

DELIBERATE PRACTICE

DOJOS, KATAS & SENSEI

KAUNAS PHP v5 / MARIJUS KILMANAS / 2013

ABOUT ME

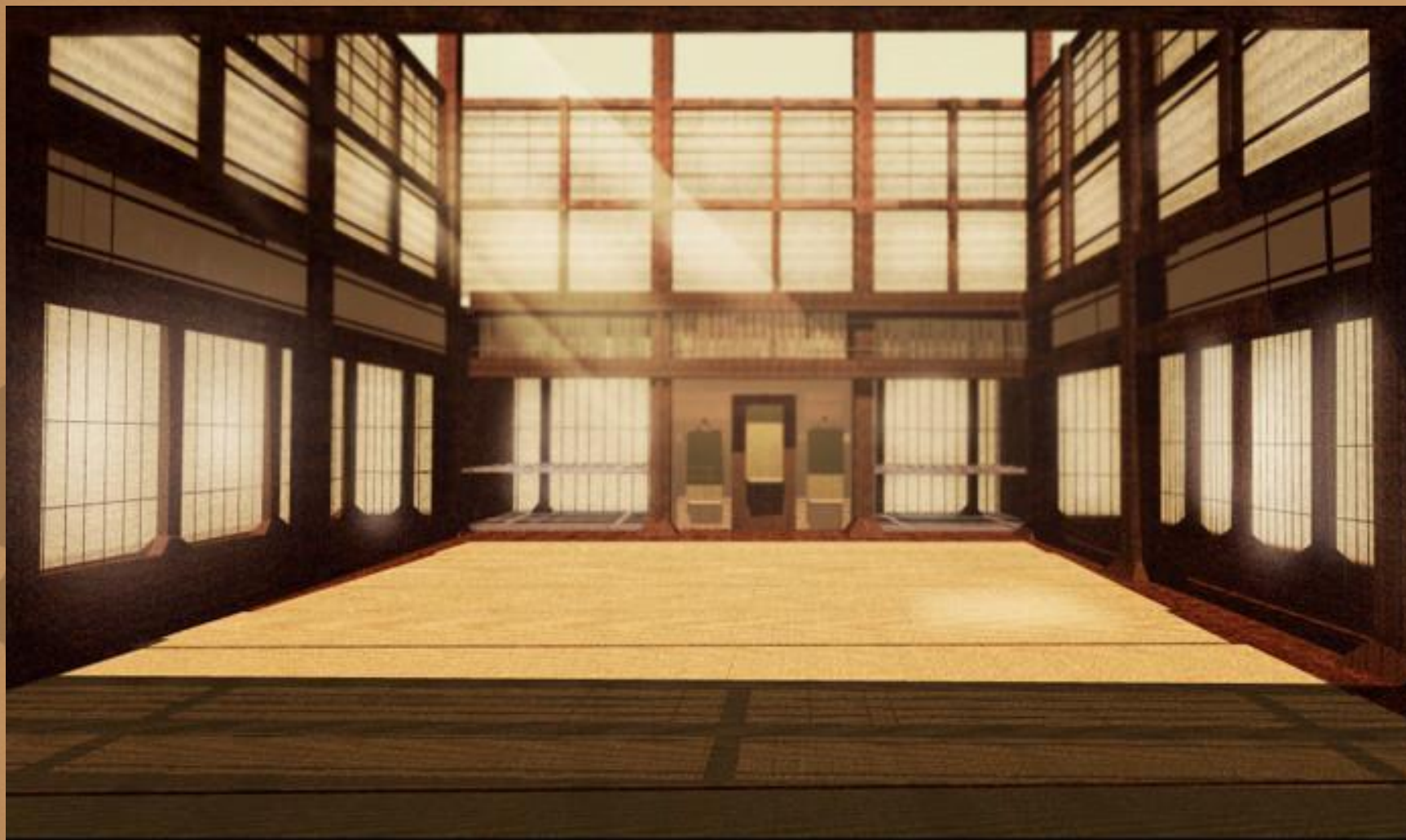
