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# My (little) journey toward mastering software design

— by Francesco Toscano —

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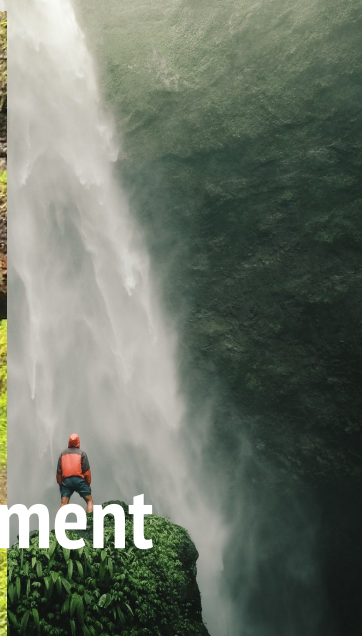
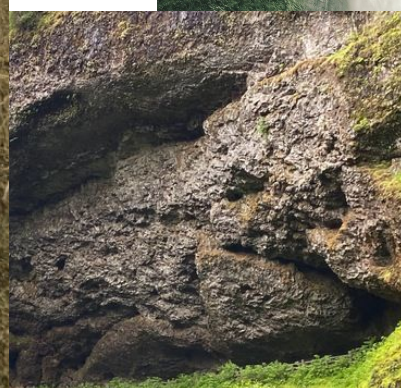
# My beginning (late '90)

Windows Batch File





**A lot of Waterfalls**

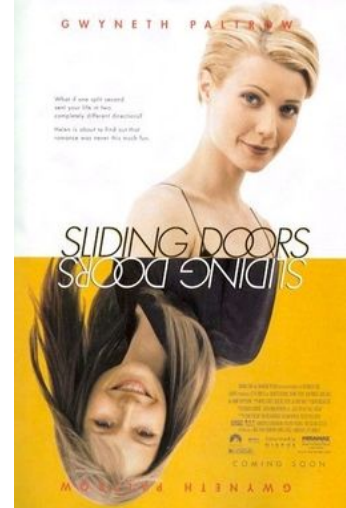


**...then, I met Agile Software Development**





# What if i wouldn't have met Agile



We can feel too old...



continuous  
improvement

**CRAWL  
WALK  
RUN  
FLY**

...or more experienced

# Highlights

1. have the right Mindset
2. write good Acceptance Criteria
3. spend time for Little Design Upfront
4. principle driven development
5. develop by testing

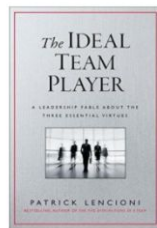


# Have the right Mindset

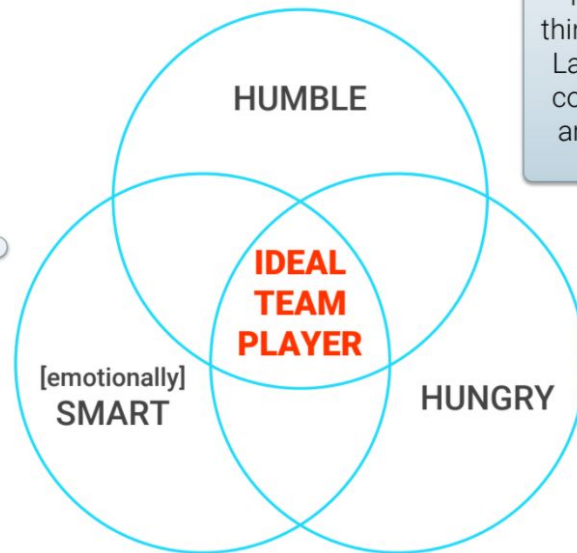


- Critical
- Analytical
- Collaborative
- Shared / Team

## ✈ The ideal team player



Empathic, emotionally smart people have good judgment and intuition about group dynamics and the impact of their words and actions to others



Humility isn't thinking less of yourself, but thinking of yourself less. Lack of excessive ego, concerns about status and attention seeking

Hunger as a sustainable commitment in doing a job well and going above and beyond when it's truly needed



