VIA University College

SEP2 – Semester project 2
Client/server systems

Agenda

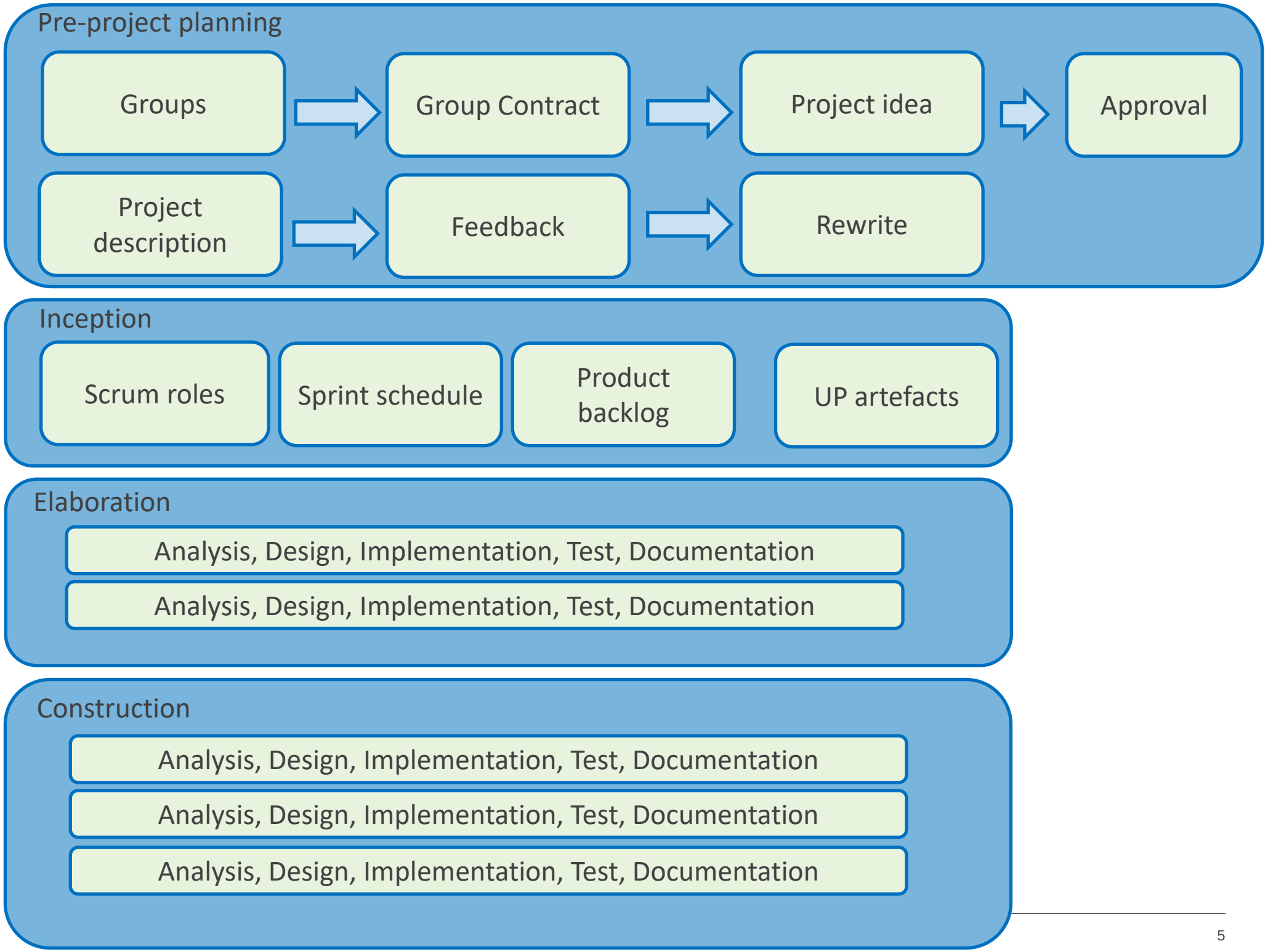
- SEP2 intro
- SEP2 Criteria
- Forming groups
- Project proposals

