CPSC 310 – Software Engineering

Lecture 3

Agile Methods

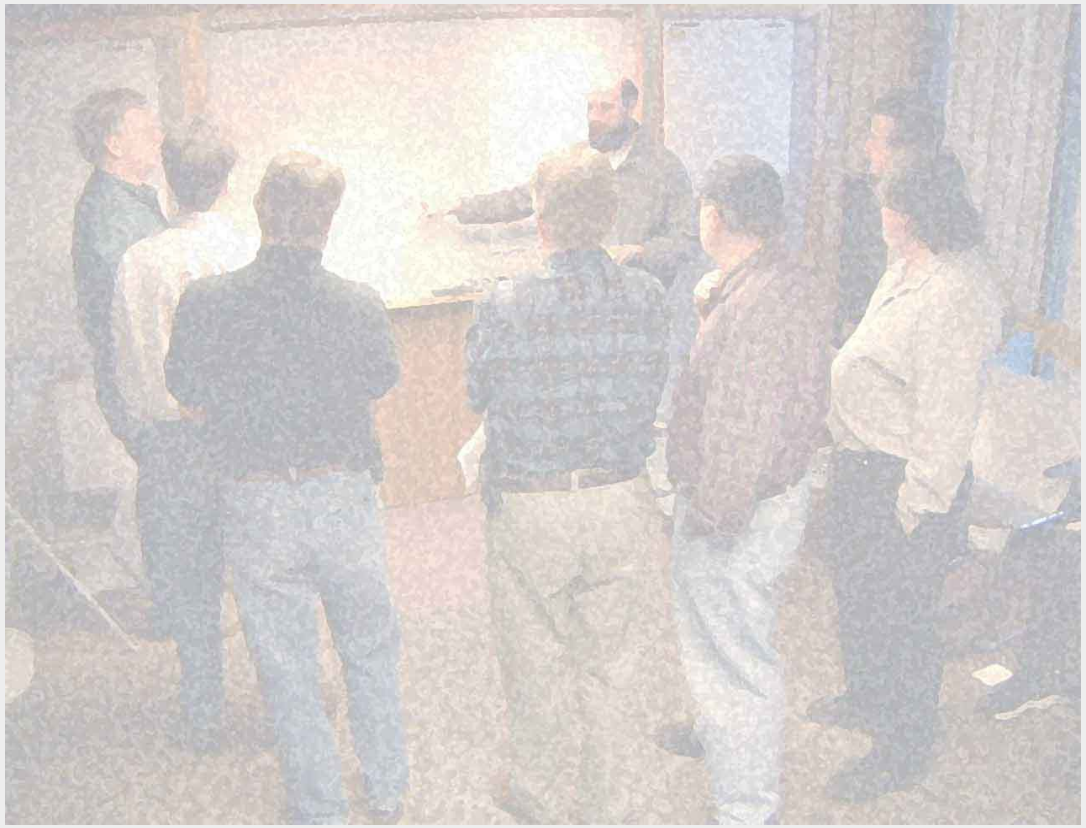
About Last Lecture

Clarification on process selection:

- People (so developer) are reluctant to change.
- Introducing a new process into a company is expensive and time consuming.
- Finally it's all about context

Where It All "Began"

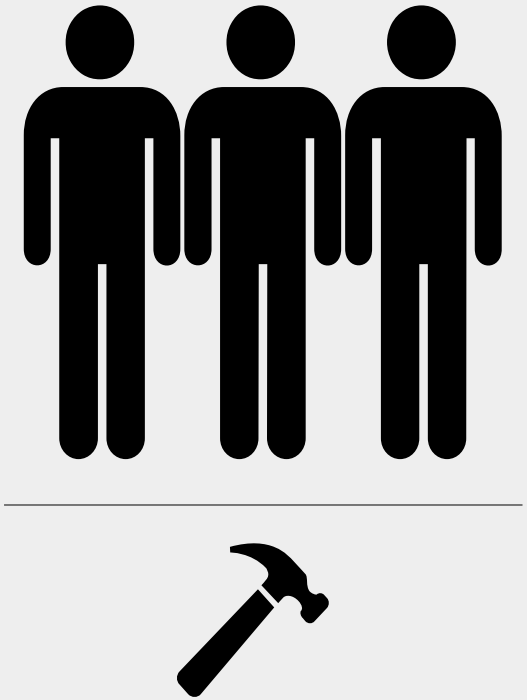
Agile Manifesto (2001)



