nagarro

Pair Programming

Exercise: Different Roles in Pair Programming

You will be split up into 2 groups :
driver and navigator

Add sticky notes to write down the tasks and responsibilities of the role

7 min.

miro.com

What is Pair Programming?

Navigator

- Observes the written code to identify defects
- Asks questions
- Participates in brainstorming & planning
- Focuses the direction of the work

Driver

- Writes code
- Explains actions taken
- Participates in brainstorming & planning

The Seven Pillars

Pair pressure

- Focus each other and avoid distraction

Pair courage

- Agree of a partner adds confidence

Pair debugging

- Easier debugging in pairs

Pair trust

- Pairs get to know each other better

Pair negotiation

- Work together to get the best solution

Pair review

- Continuous review of the code

Pair learning

- Learn from each other

More Pair-Programming Styles aka Techniques

UNSTRUCTURED

- Often the default
- No protocol

STRONG-STYLE

"For an idea to go from your head into the computer it MUST go through someone else's hands“

Llewellyn Falco

PING PONG

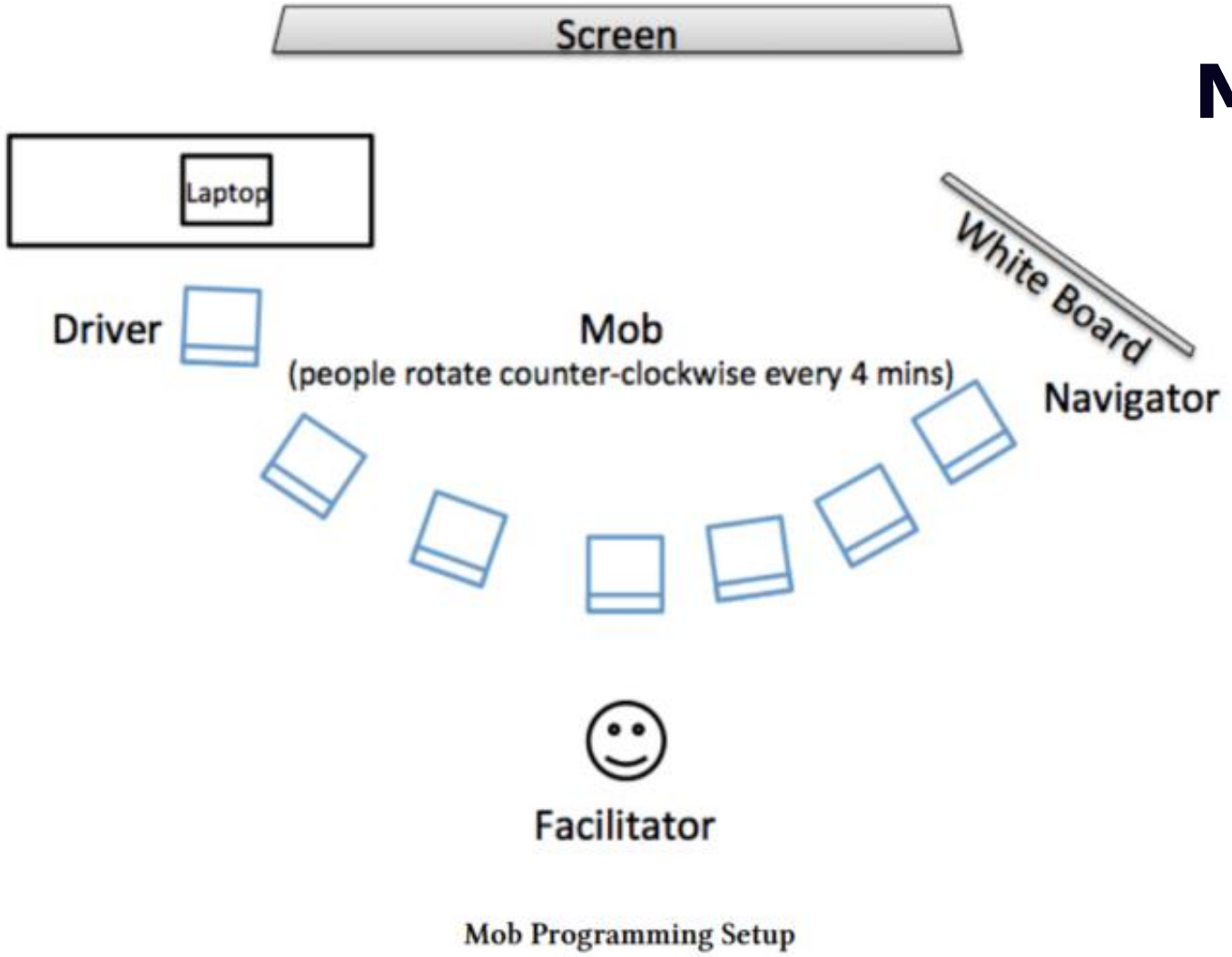
Switching based on protocol

For example

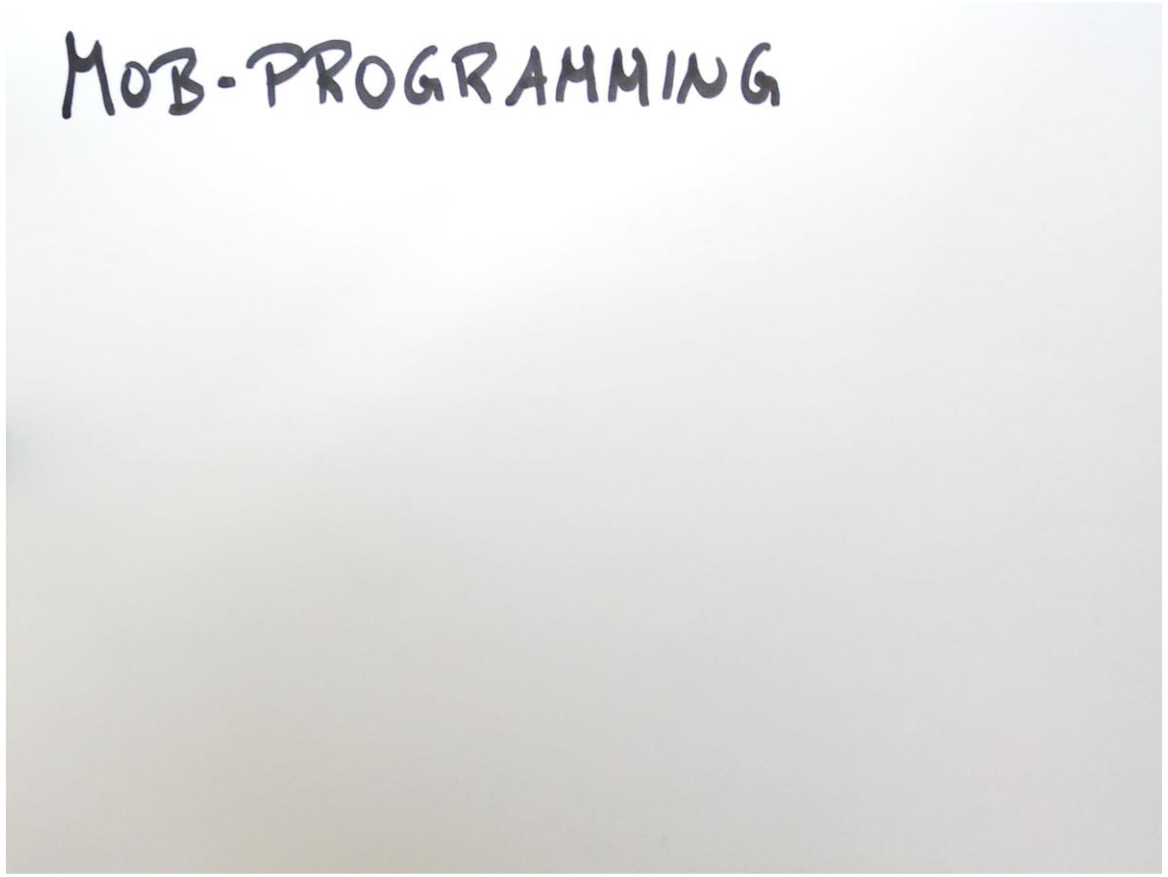
- test – code –test
- after 30 minutes

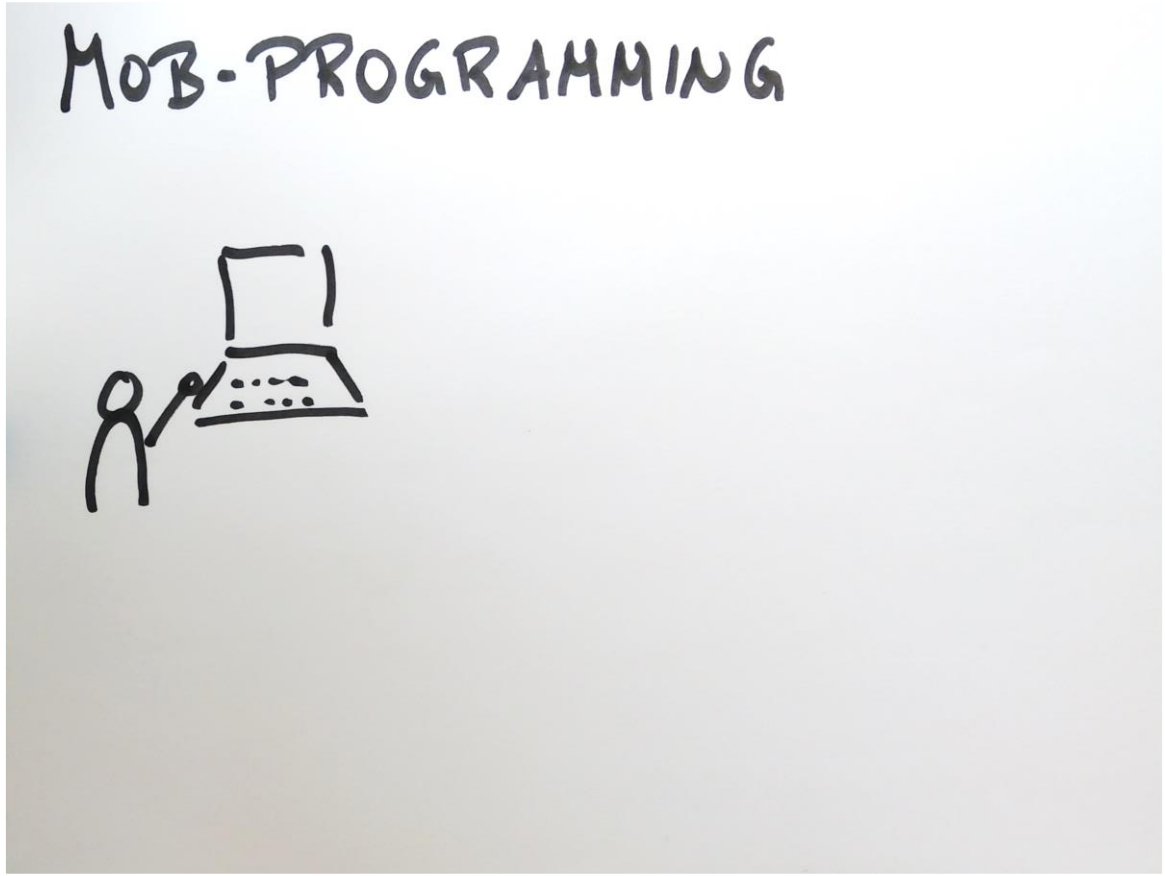
http://llewellynfalco.blogspot.com/2014/06/llewellyns-strong-style-pairing.html