MARIJUS KILMANAS

SOFTWARE ENGINEER
@INVIQA

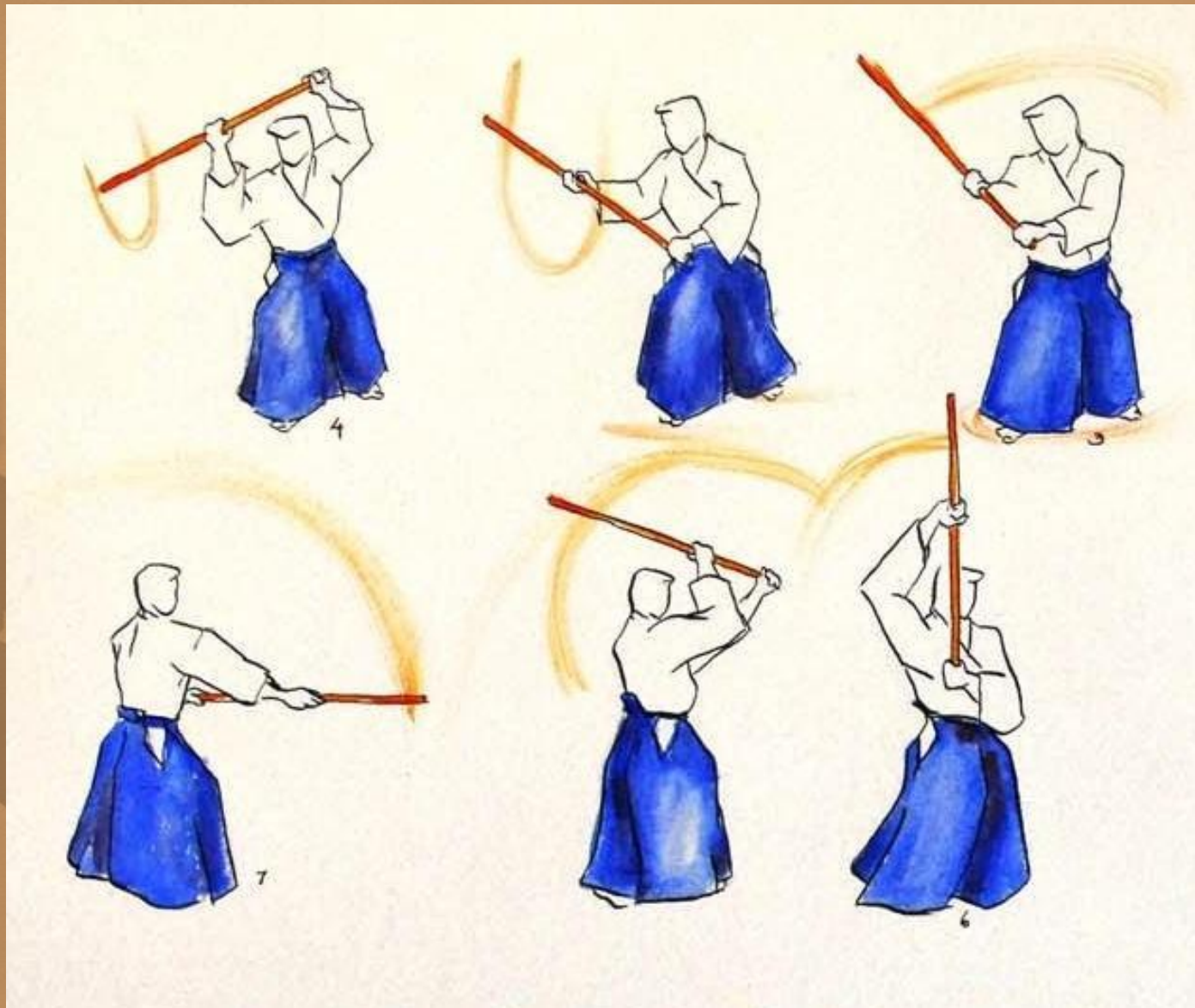
 **[HTTP://ABOUT.ME/MKILMANAS](http://about.me/mkilmanas)**