SEP2

- 10 ECTS: Approximately 280 hours per student
  - Do not underestimate time
- System development project
  - Code is one part (important, but not the sole purpose)
  - Follow a system development method (UP)
  - Use Scrum to control the development process
  - Prioritise documentation (and follow guidelines)

Calendar

February 2025			March 2025			April 2025			May 2025			June 2025		
L 1			L 1			T 1			T 1			S 1		
S 2			S 2			O 2			F 2			M 2	Exam period	23
M 3	Tuition start	6	M 3		10	T 3			L 3			T 3		
T 4	Re-exams if any		T 4			F 4			S 4			O 4		
O 5			O 5			L 5			M 5	Last day of tuition	19	T 5	Constitution Day	
T 6			T 6			S 6			T 6	buffer days		F 6		
F 7			F 7			M 7		15	O 7	buffer days		L 7		
L 8			L 8			T 8			T 8	Project period		S 8	Whit Sunday	
S 9			S 9			O 9			F 9			M 9	Whit Monday	24
M 10		7	M 10		11	T 10			L 10			T 10		
T 11			T 11			F 11			S 11			O 11		
O 12			O 12			L 12			M 12		20	T 12		
T 13			T 13			S 13			T 13			F 13		
F 14			F 14			M 14	Easter Break	16	O 14			L 14		
L 15			L 15			T 15			T 15			S 15		
S 16			S 16			O 16			F 16			M 16		25
M 17		8	M 17		12	T 17	Maundy Thursday		L 17			T 17		
T 18			T 18			F 18	Good Friday		S 18			O 18		
O 19	Company Dating 12.30-14.30		O 19			L 19			M 19		21	T 19		
T 20			T 20			S 20	Easter Sunday		T 20			F 20		
F 21			F 21			M 21	Easter Monday	17	O 21			L 21		
L 22			L 22			T 22			T 22			S 22		
S 23			S 23			O 23			F 23			M 23		26
M 24		9	M 24		13	T 24			L 24			T 24		
T 25			T 25			F 25			S 25			O 25		
O 26			O 26			L 26			M 26		22	T 26	Graduation ceremony	
T 27			T 27			S 27			T 27			F 27		
F 28			F 28			M 28		18	O 28	Hand in project		L 28		
			L 29			T 29			T 29	Ascension Day		S 29		
			S 30			O 30			F 30			M 30	Summer Break	27
			M 31		14				L 31					


