

Project Skills

Workshop 1

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MODULE COHERENCE

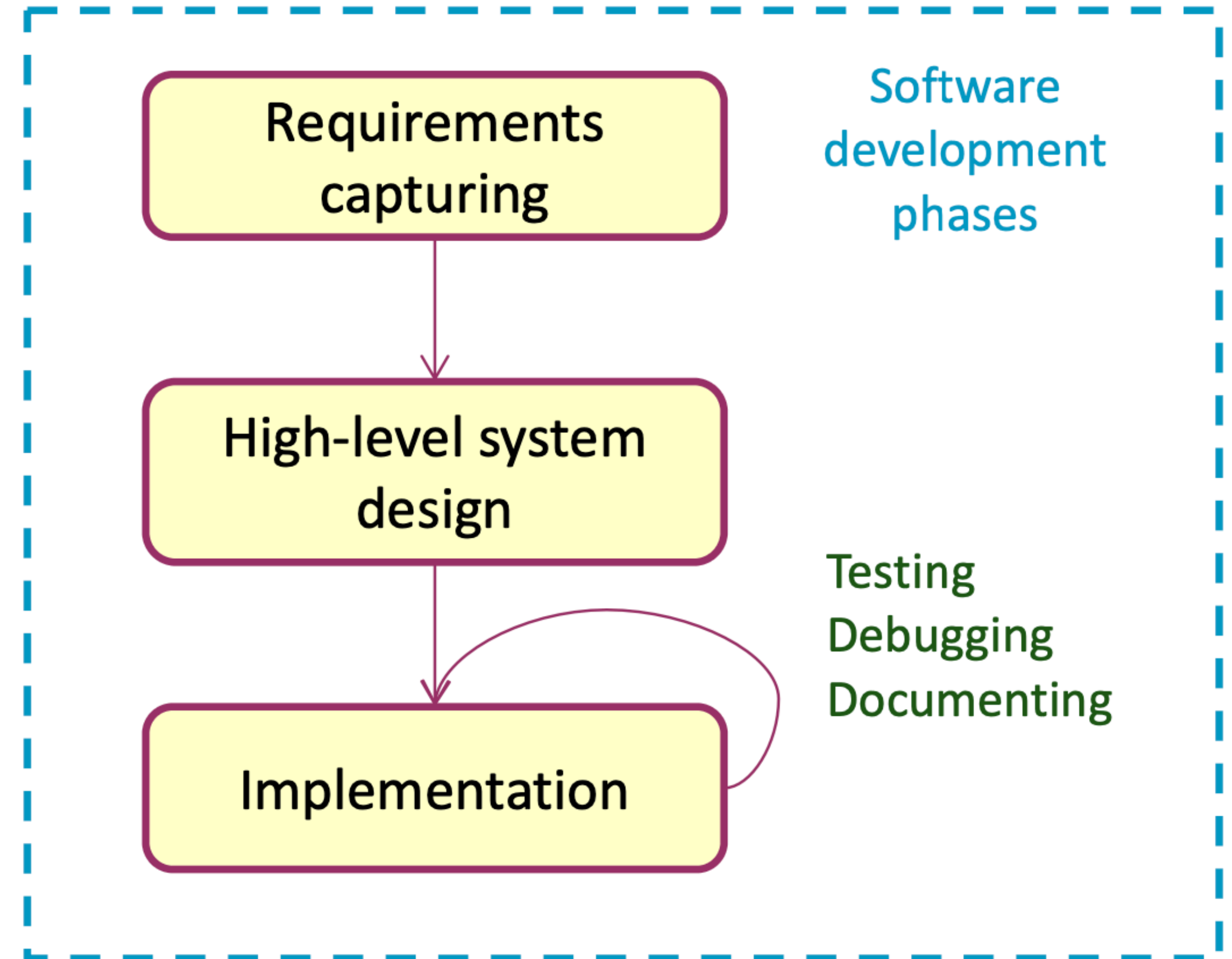
Skills

Managing a software development team



Design thread

Programming thread



Contents

Work together with your pair!

- **Workshop 1**
 - Team contract
- **Workshop 2**
 - Requirements
- **Workshop 3**
 - Time management
- **Workshop 4**
 - Guest lecture (including topics s.a. time & stress management, and not only!)

Team Contract

Overview

- **What is a team contract?**
- Let's get to know each other better
 - Reflection moment
 - The Ofman methodology
- Working effectively in groups
 - Roles
 - Challenges and solutions
 - Conflict resolution
- Hello project!
- The contract

Team Contract

What?

- **Document** that a team creates to **formalise** the **expectations** of its members
- Should contain information such as:
 - Team **members'** names and contact **information**
 - **Expectations** (ground rules) regarding
 - **Preparation** for meetings
 - **Frequency** and **duration** of meetings
 - **Communication**
 - **Behaviours** (crucial to effectiveness) that will be expected of all group members
 - Assignment of specific **tasks**, **roles**, and **responsibilities** along with **due dates**
 - Approaches for dealing with **unmet expectations** or other **problems**
 - A place for each team member to **sign**, indicating their **agreement to the contract**

Team Contract

Why?

