

# **DELIBERATE PRACTICE**

**DOJOS, KATAS & SENSEI**



**VILNIUSPHP 0x0C / MARIJUS KILMANAS / 2013**

# ABOUT ME

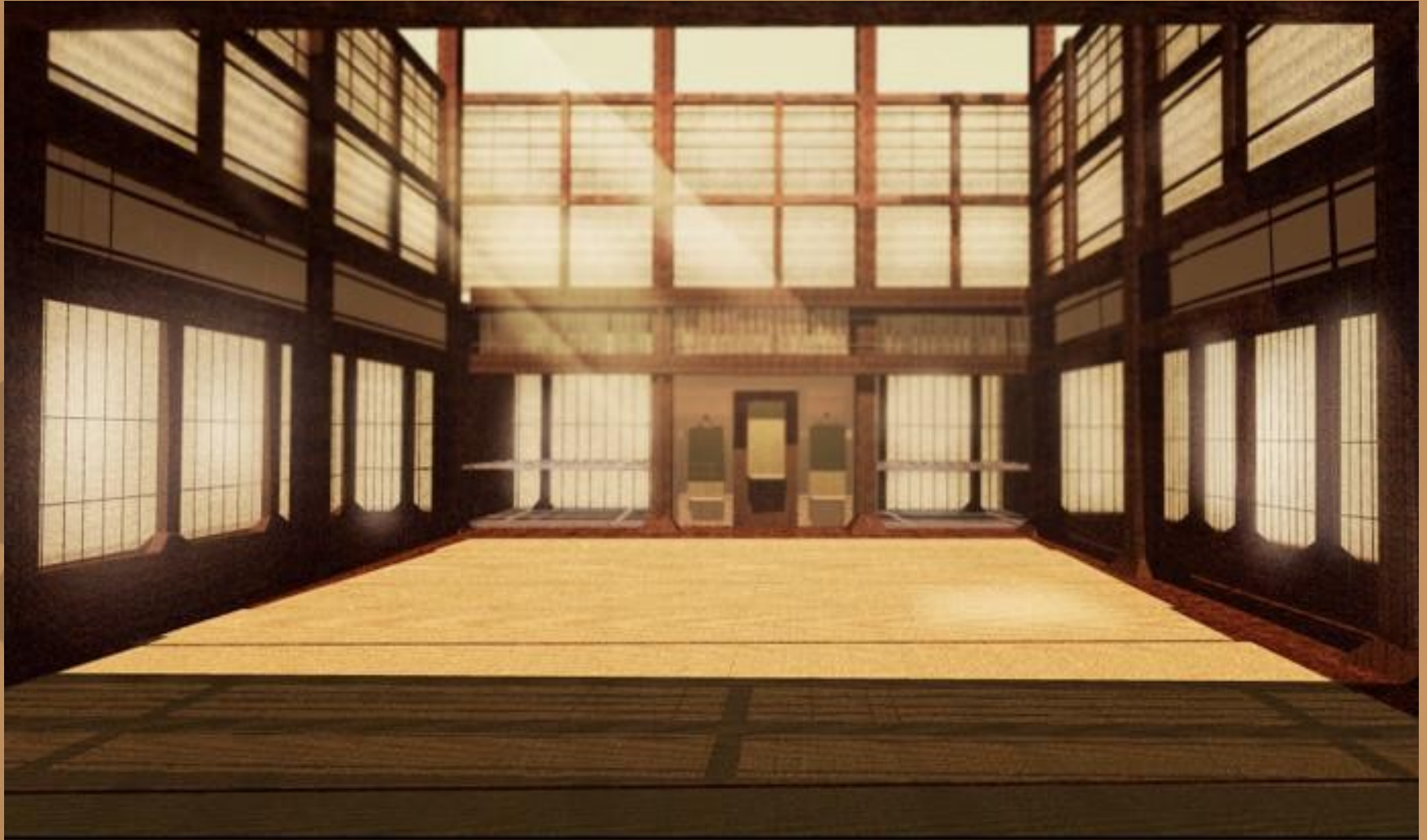
**MARIJUS KILMANAS**

**SOFTWARE ENGINEER**  
**@INVIQA**

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