Pre-project planning
Groups
Group Contract
Project idea
Approval
Project description
Feedback
Rewrite
Inception
Scrum roles
Sprint schedule
Product backlog
UP artefacts
Elaboration
Analysis, Design, Implementation, Test, Documentation
Analysis, Design, Implementation, Test, Documentation
Construction
Analysis, Design, Implementation, Test, Documentation
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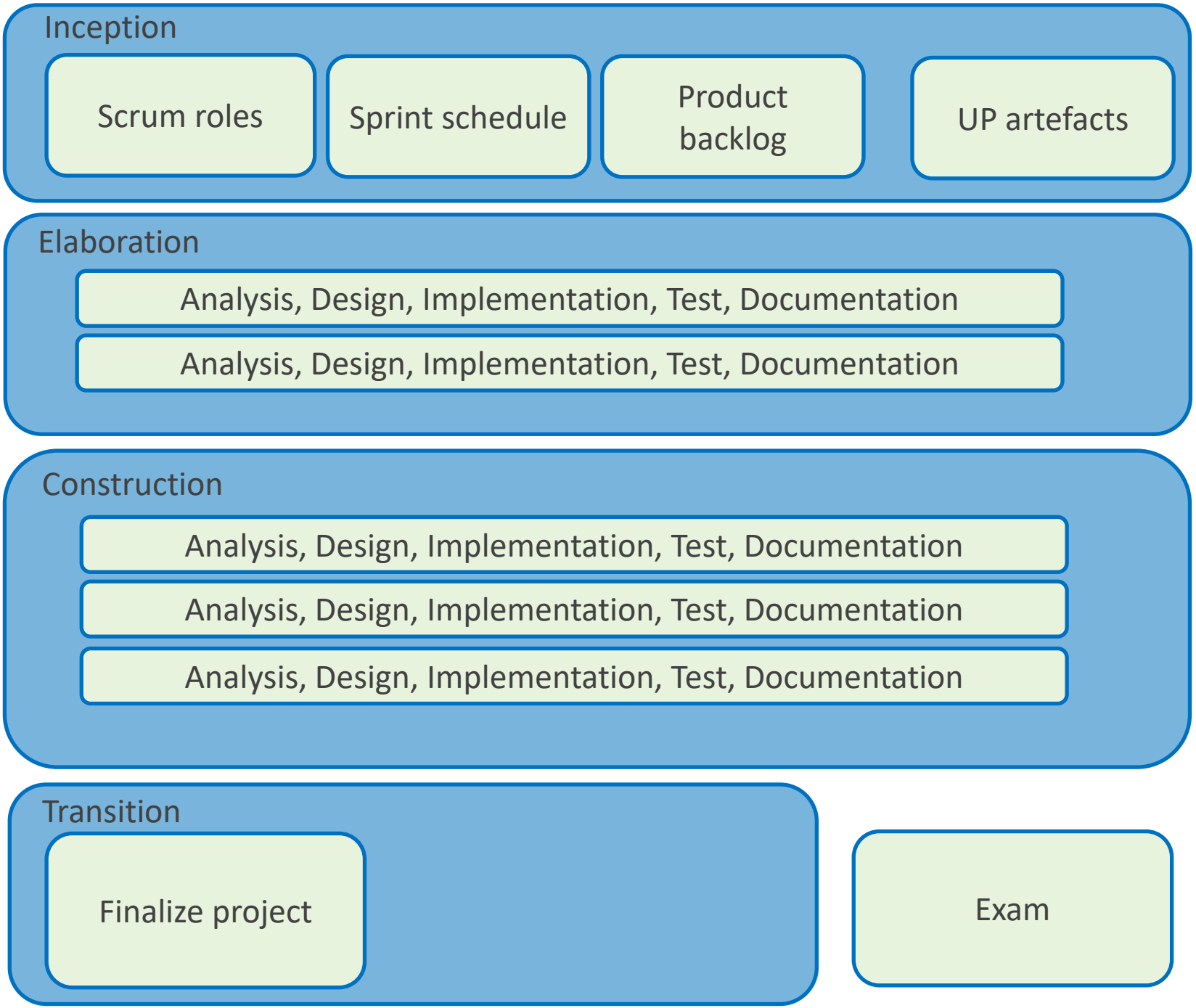
Inception
Scrum roles
Sprint schedule
Product backlog
UP artefacts
Elaboration
Analysis, Design, Implementation, Test, Documentation
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Construction
Analysis, Design, Implementation, Test, Documentation
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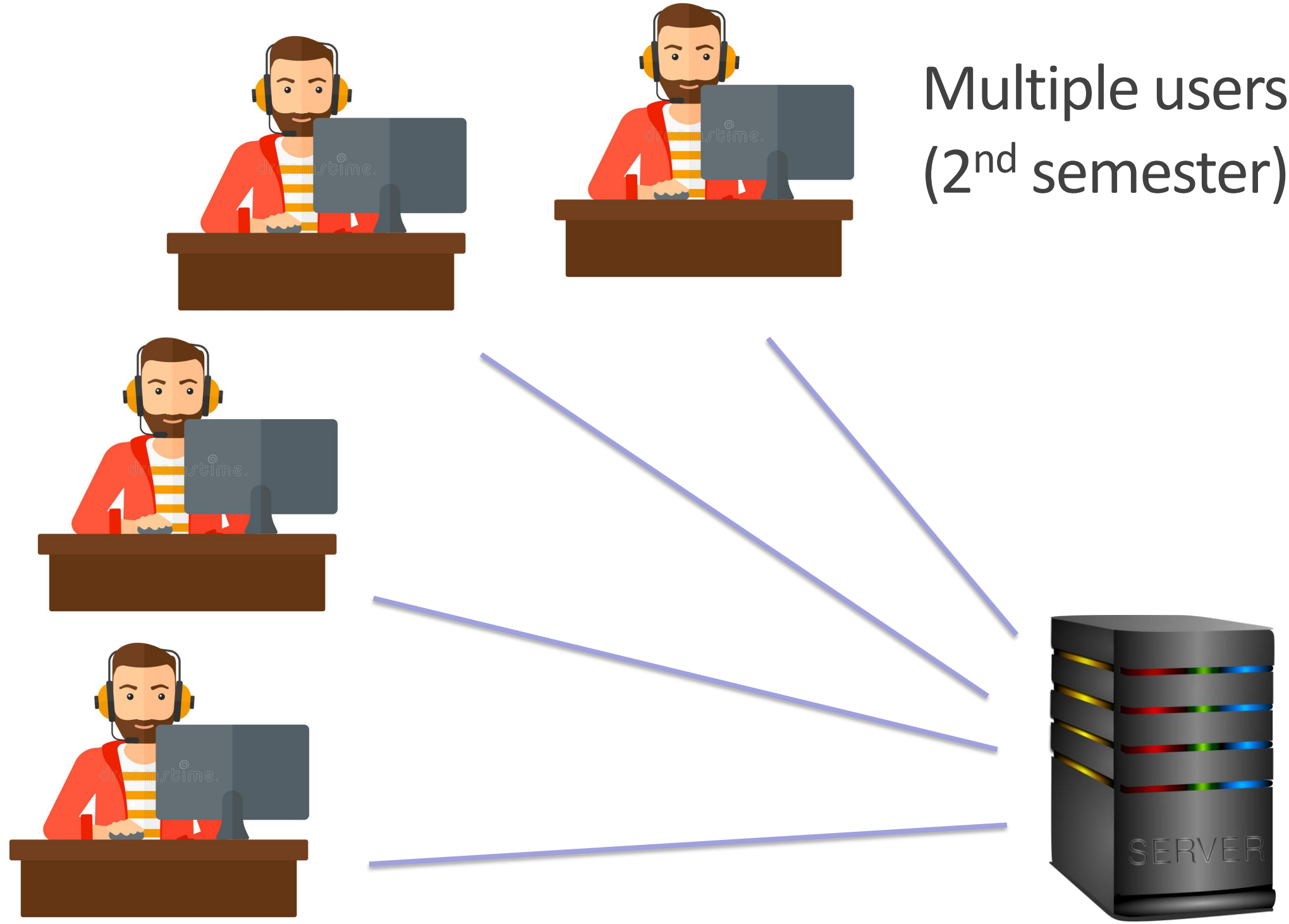
Transition
Finalize project
Exam