 **@MKILMANAS**

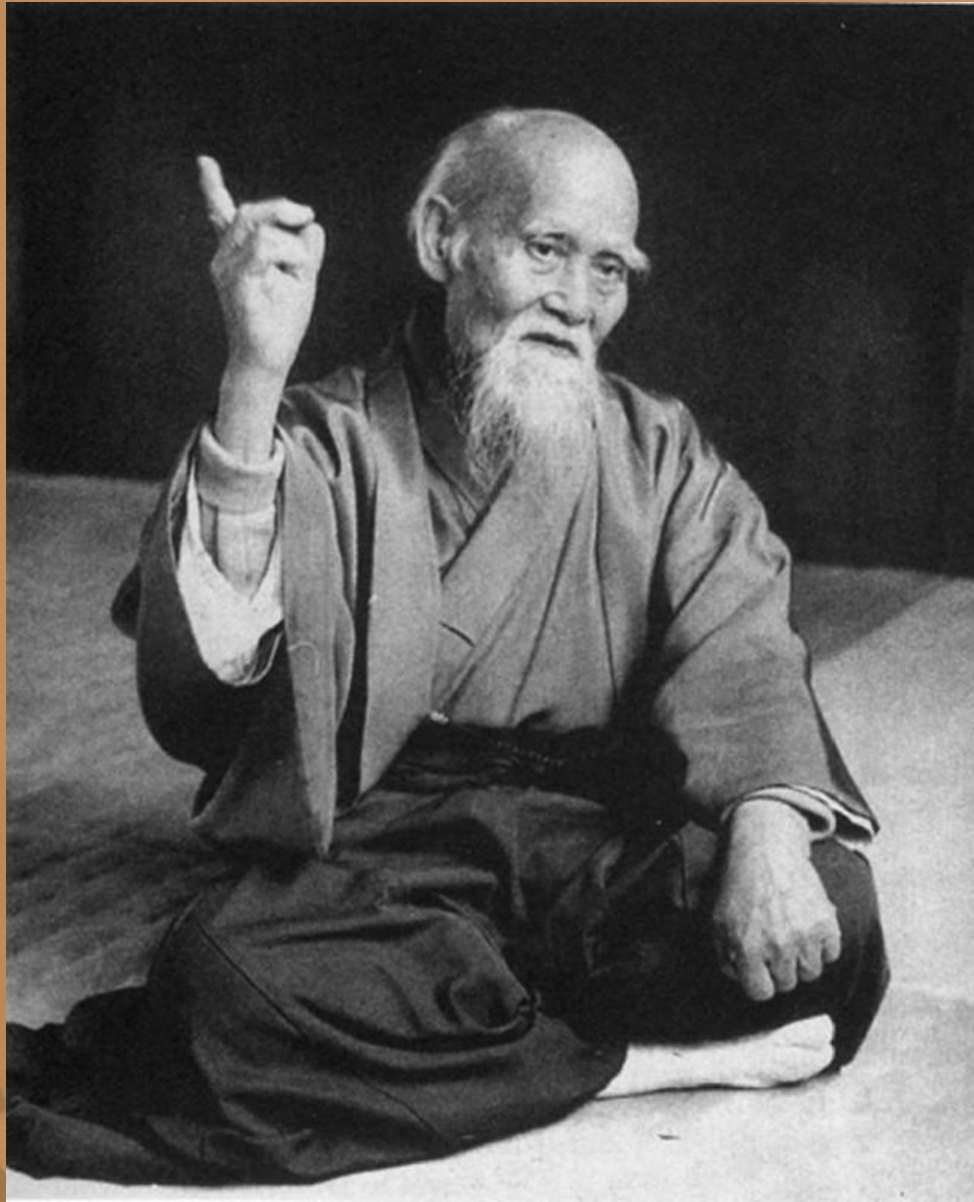
道場 - DOJO



型 OR 形 - KATA



先生 - SENSEI



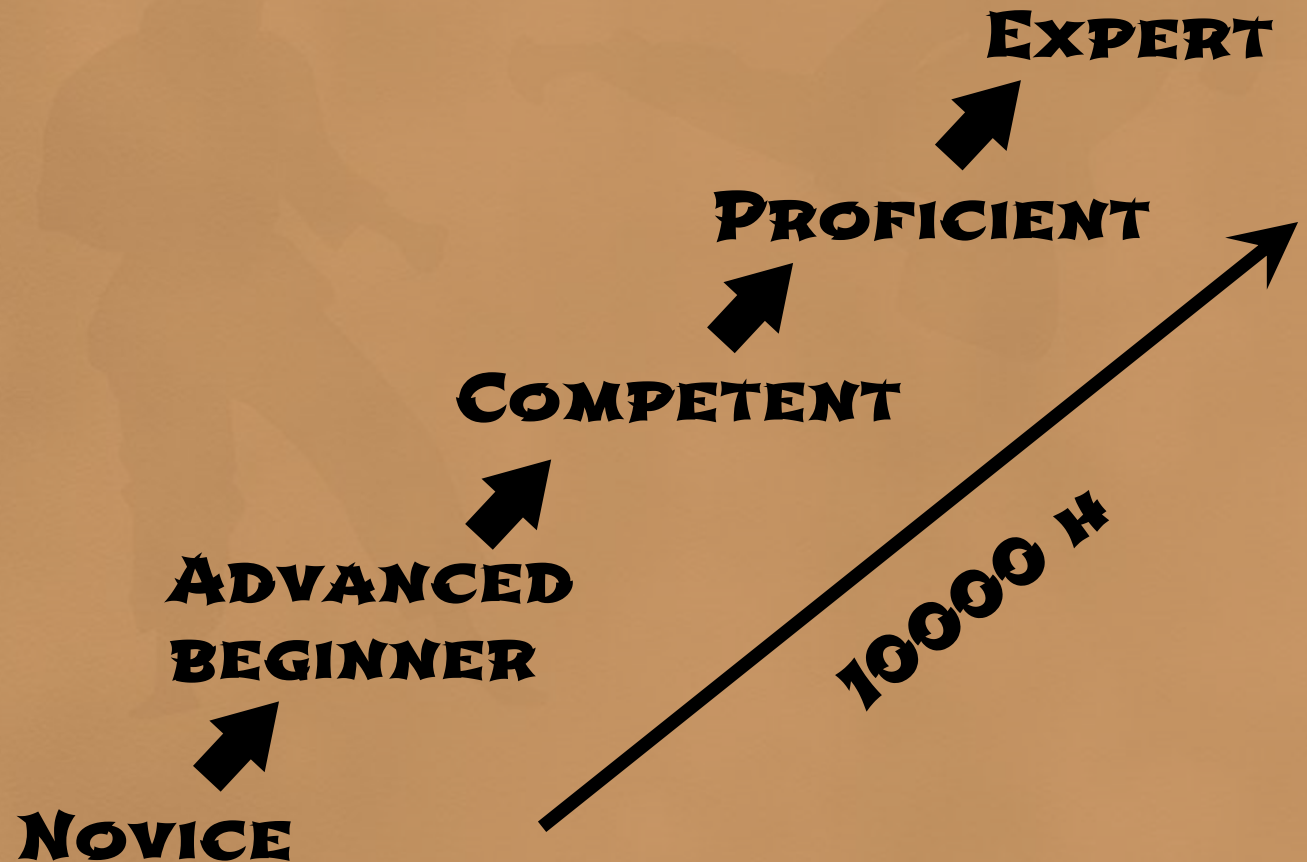
DELIBERATE PRACTICE

DREYFUS MODEL OF SKILL ACQUISITION



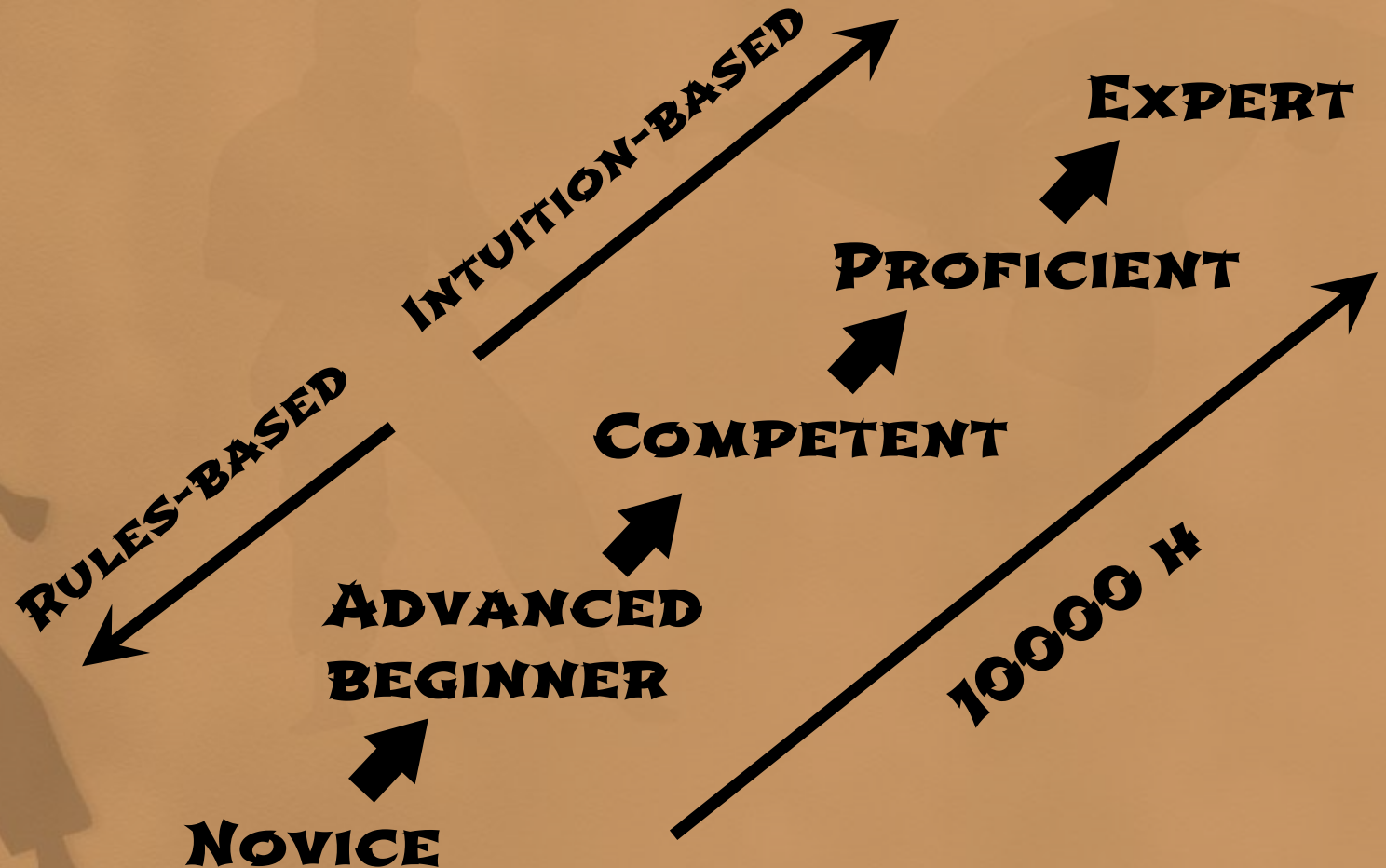
DELIBERATE PRACTICE

DREYFUS MODEL OF SKILL ACQUISITION



