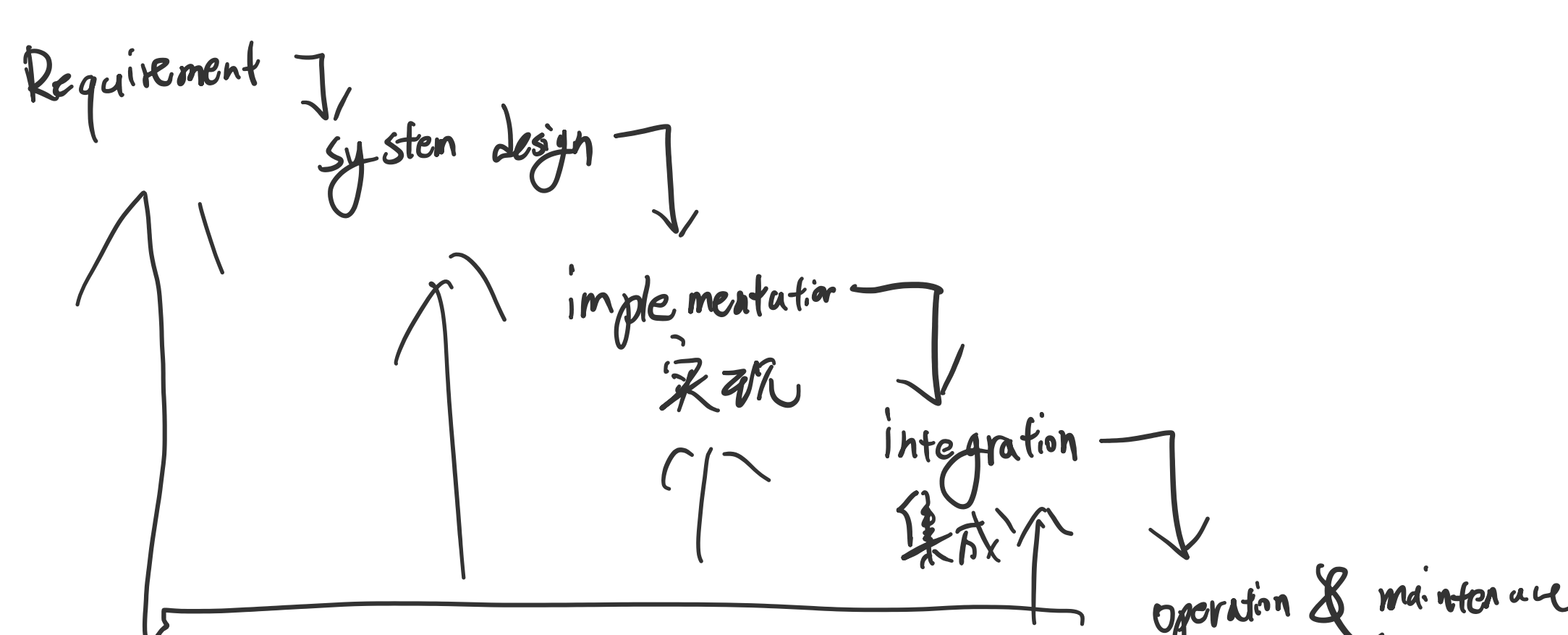


W1
Engineering: cost-effective solutions
applying scientific knowledge to things for people
UML Design

Water fall



Verification: 系统是否符合需求
Validation: 系统满足客户

W2 Agile sD 敏捷开发

2001 manifesto

4 key value

alternative way of sD

client's needs over's needs

extreme Pr 极限编程

test driven dev
kanban

Scrum:
- 管理时间
- 一个冲刺
- 快速迭代
- To do list

先写 test driven 开发
write pr to pass the test
no test no implemented
test = system requirement