SEP2 schedule (including sprint schedule example)

Week	Day	Date	SEP2	
6	Wed	5/2	Presentation: Groups, Project proposals	
7	Wed	12/2	PP Deadline/Feedback + PD presentation	
8	Wed	19/2	Work: Project description	
9	Tue	25/2	E-stimate 1	
	Wed	26/2	Work: Project description	
10	Tue	4/3	E-stimate 2	
	Wed	5/3	PD - peer review/feeback	
11	Wed	12/3	Inception start	
12	Tue	18/3	PBL - Culture	
	Wed	19/3	Work: Inception artifacts (Scrum + UP)	
13	Wed	26/3	Inception feedback	Sprint 1 - start
14	Wed	2/4	Sprint	Sprint
15	Wed	9/4	Sprint	Sprint
16	Mon	14/4	Easter break	
17	Tue	22/4	Sprint	Sprint
	Wed	23/4	Sprint	Sprint
	Thu	24/4	Sprint	Sprint
18	Wed	30/4	Sprint	Sprint
	Thu	1/5	Sprint	Sprint
	Fri	2/5	Sprint	Sprint
19	Mon	5/5	Sprint	Sprint
	Tue	6/5	Sprint	Sprint
	Wed	7/5	Sprint	Sprint
	Thu	8/5	Sprint	Sprint
	Fri	9/5	Sprint	Sprint
20	Mon	12/5	Sprint	Sprint
	Tue	13/5	Sprint	Sprint
	Wed	14/5	Sprint	Sprint
	Thu	15/5	Sprint	Sprint
	Fri	16/5	Sprint	Sprint
21	Mon	19/5	Sprint	Sprint
	Tue	20/5	Sprint	Sprint
	Wed	21/5	Sprint	Sprint
	Thu	22/5	Sprint	Sprint
	Fri	23/5	Sprint	Sprint
	Sun	25/5	Sprint	Sprint
22	Mon	26/5	Sprint	Sprint
	Tue	27/5	Sprint	Sprint
	Wed	28/5	Sprint	Hand In