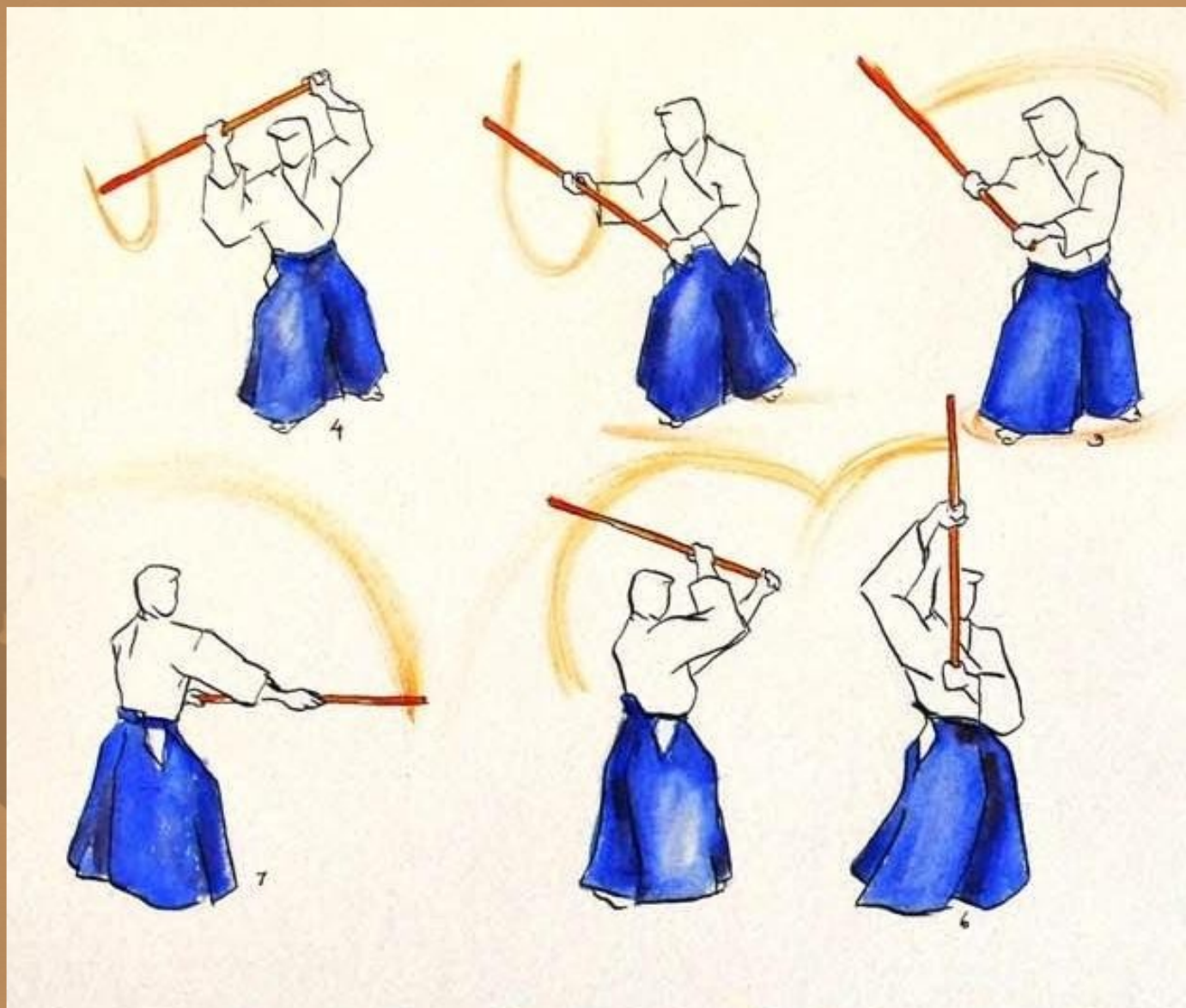
 **@MKILMANAS**

# 道場 - DOJO

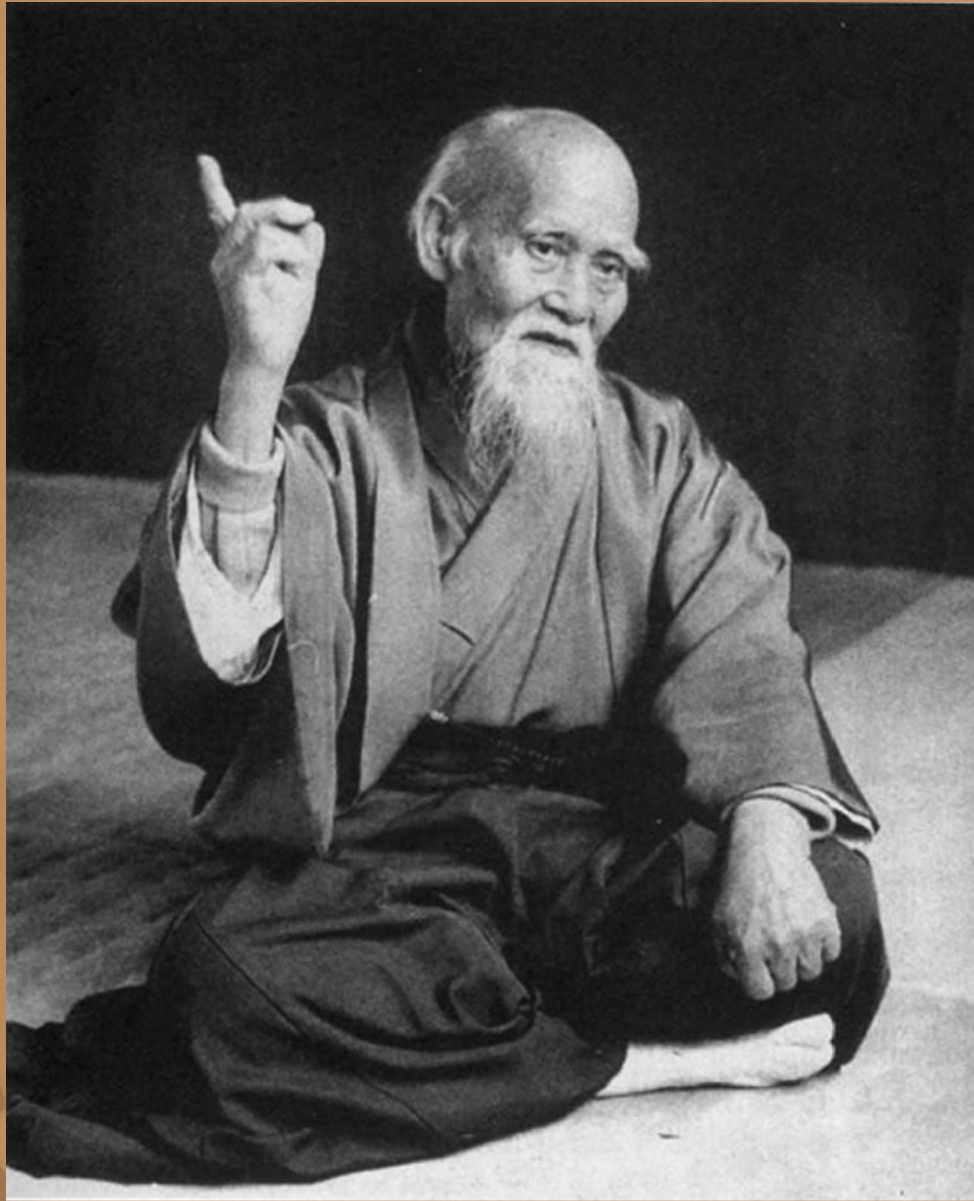