W3 Requirement

system requirement: user observation

functional requirement: what system should do

non-functional requirement: how functional requirement are realized

service
input -> output
not to do

对系统服务物约束 constraints
often apply on whole system
not only a feature

Requirement are Instructions

acceptance criteria 验收标准

stakeholders Onion model

Surrogate stakeholder
代理受益者

negative stakeholders
消极利益相关者

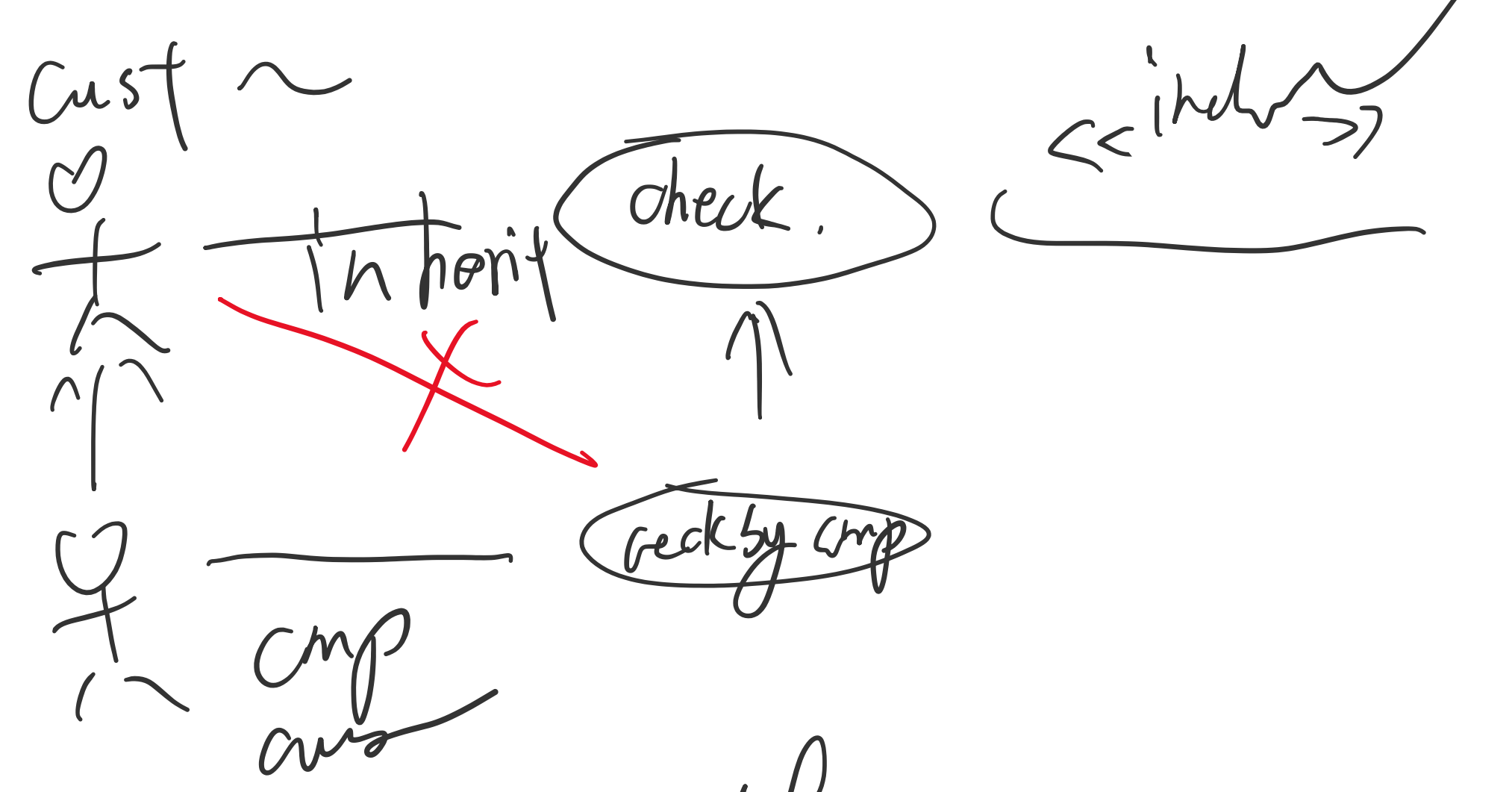
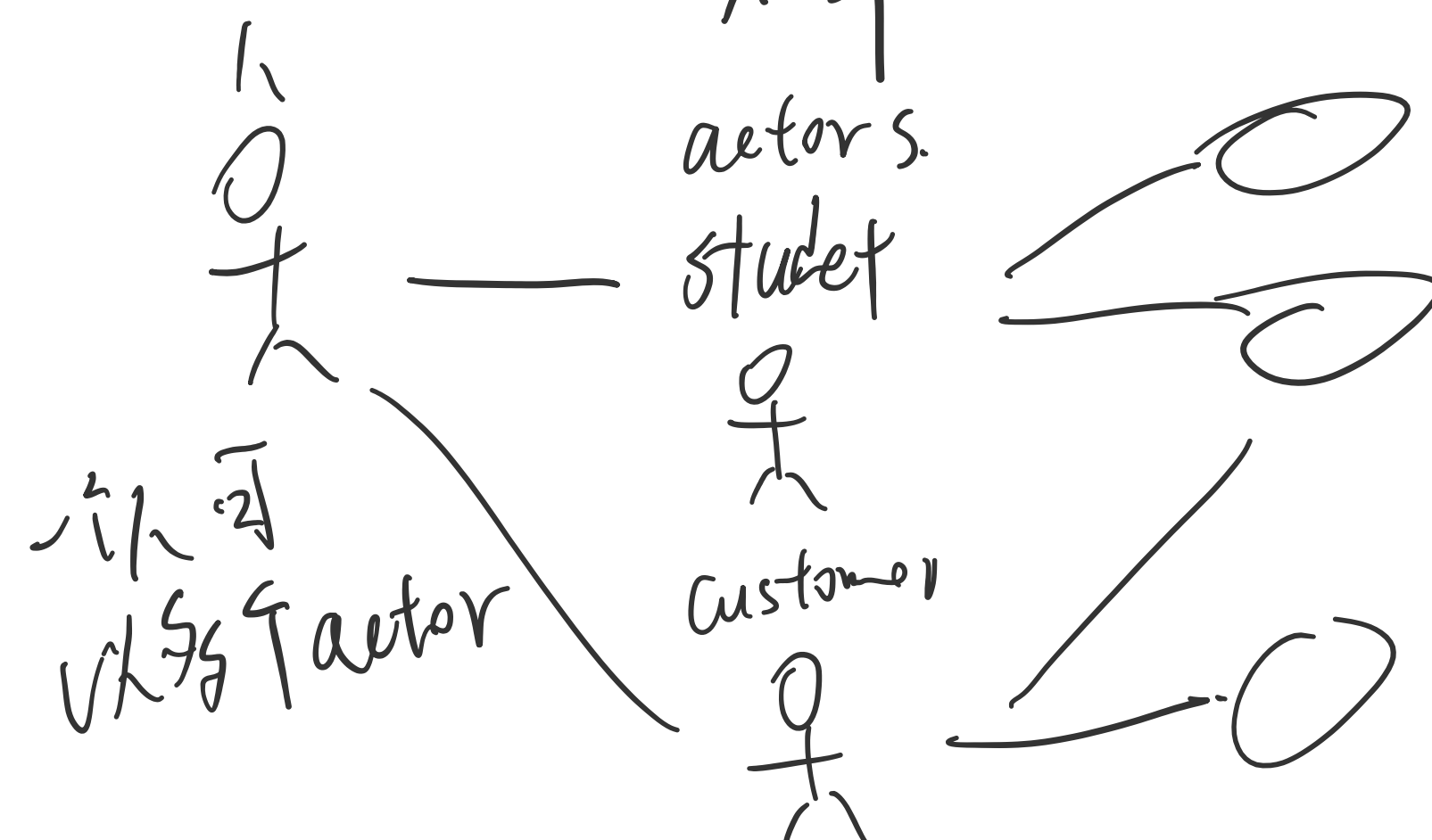
Top level needs / concerns