Single user
(1st semester)

Multiple users (2nd semester)



Definition: **client-server system**

A computing system composed of two logical parts:

1. *a **server**, which provides information or services, and*
2. *a **client**, which requests them.*

On a network, for example, users can access server resources from their personal computers using client software.

McGraw-Hill Science & Technology Dictionary
https://encyclopedia2.thefreedictionary.com/client-server+system

An example: VIA Events

VIA Events (Facility Reservation system)

- The aim of this project is to create a reservation system for facilities and events. It is going to be a closed system only available for students, teachers, together with other people related to VIA University College, Campus Horsens. We are planning the system to be applicable in other university campuses by exchanging the database and setting up another server.

An example: VIA Events (features)

1. Account system using already existing VIA identifications.
2. Live feeds of public events.
3. Overview of VIA University College, Campus Horsens facilities.
4. Booking of events and facilities.
5. Users (students, teachers, administrators and event organizers) can interact with the system in different ways.
   - Students
     - can sign up for events and cancel their subscription to this
     - can book selected facilities and organize events
     - bookings of facilities and events made by students have to be approved by an administrator
   - Teachers
     - can sign up for events and cancel their subscription to this
     - can book facilities (not events) without approval from administrator
   - …

…

SEP2 criteria

Based on Course Description

You must…

- Use UP as the system development method
- Use Scrum to control the development process
- Follow guidelines and formalities requirements

The system must…

- Be a Client/Server system
  - Sockets – NOT a Website
- Have a database
- Include design patterns

SEP2 criteria (from PRO2)

- A Client/Server system
  - Sockets
- Both client and server must be a java program
- Design patterns
- Java Model
- Thread handling
- Testing
  - Unit tests, System tests

SEP2 criteria (from SWE1)

- Analysis
  - Functional, non-functional requirements
  - UC, UC-Descriptions, System Sequence diagrams, etc.
  - Domain Model
  - Test Cases
- Design
  - Architecture
  - Static and behavioural
  - Design Patterns
  - SOLID Principles
- Process
  - Scrum
  - Unified Process