# 型 OR 形 - KATA

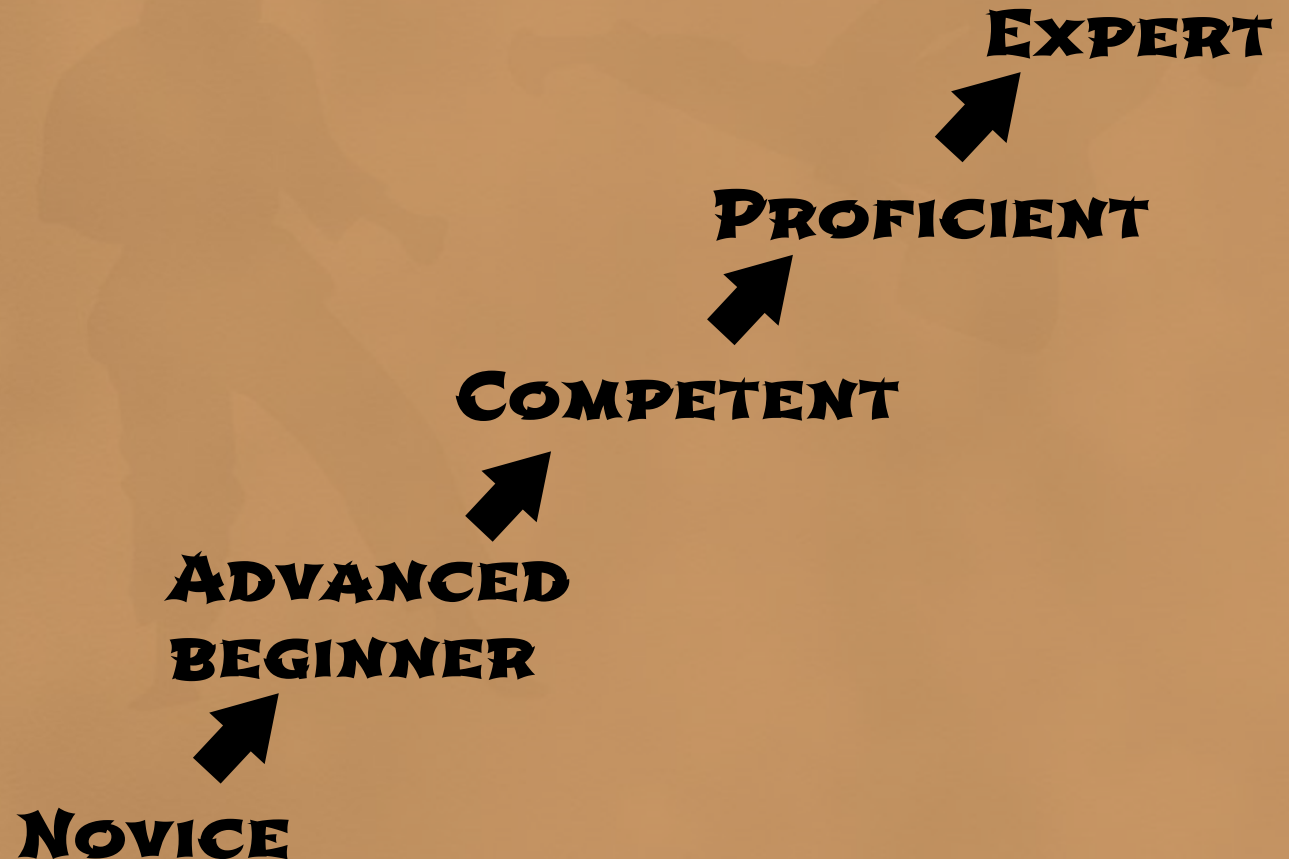


# 先生 - SENSEI



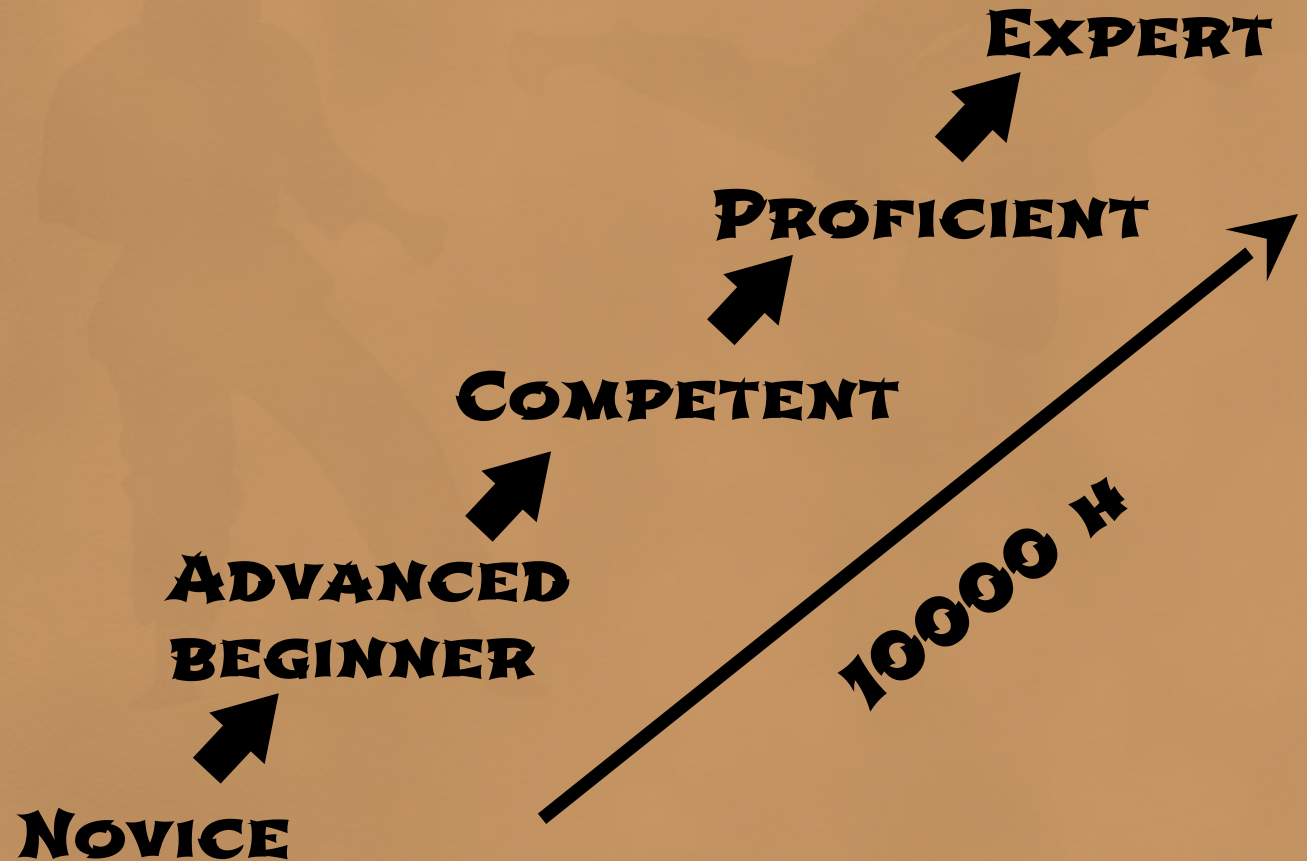
# DELIBERATE PRACTICE

## DREYFUS