- Among others:
- Take an active role in **setting the tone** for group interaction
 - Matter of autonomy, choice and responsibility
- Identify **expectations** of one another
- **Reflect on past** experiences and communications practices, important transferable skills

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Reflection Moment

- **Task1: Individual work** (~5 minutes)
- Consider your **past experiences** working in a team. **Reflect** and write down:
 - What you **like and don't like** about working in a team?
 - What **went well**? What **didn't go well**?
 - What contributed to the group's **success** or **problems**?
 - What are your **strengths** when it comes to working collaboratively, and what is something you would like to **improve**?

The Ofman Methodology

Ofman Core Qualities

- Core qualities

- Characteristics that belong to the **essence** or core of a person
- Powers or strengths that people think of when they hear a certain name
 - Example: **punctual**
- Different from skills; Skills are learned; Qualities come from within

- Pitfall

- **Too much of a core** quality / going too far; the quality has a negative effect
 - Example: **overly organised**

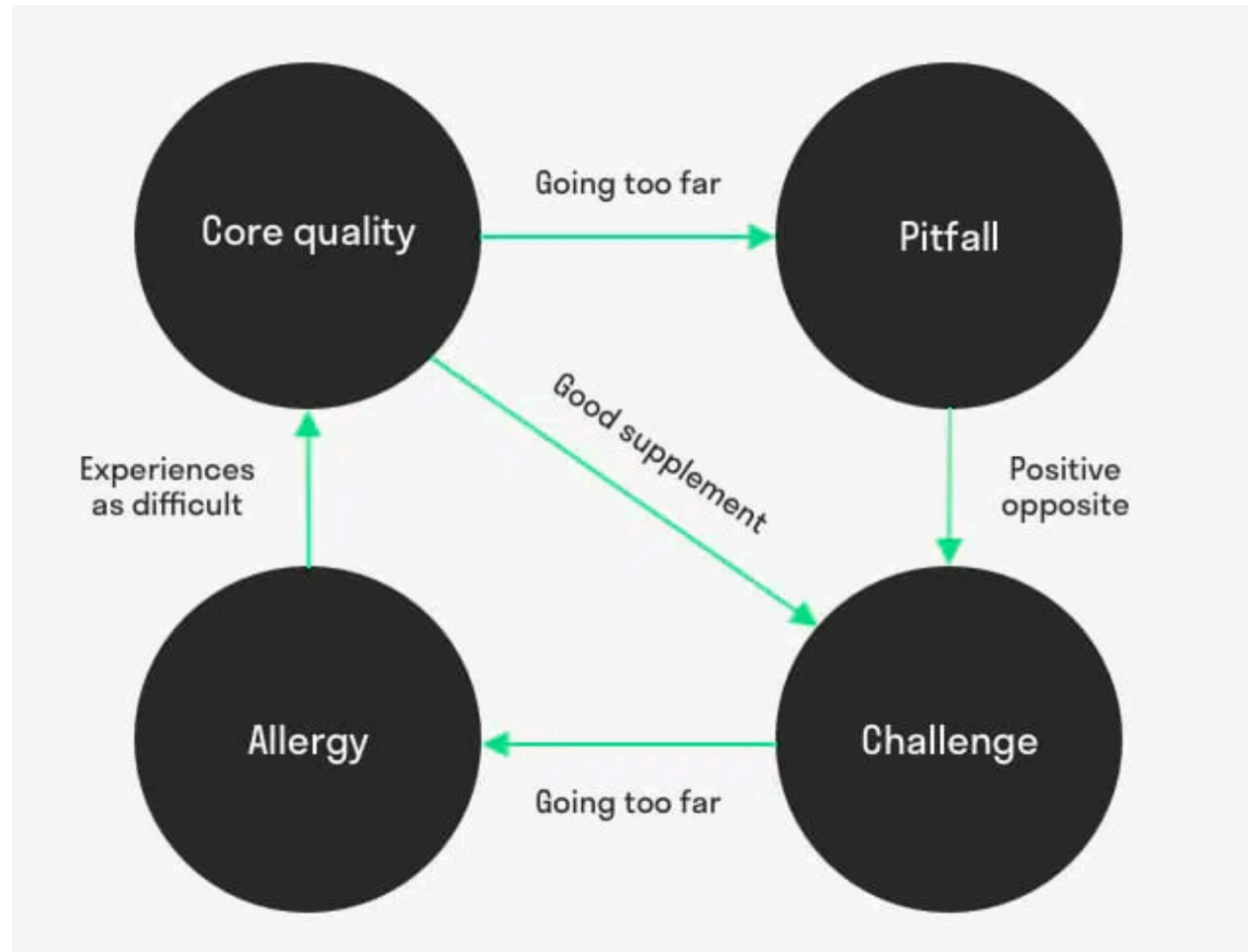
- Challenge

- The positive opposite of the pitfall; provides more of a **balance**
- A second gift to the core quality
 - Example: **learning to postpone**

- Allergy

- Direct **opposite of the core** quality
- Going too far in the challenge
 - Example: **disorganised**