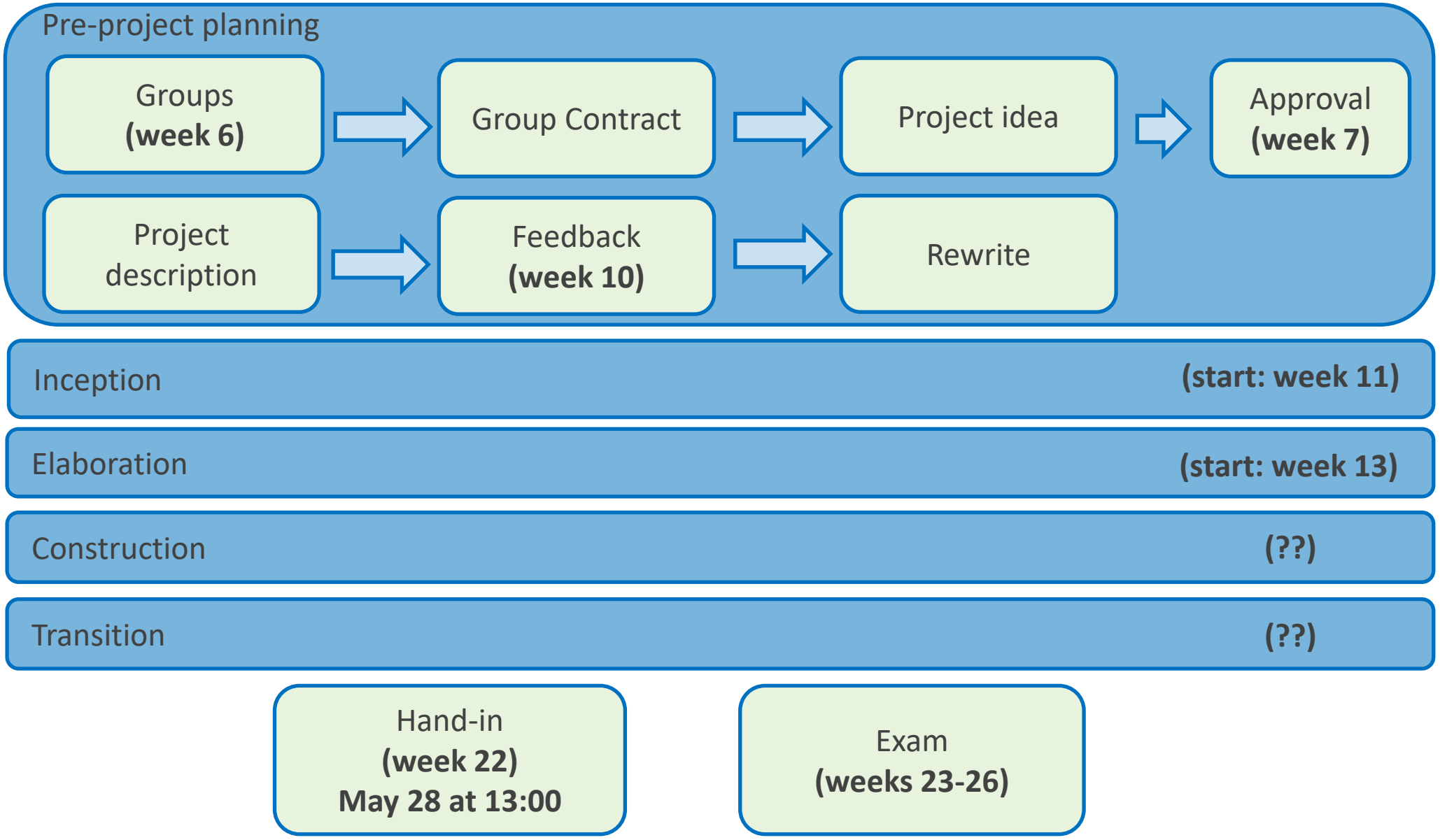
SEP2 criteria (from DBS1)

- Application data stored in a database
- E/R model, and Global Relations Diagram
- Proper use of types
- Proper use of constraints
- Normalized to 3rd normal form