MODEL OF SKILL ACQUISITION



# DELIBERATE PRACTICE

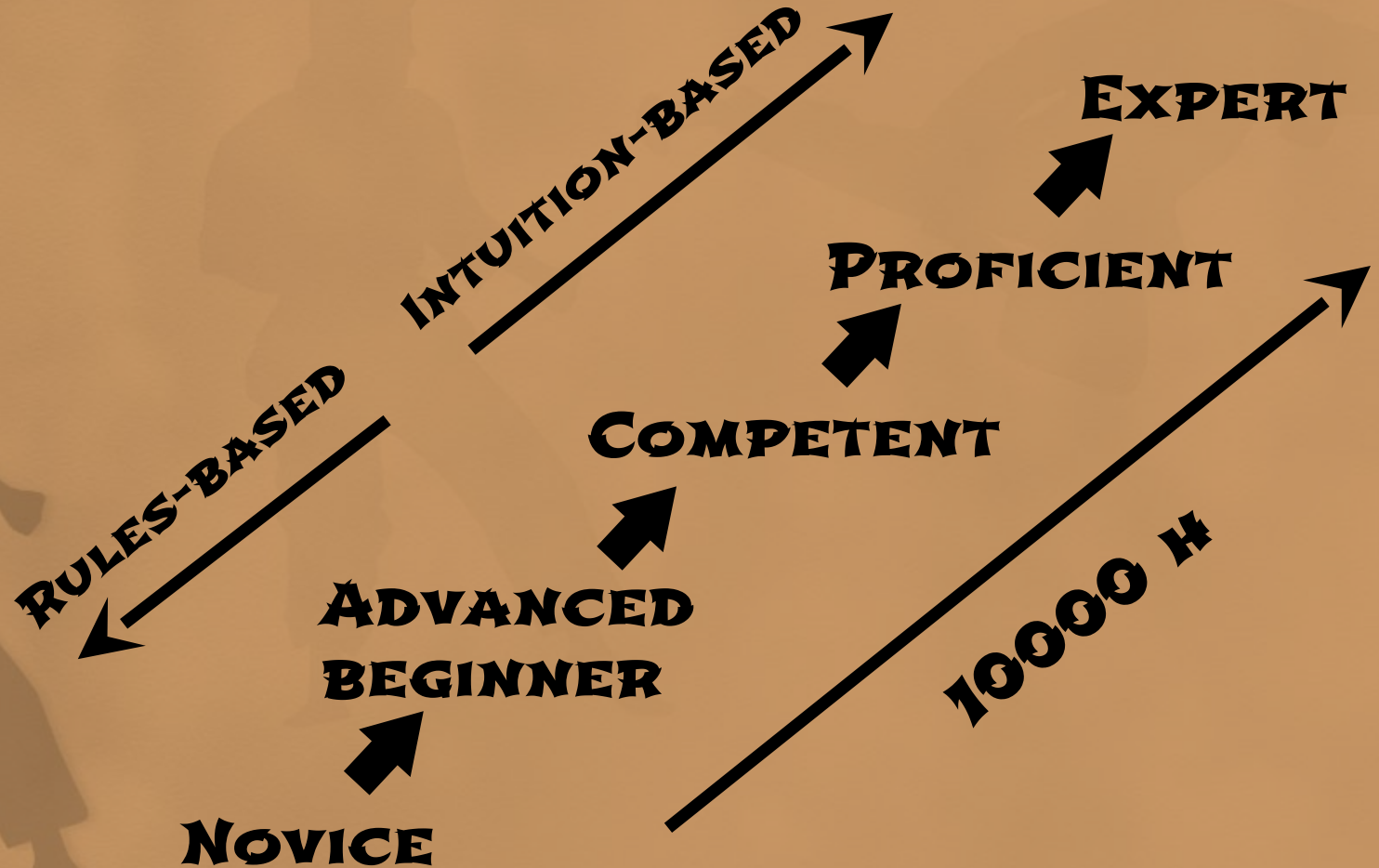
## DREYFUS MODEL OF SKILL ACQUISITION