The Ofman Core Quadrant



The Ofman Methodogy

Practice

- Watch The Ofman Quadrant animated:
 - <https://www.youtube.com/watch?v=mtRgHQjun0Q>
- **Task 2: Individual work** (~10 minutes)
 - Draw the Ofman Quadrant for two positive core qualities that define you
 - Reflect on how the above core qualities and / or pitfalls influenced your past experiences working in a team. Write down your thoughts.
- **Task 3: Team work** (~10 minutes)
 - Sit with your pair and share what you've written in Task 1 and Task 2

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Advice for Creating a Successful Team

Get Organised: Assign Roles (and Divide Labor)

- **Leader**

- Prioritises tasks
- Composes and organises the working process
- Leads discussion with open-ended questions
- Facilitates brainstorming by summarising and clarifying comments

- **Organiser**

- Schedules meetings
- Ensures meetings follow a time line/agenda
- Takes notes at meetings to send to everyone afterwards

- **Writer**

- Writes the project/report/presentation

- **Presenter**

- Works with group members to compile and create presentation
- Delivers/presents information

Advice for Creating a Successful Team

Get Organised: Assign Roles (and Divide Labor)

- **Software Architect**
 - Decides the **internal arrangement of the software** in accordance with product requirements and resources
 - Determines **technical and functional instruments** required for development
 - **Designs** the system
 - Focuses on finding **optimal technical solutions**
- **Software Developer**
 - **Codes** the software
- **Specialisations**: full-stack, front- or back-end developers
- Closely **collaborates** and **works in parallel** with other team members such as designers, testers, etc.
- **Tester**
 - Shares responsibility for the **product quality**
 - Handles **tests** reflecting a user's operating habits and patterns
- Team/Tech Leader, Scrum Master, QA Engineer, UX/UI Designers, etc.

Advice for Creating a Successful Team

Get Organised

- Assign **roles**
- Create a **timeline**
 - Don't leave things until the last minute
- Schedule **regular meetings**
 - On-site, online, use email
- Create a **communication plan**; What happens if:
 - (Consistently) miss meetings/fail to communicate/produce work?

Advice for Creating a Successful Team

Challenges & Solutions

- Scheduling problems
 - Try and be understanding of others' schedule & responsibilities
 - Use virtual meetings / email
 - Take turns in picking the venue and the time of the meeting
- Uneven contributions
 - Set-up clear guidelines and expectations at the beginning of your group project
- Assign roles & responsibilities such that each person will be making an equal contribution
- Speak directly, but respectfully!
- Getting stuck
 - Take a step back; do not panic; do not get demotivated. Reread project expectations & goals. Have a brainstorming session. Create a mind map to link ideas. Seek help from a teacher/TA.
- Group conflict

Advice for Creating a Successful Team

Challenges & Solutions

- Group conflict
 - Take care of yourself and understand your triggers (ref. to Ofman quadrant)
 - We all react differently to conflict; Make sure you're well-rested and eating well, so you can be at your best
 - Clarify personal needs threatened by the dispute
 - Identify the desired outcomes and work towards those
 - Identify a safe place for negotiation
 - Consider the role of your teacher/TA
 - Take a listening stance in the interaction
 - Stay flexible
 - Keep the interests of the group as the focus
 - Only one person speaks at a time
 - Listen to each other with respect and patience
 - Honour confidentiality
 - Focus on the problem and avoid personal attacks
 - Participate in identifying options for moving forward (you may not be able to resolve the conflict)

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Multiplayer Game

Together with your partner, you have been hired to develop a platform for a client-server multiplayer game. Your customer has not decided on the game yet; at this point they are exploring the idea of a simple game with unambiguous rules.

The client-server architecture requires you to deliver two products: a client and a server. The server controls the game, and the client serves as one player of the game. Of course, the client and the server will need to be able to communicate with each other. Furthermore, your customer is very enthusiastic about the possibility of your client and server to communicate with the client and server of competitor companies. An opportunity for competition would be so much more fun! Last, but not least, you should not only be able to play the game as a human, your client should also be able to play by itself! This means your client needs to have a computer player.

The contract with your customer stipulates a fully functional client-server game implementation, that adheres to best coding standards and good practices. Your customer expects you deliver a preliminary design at the start of the project, together with a good documentation and a complete (design) report at the end. Finally, your customer demands for an extensively tested product.

A detailed description of the client and server functionality can be found in the M2 manual, starting on page 17.

You will have one day (in workshop 2) to meet your customer and understand her preliminary requirements. The actual implementation of the project (possibly addressing sudden changes in your customer's requirements) can take maximum four weeks; your budget runs out after that.

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Your Team Contract

- Task 4: Team work
 - With the idea of the client-server multiplayer game in mind, [devise your team contract](#)
 - Use the information on Slide 5
 - You can draw inspiration from the template [SkillsContract](#) in Canvas, under Modules
- (Credits: M7 2021-2022 – Implementation Project Graph Isomorphism)
- Submit your answers to **Tasks 1, 2 and 4** as a pair, in **one PDF** document, today, before **23:59h**! A valid PDF explicitly states the **names of all team members**!

Good luck!