MASTER ELECTIVE · WINTER SEMESTER 2026/27

DDD

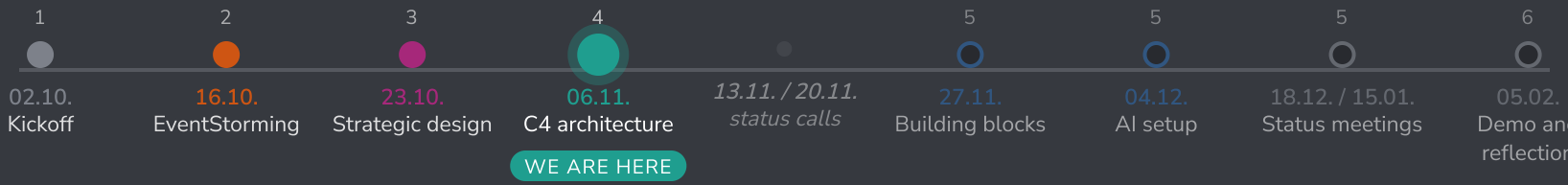
Domain-Driven Design of Large Software Systems



Where we are

Friday, 06.11.2026 - phase 4 of 6: high-level architecture

Halfway through the design



Design, behind us after today

- domain explored on one wall
- domain cut into bounded contexts
- today: the contexts become services

Build, from tonight

- bounded context teams take over
- first on their own
- then improved in two tactical workshops

What we have so far

16.10. EventStorming
big picture of the restaurant domain, moderated by the exploration team

23.10. Strategic design
core domain chart, domain stories, context map

23.10. Positioning
a restaurant for tech aficionados: delivery robots instead of pickup boxes

01.11. Bounded context teams
four teams, jigsaw: one member of each specialist team per team

FOUR BOUNDED CONTEXTS

Ordering / Payment / Recipe	Food Processing / Stock Mgmt
Food Distribution / Robot Mgmt	Reservation / Table Mgmt

four, not three: no team of six that quietly splits in two

After today

Today
C4 levels 1 and 2, first technology decisions and decision records

Until 27.11.
your clients and the APIs they need, dummy clients for the demo

27.11. and 04.12.
corrective workshops: building blocks, then the AI setup, applied to what you have built

18.12. and 15.01.
how far the demo scenarios run end to end

05.02.
demo, reflection, handover

WHO CARRIES WHAT FROM HERE

- architecture team: infrastructure, decision records
- tactical team: shared platform, aggregate coaching
- strategic team: context map, demo scenarios
- exploration team: guardians of the events
- bounded context teams: your service and its integration

The next two weeks

STATUS CALLS VIA ZOOM

Friday, 13.11., 18:00
status call

Friday, 20.11., 18:00
status call

TASK FOR THE BOUNDED CONTEXT TEAMS

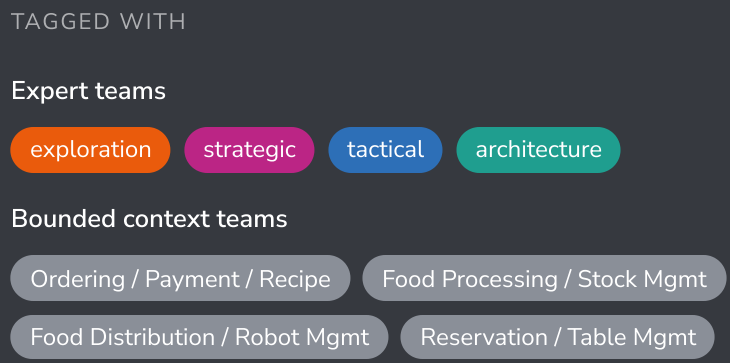
1. AsyncAPI
the events your service publishes and receives

2. Service implementation
start building your service against that contract

same order as the self-study material

To-dos become issues

- everything still to be done: one issue
- every issue tagged with the team that does it
- open issues show what is left
- in the DDD restaurant organization on git.archi-lab.io



Self-study for November

ONE TOPIC, TWO PLACES

Infopage
the explanation, in English, on archi-lab.io

+

Example repo
runnable code and tests: learn-event-driven-architecture on gitlab.com

WHERE TO FIND IT

Course page, workshop 06.11.
"Information Pages", and "Example Repos" below them
https://www.archi-lab.io/regularModules/ws26/ddd_ws26.html#workshopDay4

Menu
Master > DDD

archi-lab.io/regularModules/ws26/ddd_ws26.html

The storyline

CONTRACT
AsyncAPI
what a service publishes and receives, written down first

→

MODULE 1
Core
business logic only: no way in, no way out, no tests

→

MODULE 2
Interfaces and tests
receiver, handler, outgoing interface; tests without a broker

→

MODULE 2A
Spring events
variant of 2: choreography instead of a handler

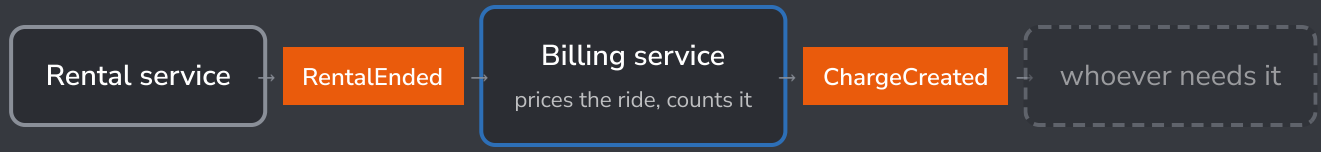
→

MODULE 3
Kafka
only adapters added, nothing of module 2 changes

- each step builds on the one before
- read in this order

- module 1 has no infopage of its own
- module 2 explains the step from 1

One event in, one event out



THE PRINCIPLE

- small bike sharing story
- two aggregates, one price rule
- one event in, one event out

WHY NOT THE RESTAURANT

- a different domain on purpose
- no ready-made solution for your context
- the structure carries over, the model does not

GitLab: please log in once

Log in to git.archi-lab.io with your campus ID

- only after that I can assign you to the DDD restaurant organization
- one login is enough
- best: now, on your phone



https://git.archi-lab.io/

Poll: who needs a Claude Code seat?

Who needs a Claude Code subscription (Pro level) for the implementation phase?

Limited seats
about 10 seats in a sponsored team subscription, so we quota and rotate

Already have agentic AI?
then you do not need a seat, and leave it to someone who does



ilu.th-koeln.de/goto.php/svy/933630

OFFTOPIC

International Business in Asia

Master's Module with a Field Trip to Thailand in the Summer Semester of 2027

- Would you like to learn about international business not just in the classroom, but by experiencing it firsthand?
- Are you interested in …
  - how companies operate in Asia
  - what cultural differences exist in management, and
  - how international collaboration works?

> Then apply for the “International Business in Asia” master’s module, which includes a field trip to Bangkok in May 2027!

Who is it for?	Master’s students in Industrial Engineering, Product Design, and Digital Science at TH Köln
Credit	5 ECTS as an elective module (Industrial Engineering and Product Design) or a GP-ID (Digital Science), 6 ECTS
Field trip	tentatively May 9-19, 2027 (± 1 day)
Language	German, with presentations in English
Cost to participants	only €500 for airfare, hotel with breakfast, and local transportation (made possible by funding)
Spots	4 master’s students from TH Köln