Mob Programming



Mob Programming Setup


MOB-PROGRAMMING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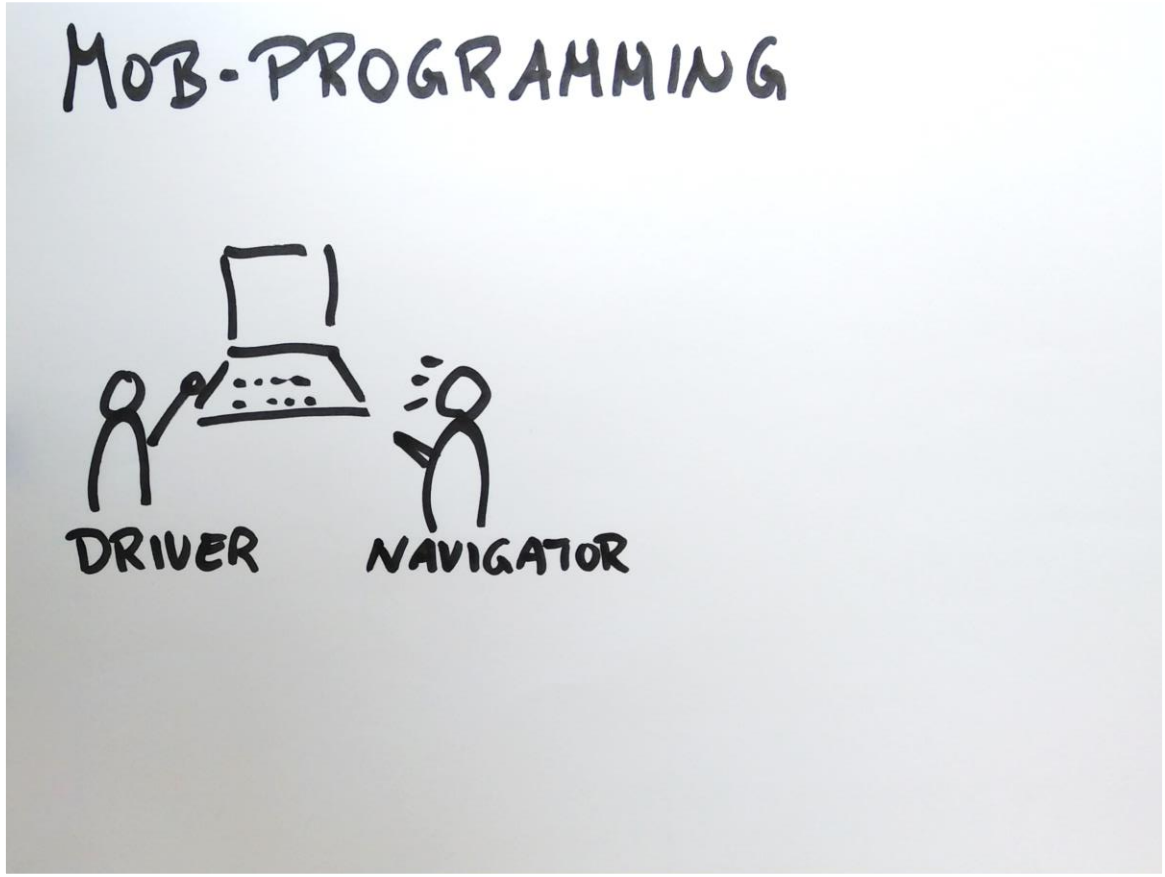
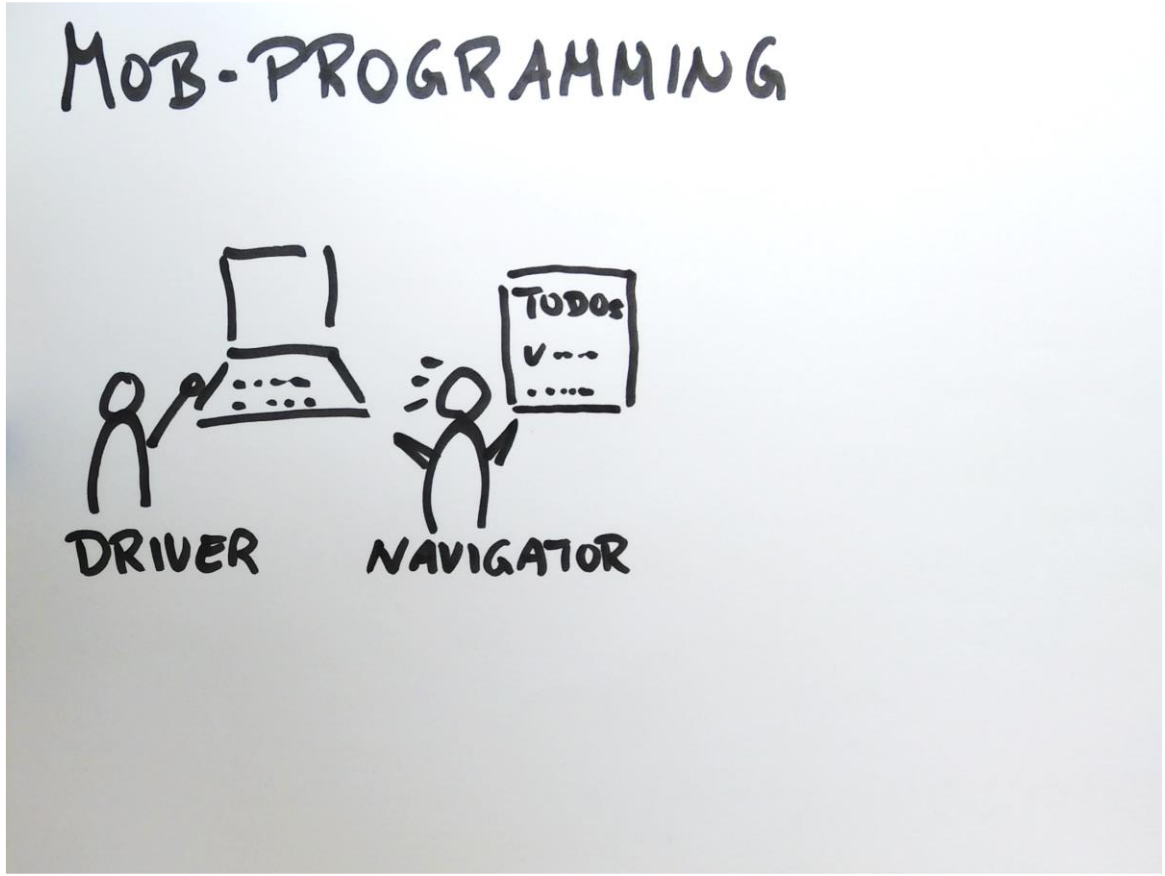
