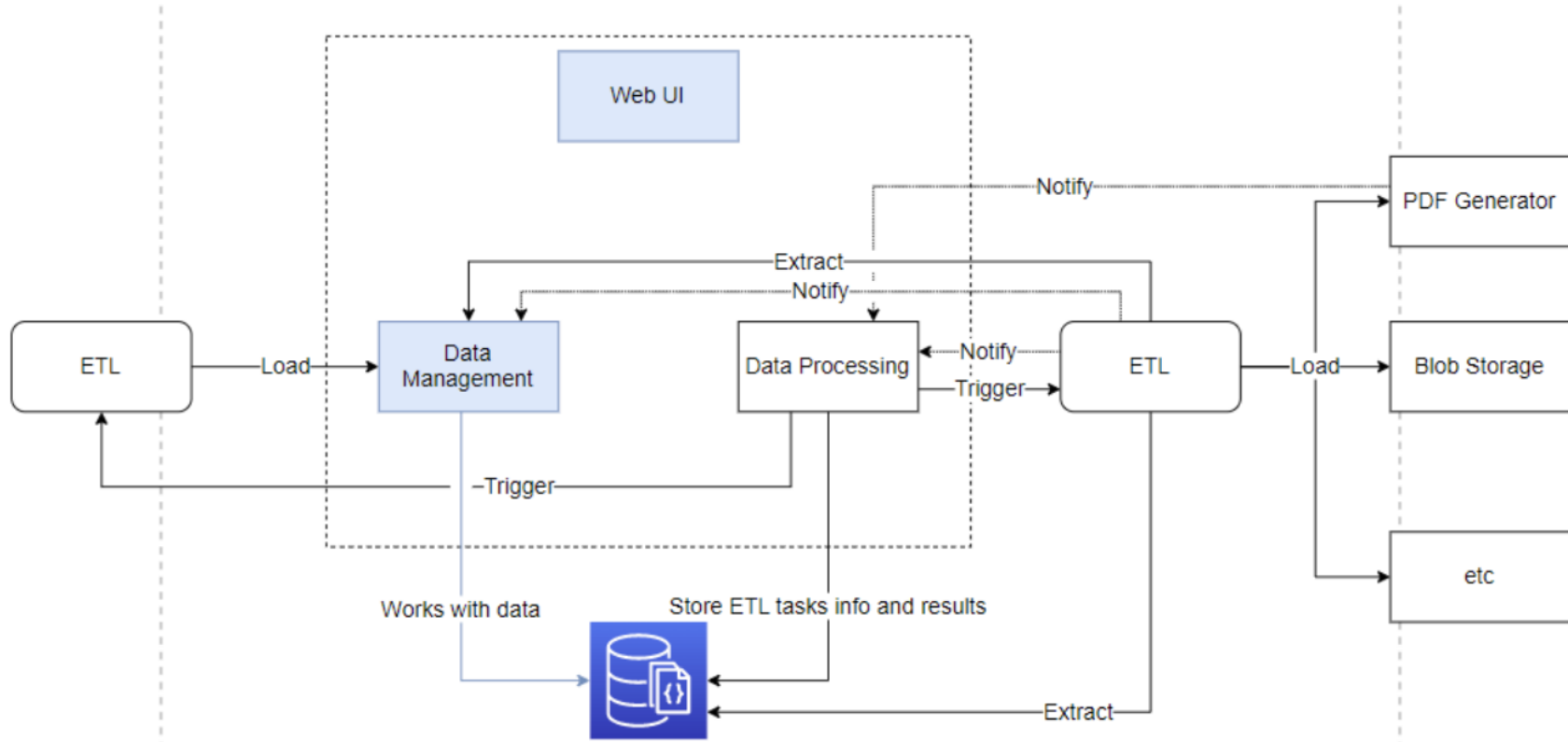
# Context diagram



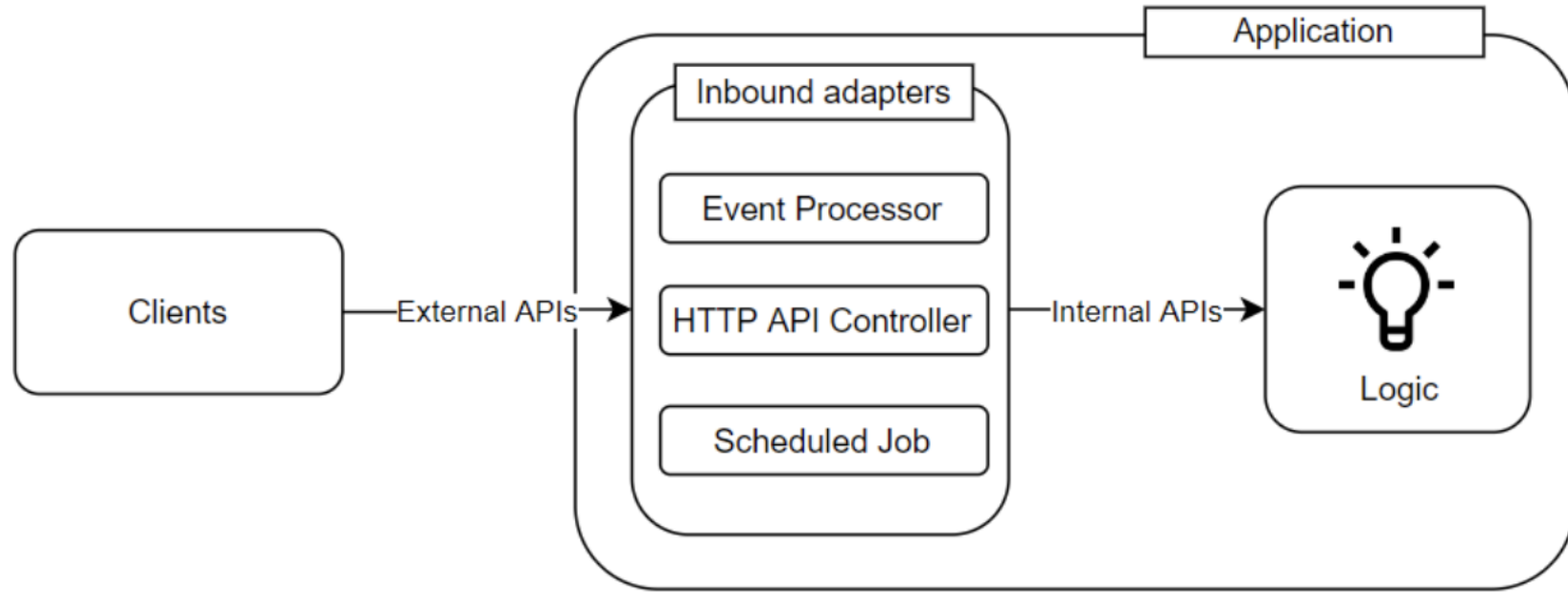
# Domain data model diagrams



# Component diagram



# List of APIs



# Summary

- Components of architectural template:
  - context diagram
  - domain data model diagram for each context
  - component diagram
  - list of the APIs to be developed
  - list of APIs for integration
- Architecture validation



# Results

- The number of code review comments, related to the architectural design decisions, is reduced by 90%
- The remaining 10% are related to human errors and lower-level design decisions.

**Thank you for your attention!**