DELIBERATE PRACTICE

DREYFUS MODEL OF SKILL ACQUISITION



DELIBERATE PRACTICE

PRACTICE MUST BE:

- FOCUSED**
- GOAL-DIRECTED**
- STRETCH YOUR ABILITIES**
- GIVE CONTINUOUS FEEDBACK**
- FOLLOWED BY SELF-REFLECTION**



CODE KATA

- **TIME TO IMPROVE SKILLS**
- **FOCUS ON PROCESS, NOT THE RESULTS**
- **PRACTICE**
- **REPETITION**
- **TDD**



CODE KATA

- **UNINTERRUPTED**
- **CHALLENGING**
- **NO PRESSURE (NO COMPETITION)**
- **MISTAKES ARE GOOD**
- **SMALL STEPS**






CODE KATA

IDEAS:

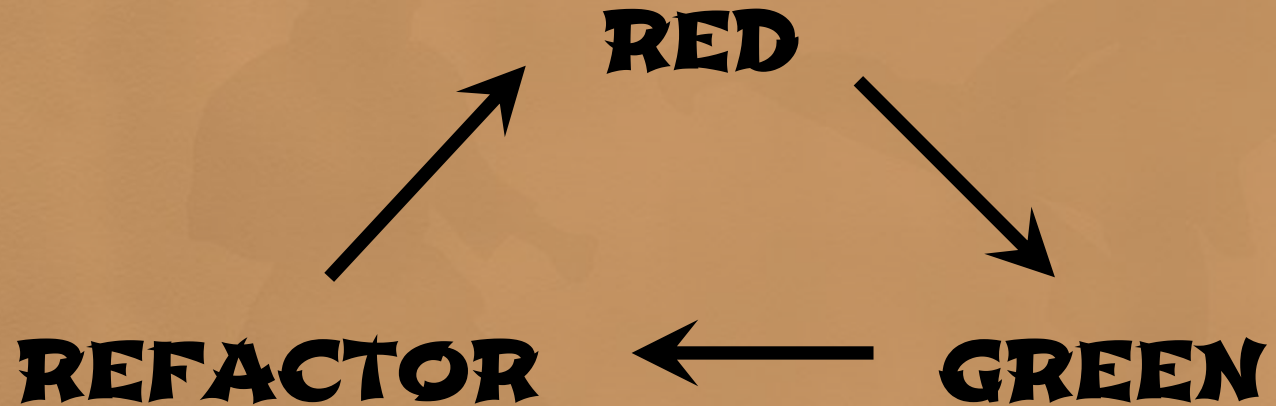
- **FIZZBUZZ**
- **STRING CALCULATOR**
- **CODE BREAKER**
- **BOWLING GAME**