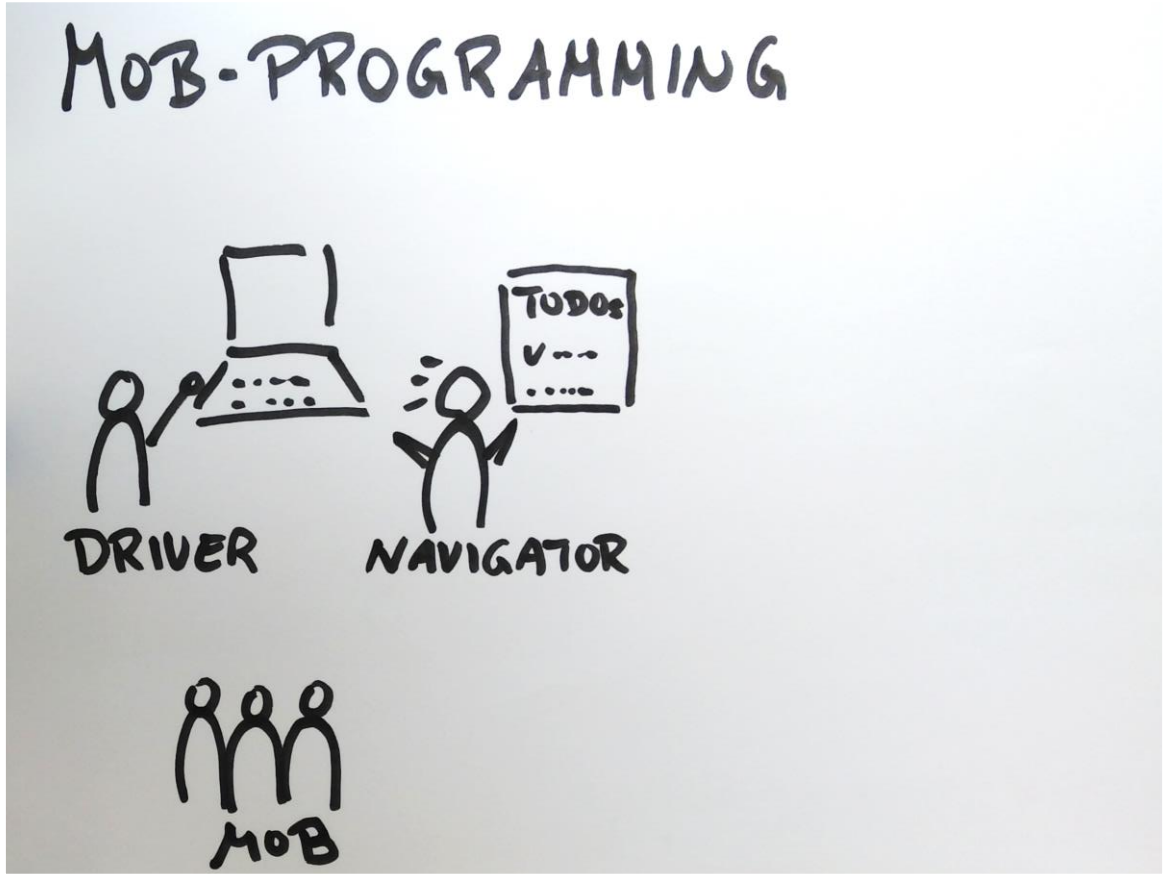
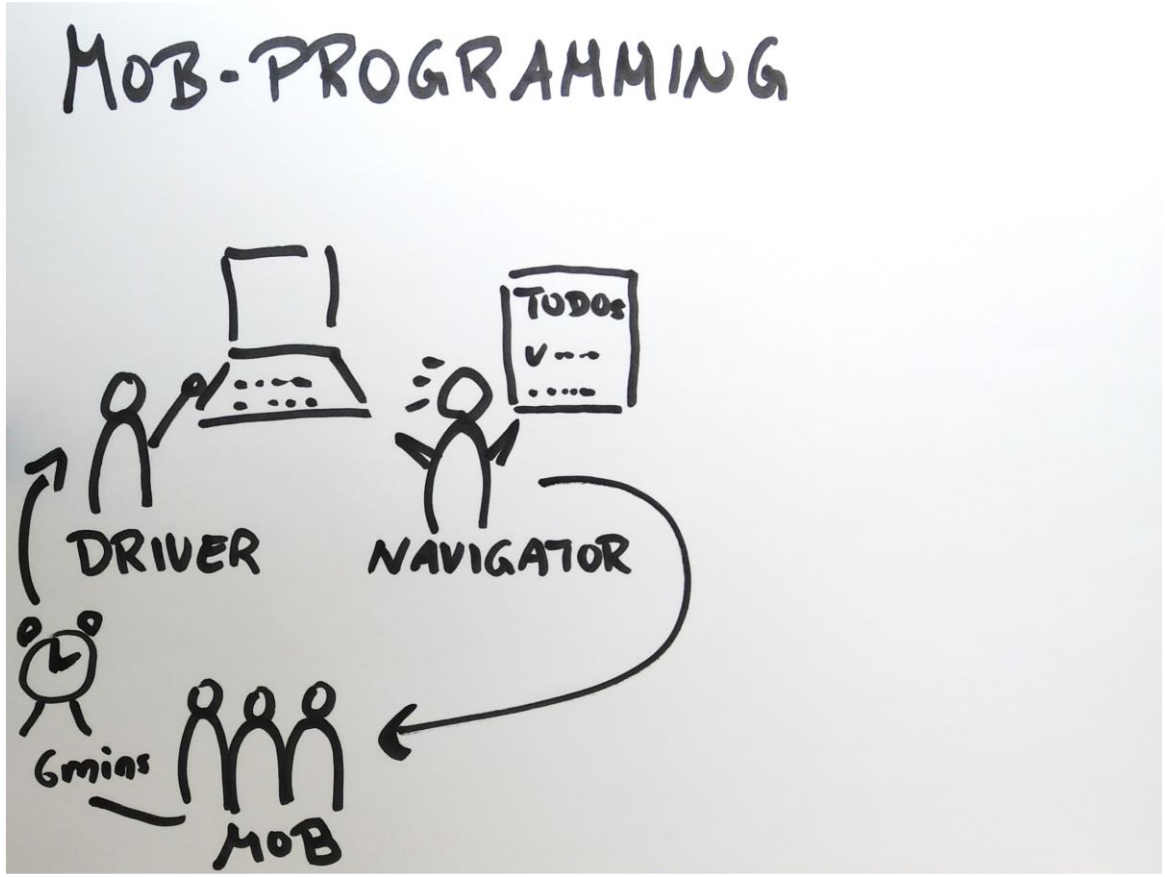