# Write good Acceptance Criteria

- Definition of Done
- meeting point from Business to Developers

*given* I bought 1000 shares of "Old School Waterfall Software LTD" on 14/02/1990  
*and* I bought 400 shares of "Crafter Masters Limited" on 09/06/2016  
*and* I bought 700 shares of "XP Practitioners Incorporated" on 10/12/2018  
*and* I sold 500 shares of "Old School Waterfall Software LTD" on 11/12/2018  
*and* the current share value of "Old School Waterfall Software LTD" is \$5.75  
*and* the current share value of "Crafter Masters Limited" is \$17.25  
*and* the current share value of "XP Practitioners Incorporated" is \$25.55  
*when* I print my current portfolio  
*then* the outcome displayed should be:

company	shares	current price	current value	last operation
Old School Waterfall Software LTD	500	\$5.75	\$2,875.00	sold 500 on 11/12/2018
Crafter Masters Limited	400	\$17.25	\$6,900.00	bought 400 on 09/06/2016
XP Practitioners Incorporated	700	\$25.55	\$17,885.00	bought 700 on 10/12/2018

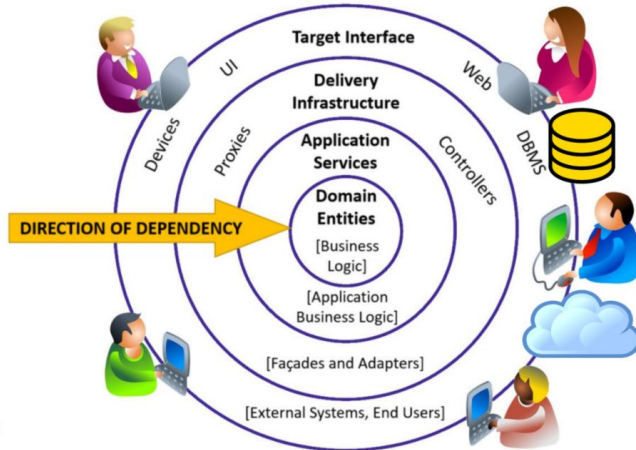
[sorted by first operation date ascending]