MORE AT:

-  <http://codekata.pragprog.com/codekata/>
-  <http://www.wiredtothemoon.com/2012/12/12-tdds-of-christmas/>
-  <http://codingdojo.org/cgi-bin/wiki.pl?KataCatalogue>

TEST DRIVEN DEVELOPMENT

TDD CYCLE



3 LAWS OF TDD

- 1. DON'T WRITE ANY CODE UNLESS YOU ARE MAKING THE FAILING TEST PASS**
- 2. DON'T ADD TO THE TEST MORE THAN NECESSARY TO MAKE THE TEST FAIL**
- 3. ONLY WRITE ENOUGH CODE TO MAKE THE ONE FAILING TEST PASS**



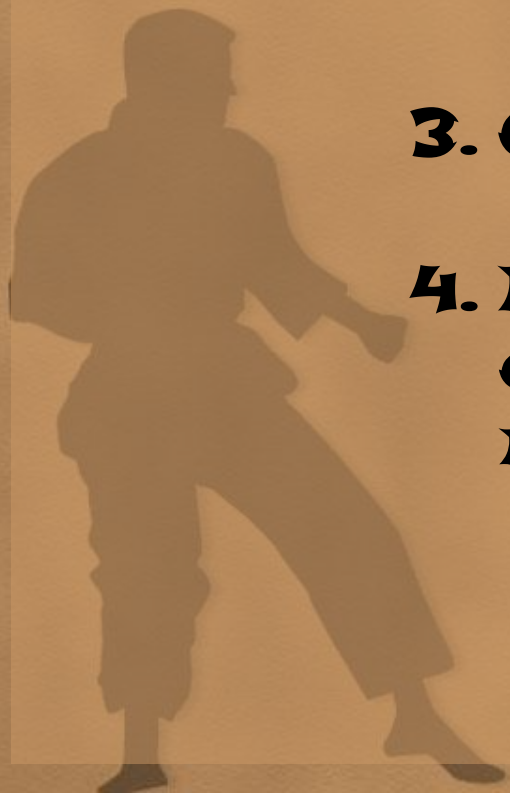
4 RULES OF SIMPLE DESIGN

1. ALL THE TESTS PASS

**2. EXPRESSES EVERY IDEA WE NEED
TO EXPRESS**

3. CONTAINS NO DUPLICATION

**4. MINIMIZE THE NUMBER OF
CLASSES, METHODS AND OTHER
MOVING PARTS**



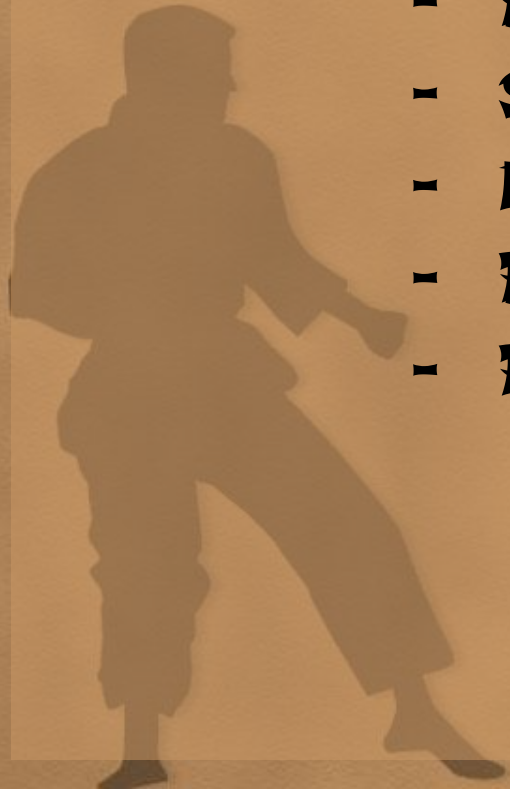
PAIR PROGRAMMING

- **FLOW OF KNOWLEDGE**
- **EXCHANGE OF IDEAS**
- **BETTER DESIGN**
- **REDUCED DEFECTS**
- **IMPROVED DISCIPLINE**
- **BETTER TIME MANAGEMENT**
- **CONFIDENCE**