MOB-PROGRAMMING
DRIVER
NAVIGATOR


MOB-PROGRAMMING
TODOs
DRIVER
NAVIGATOR


MOB-PROGRAMMING
TODOs
DRIVER
NAVIGATOR
MOB


MOB-PROGRAMMING
TODOs
DRIVER
NAVIGATOR
6mins
MOB

Effects on Quality

Quality - Separate Programming

Quality - Mob Programming

Exercise: Benefits of Pair Programming

Discuss the benefits of Pair Programming in your group

Add sticky notes to write down your ideas

7 min.

miro.com

Benefits of Pair Programming

Higher quality code

- Immediate reviews
- Multiple perspectives
- Developers from different areas

Knowledge Transfer

- Learn from their partners
- Rotation of pairs

Fewer Bugs

- Early defect detection

Enhances Teamwork

- Better communication skills
- Better cooperation skills
- Get to know each other better
- Better understanding of people’s skills

More fun

- Social interaction

Guidelines

Avoiding Poor Ergonomics

- Two monitors
- Two keyboards

Personal Hygiene

- Take a shower
- Wear deodorant

Clean Workspace

- Free of clutter
- Free of distractions

No extra windows

- Close all not related windows
- Close Email & Chat

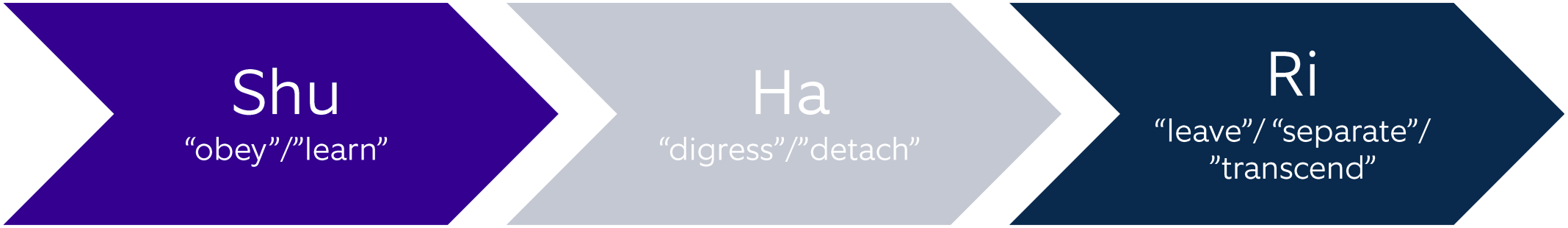
Respect each other

- No teacher/student relationship

Stay focused on the task

Shu-Ha-Ri Learning Model - Concepts

Shu-Ha-Ri learning model is a Japanese martial art concept describing the stages of learning to mastery (Wikipedia 2016)



Source: Martin Fowler: http://martinfowler.com/bliki/ShuHaRi.html, Alistair Cockburn (2006): Agile Software Development

Skill levels and combination

Don’t forget

You can be a Master in a discipline and a beginner in another!

SHU – HA

HA – RI

› Normal combination

› Best learning effects

SHU – SHU

› Avoid if possible

RI - RI

› Only for a short time

› Critical tasks with high impact

Smells

Mentoring, Teacher/
Student relationship

Poor Ergonomics

No pair switching

Worker / Rester pairing

Second computer

Ongoing discussions