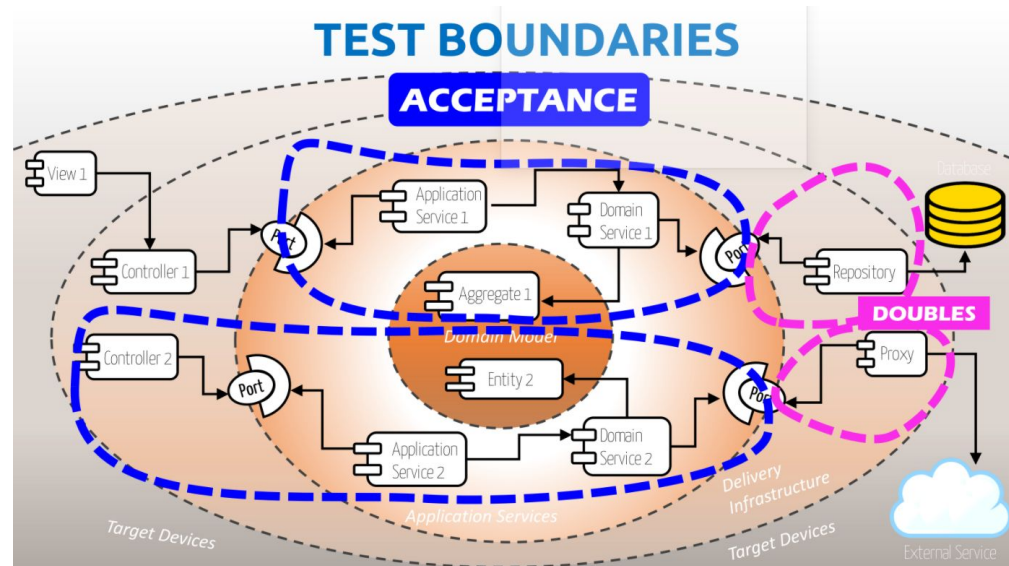


# Spend time for Little Design upfront

## Clean/Onion/Hexagonal Architecture

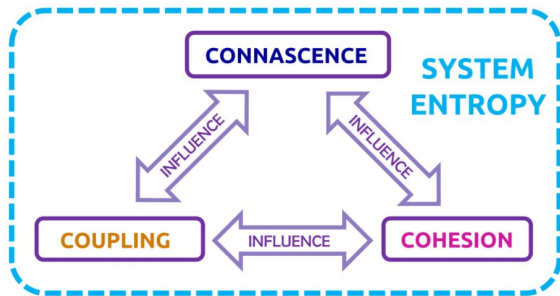


Lesson 3



# Principle Driven Development

- Code smells
- Coupling and Cohesion
- SOLID
- Connascence



**ENTROPY** as the degree of disorder in a system

Strong

Weak



Lesson 1



TRAINING PROGRAMME

**Dynamic**  
(discoverable  
only at runtime)

**Static**  
(discoverable by  
visually  
examining the  
code)



Lesson 1

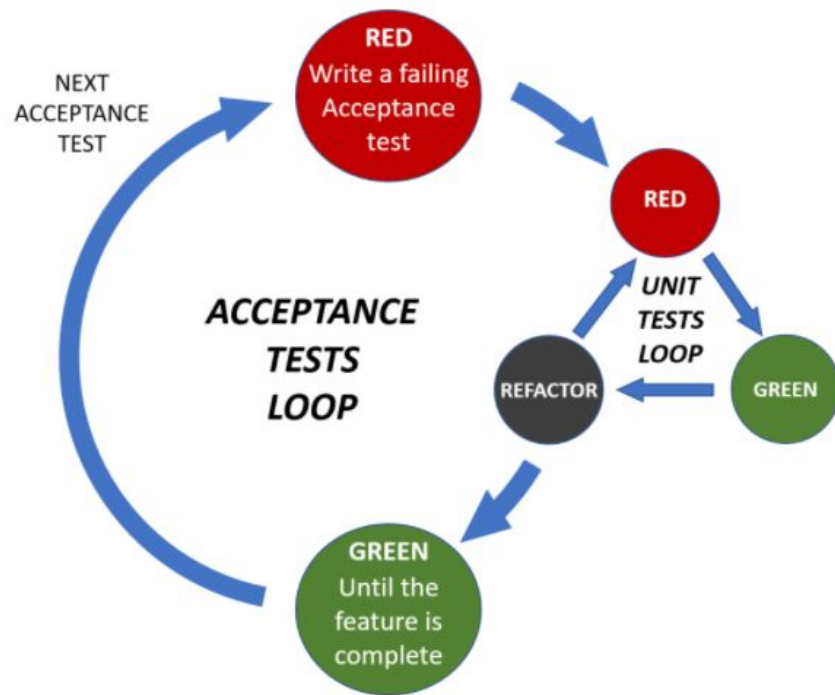
TRAINING PROGRAMME



# Develop by testing



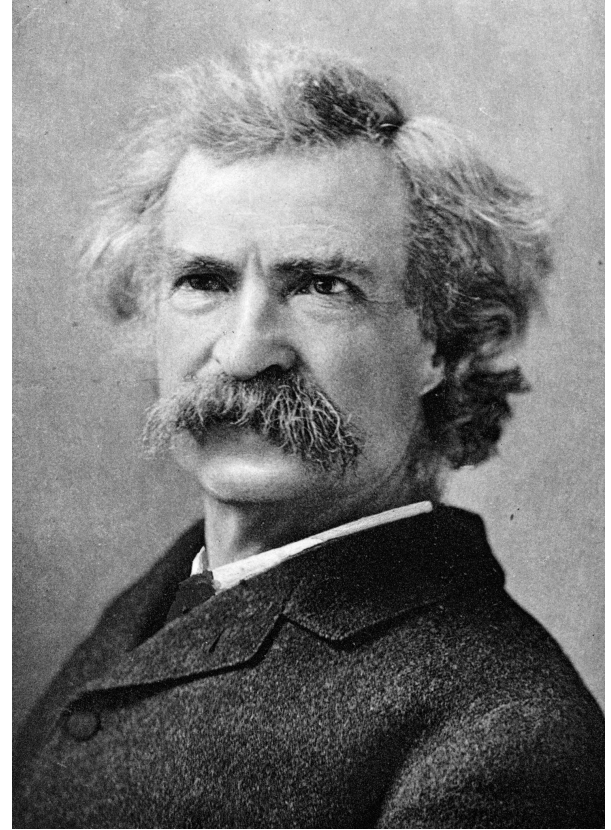
- Types
  - Unit, Acceptance, Integration
- Practices
  - Test Doubles
  - TDD & AcceptanceTDD
  - BDD



## Conclusion

*“Continuous improvement is better than delayed perfection.”*

*Mark Twain*





**THANK YOU**



# Questions



# Resources

## Agile Technical Practices Distilled

*A journey Toward Mastering Software Design*

Pedro Moreira Santos, Marco Consolaro, Alessandro di Gioia