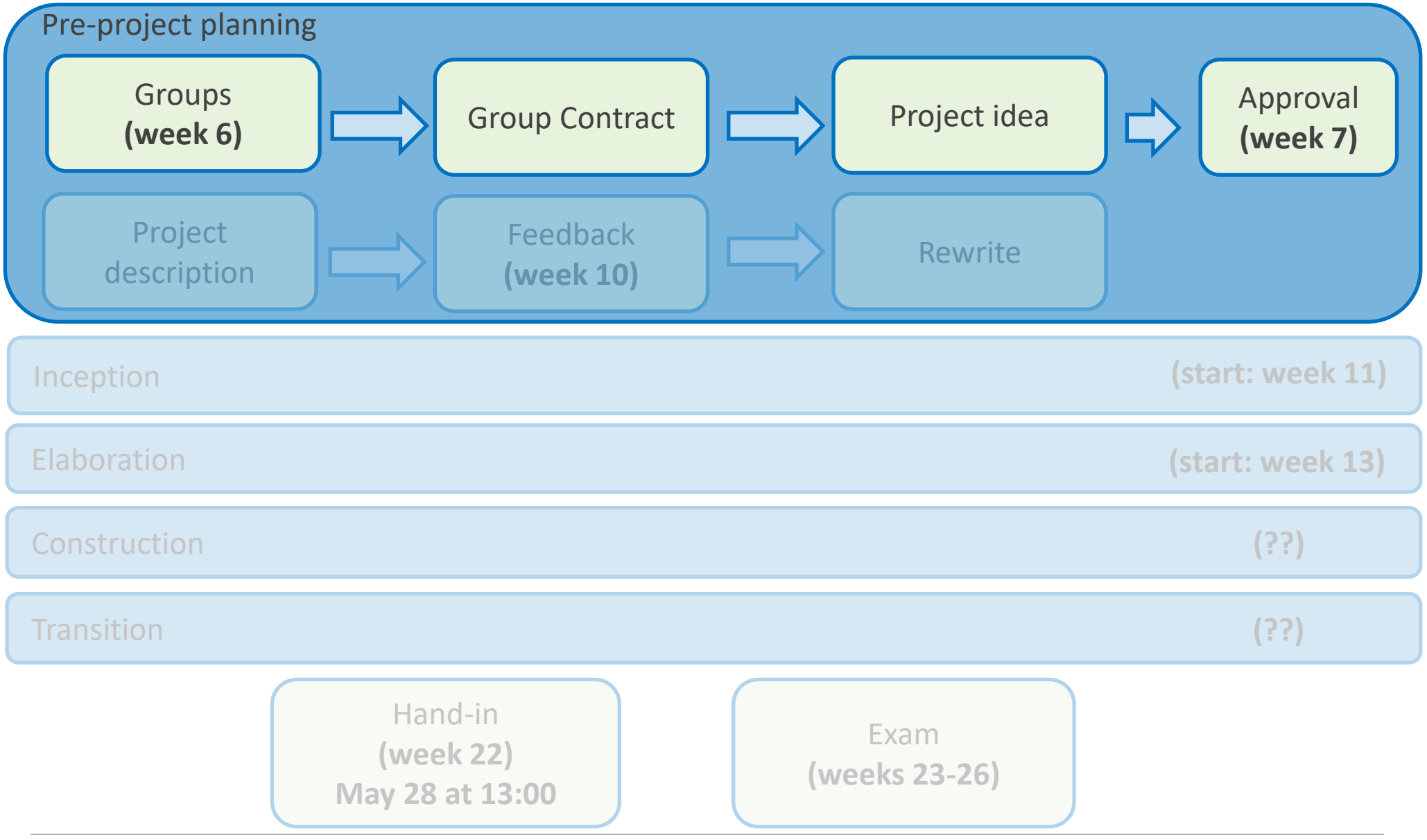
SEP2 recommendations

- Prioritise time for SEP2
- Understand that this is a system development project and NOT just a programming exercise
- Have your primary work environment on a common location together (at school if possible)
  - Good luck finding a group room ;-)
- Use your supervisors

Milestones


Pre-project planning
Groups
(week 6)
Group Contract
Project idea
Approval
(week 7)
Project
description
Feedback
(week 10)
Rewrite
Inception
(start: week 11)
Elaboration
(start: week 13)
Construction
(??)
Transition
(??)
Hand-in
(week 22)
May 28 at 13:00
Exam
(weeks 23-26)

Where are we now?



What to do now?

Form groups and make Project Proposals

1. Email group wish (to both supervisors – today)
   - 4 members (maybe 5 if necessary, no groups with less than 4)
   - Not all group members with the same nationality
2. Final groups will be formed by supervisors
3. Write your group contract
4. Write down two project proposals (5-10 lines)
   - Maybe include expected features of the two systems
5. You have to get approval by one of the supervisors at the end of week 7 (meetings Wednesday)
6. Maybe take a look at the course description