Identify "User stories"

system behaviour ← captured in user case

actors & use cases → in the actin the system takes

actors are external
外部



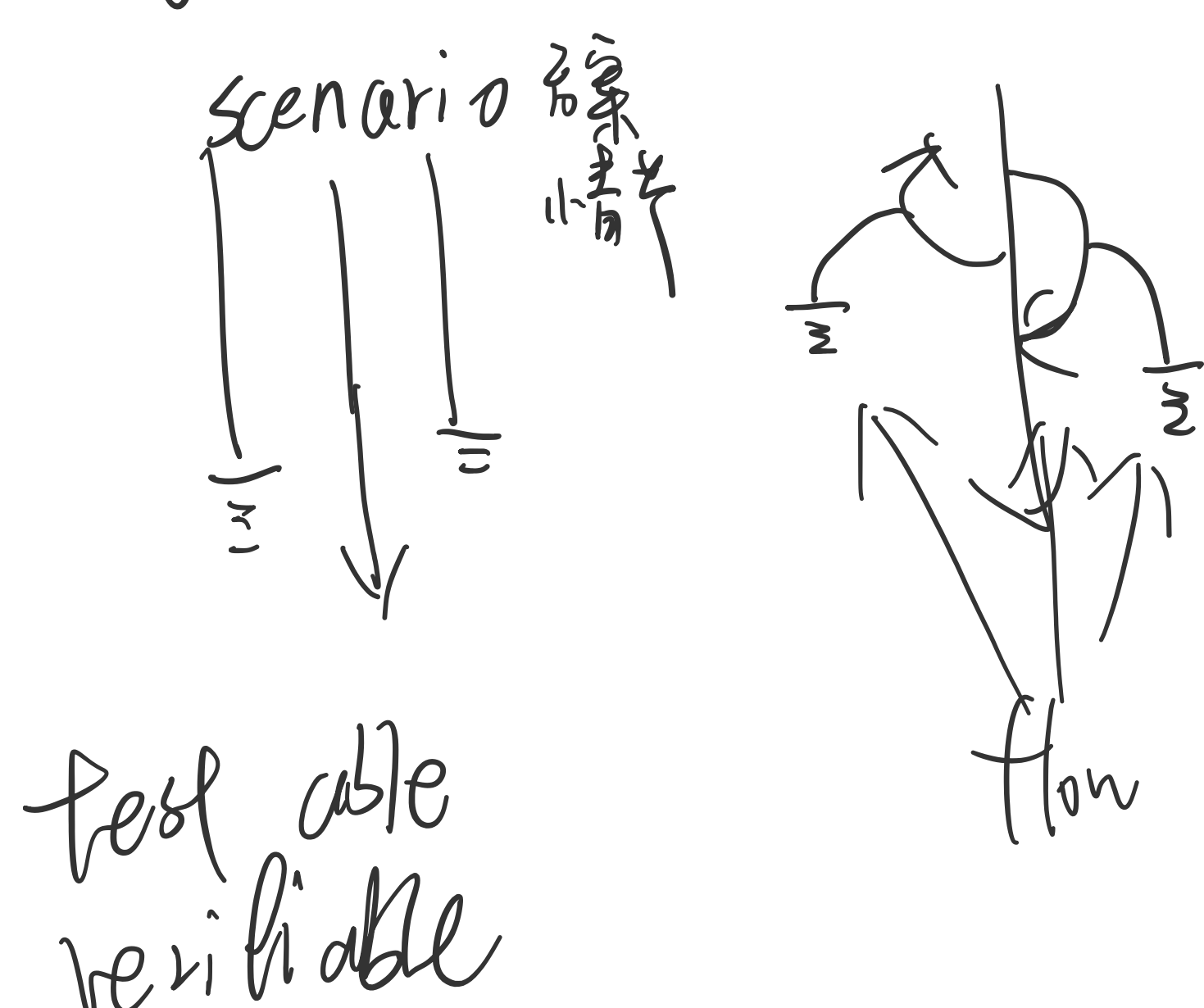
use-case specification

Use-case Name

Basic Flow

Alternative Flows

exceptional (error) flows



W4 Aggregation

whole-part "part of"

Composition

强所有权

Generalization "is a" "kind of"

一类共享多类的属性