# DELIBERATE PRACTICE

## DREYFUS MODEL OF SKILL ACQUISITION





# **DELIBERATE PRACTICE**

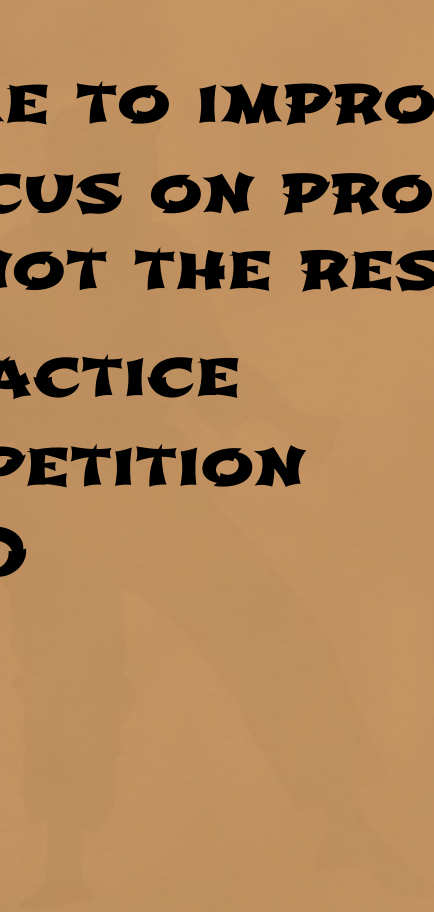