TDD PING PONG

- FIRST PERSON WRITES A TEST
- SECOND PERSON WRITES CODE TO PASS THE TEST
- BOTH REFACTOR
- SECOND PERSON WRITES A TEST
- FIRST PERSON WRITES CODE
- BOTH REFACTOR
- REPEAT



CODE CLUB

- **CHOOSE YOUR KATA**
- **SET SESSION TIME - E.G. 3x20MIN**
- **PAIR PROGRAMMING**
- **DELETE CODE AFTER EACH SESSION**
- **REMEMBER TO DO REFLECTION AFTERWARDS**



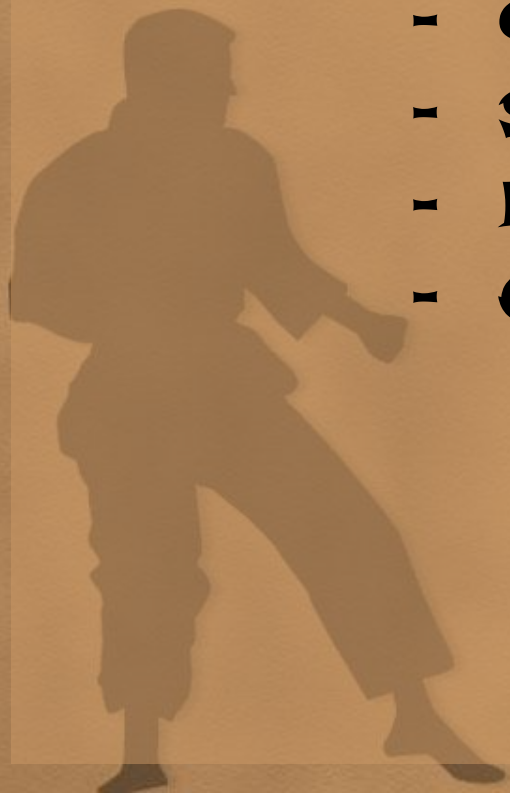
CODE RETREAT

- **LONG SESSION - E.G. 4x1 HOUR**
- **DISCUSS WHAT HAPPENED**
- **PROBLEM IS MORE COMPLEX**
- **E.G. GAME OF LIFE**



CODE DOJO

- **CHOOSE YOUR KATA**
- **ONE PROJECTOR**
- **ONE IDE**
- **ONE PAIR**
- **SENSEI GUIDES THE SESSION**
- **LEARN FROM THE GROUP**
- **CHANGE EVERY N MINUTES**



EXTRA CHALLENGES

- **METHOD LENGTH LIMIT**
- **NO MOUSE**
- **NO LOOPS**
- **NO IF/ELSE/SWITCH**
- **REFACTOR AT LEAST 3 TIMES**
- **NO STATE**



CONTROVERSY

- **DAN NORTH:**  <http://youtu.be/SPj-23z-hQA>
- **KATA AIMS TO MINIMIZE VARIANCE**
- **SOFTWARE DEVELOPMENT IS ALL ABOUT MAXIMIZING IT**

PROBLEM?



CONTROVERSY

NO

- **PRACTICE THE PROCESS, NOT THE RESULT**
- **TDD MUST BE IN YOUR BLOOD**
- **DESIGN HAS TO BECOME INTUITIVE**

"Practice does not make perfect.
Only perfect practice makes perfect."

Vince Lombardi



QUESTIONS?





INVIQA™

WE ARE HIRING

- **SENIOR SOFTWARE ENGINEERS**
- **LOOKING FOR THE BEST OF THE KIND**
- **WE DO DELIBERATE PRACTICE**
- **... AMONGST MANY OTHER THINGS**

LET'S TALK IF YOU ARE INTERESTED

✉ mkilmanas@inviqa.com

🌐 <http://inviqa.com/>

有難う - THANK YOU!

AND KUDOS TO @CAKPER FOR PUBLICLY SHARING
<http://www.slideshare.net/cakper/2013-0617-php3-city-code-dojo>