**PRACTICE MUST BE:**

- **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**

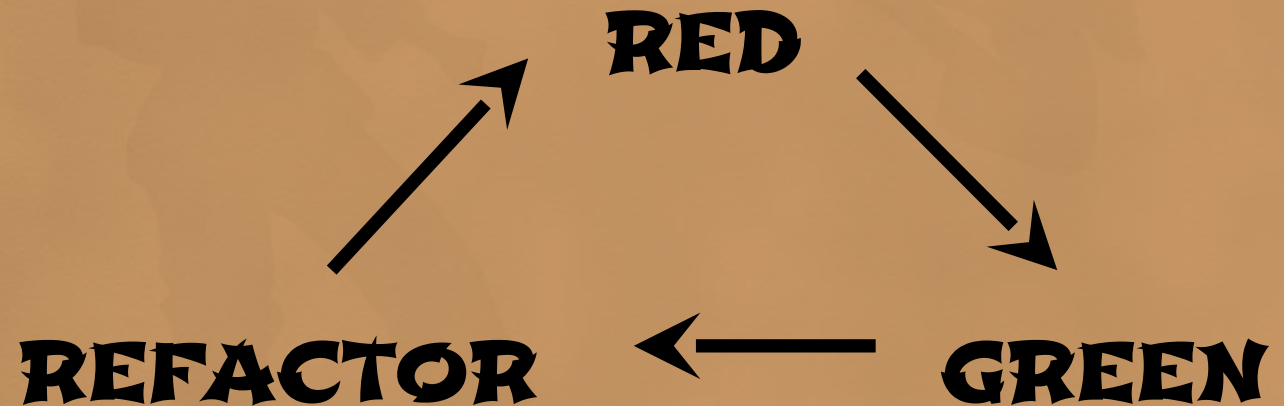
## MORE AT:

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



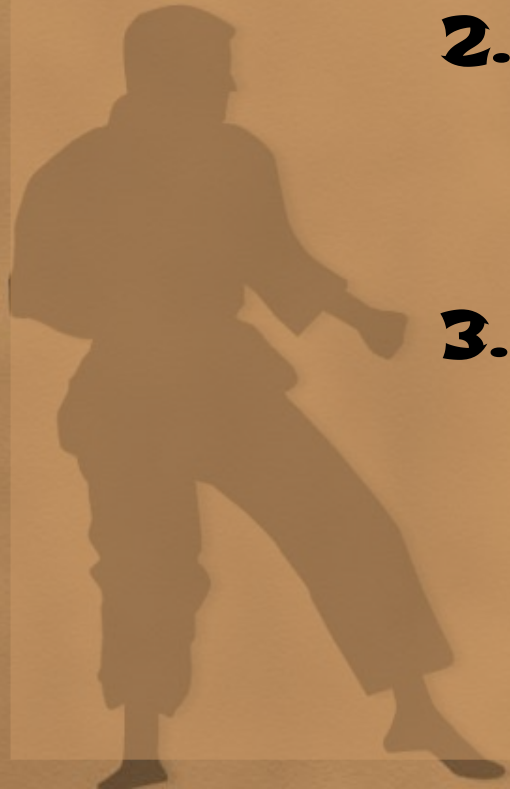
# TEST DRIVEN DEVELOPMENT

**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**



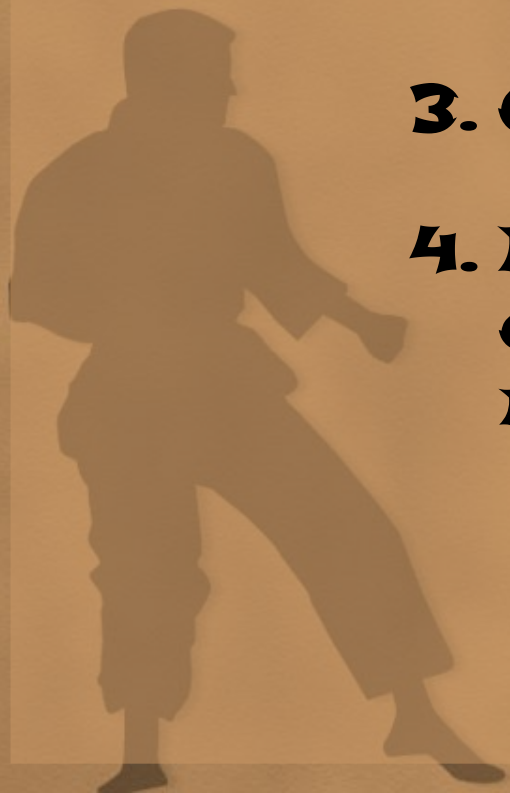
# **4 RULES OF SIMPLE DESIGN**

**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**

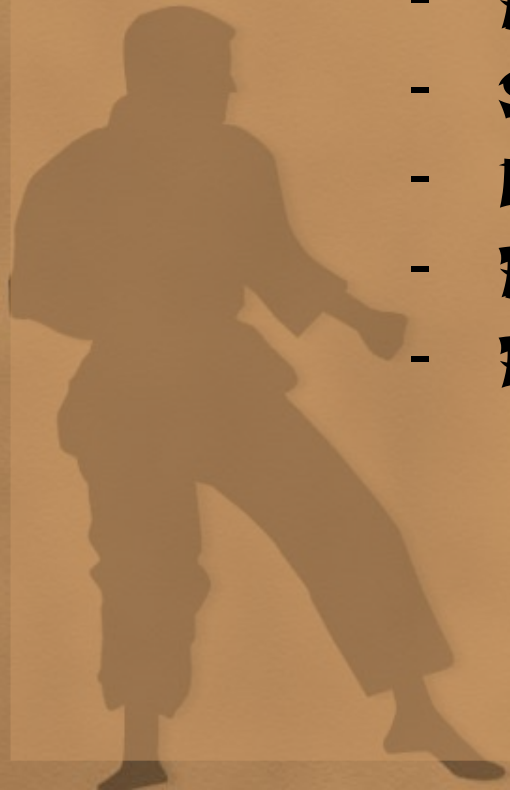
- **FLOW OF KNOWLEDGE**
- **EXCHANGE OF IDEAS**
- **BETTER DESIGN**
- **REDUCED DEFECTS**
- **IMPROVED DISCIPLINE**
- **BETTER TIME MANAGEMENT**
- **CONFIDENCE**





# 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**

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🌐 <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>