http://agilemanifesto.org/

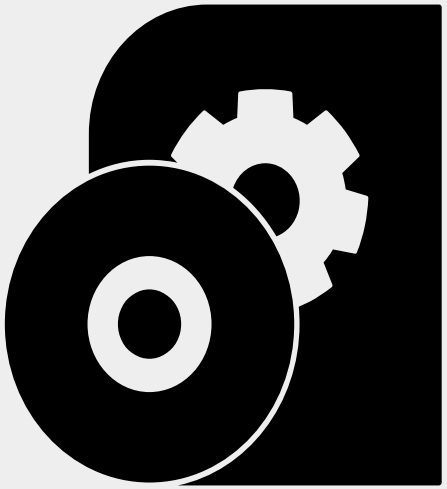
Individuals and interactions

over processes and tools



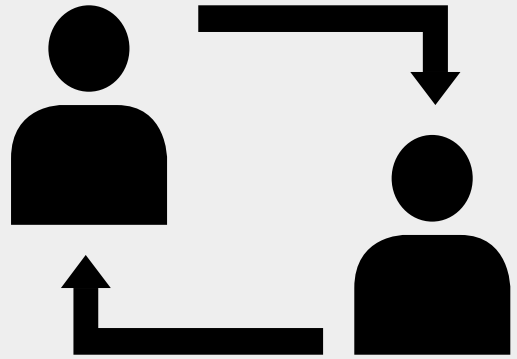
Working software

over comprehensive documentation



Customer collaboration

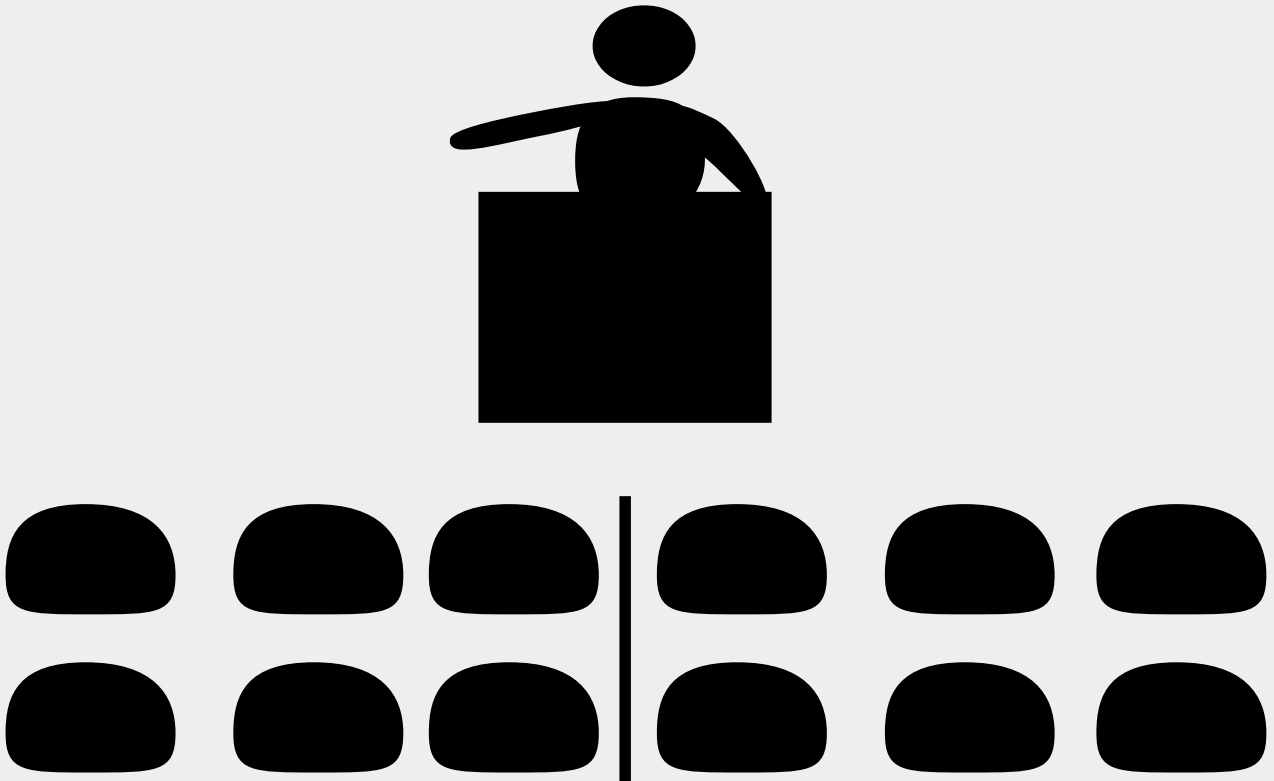
over contract negotiation



Responding to change

over following a plan

Class Activity: Agile Methods



Advantages ?

Disadvantages ?

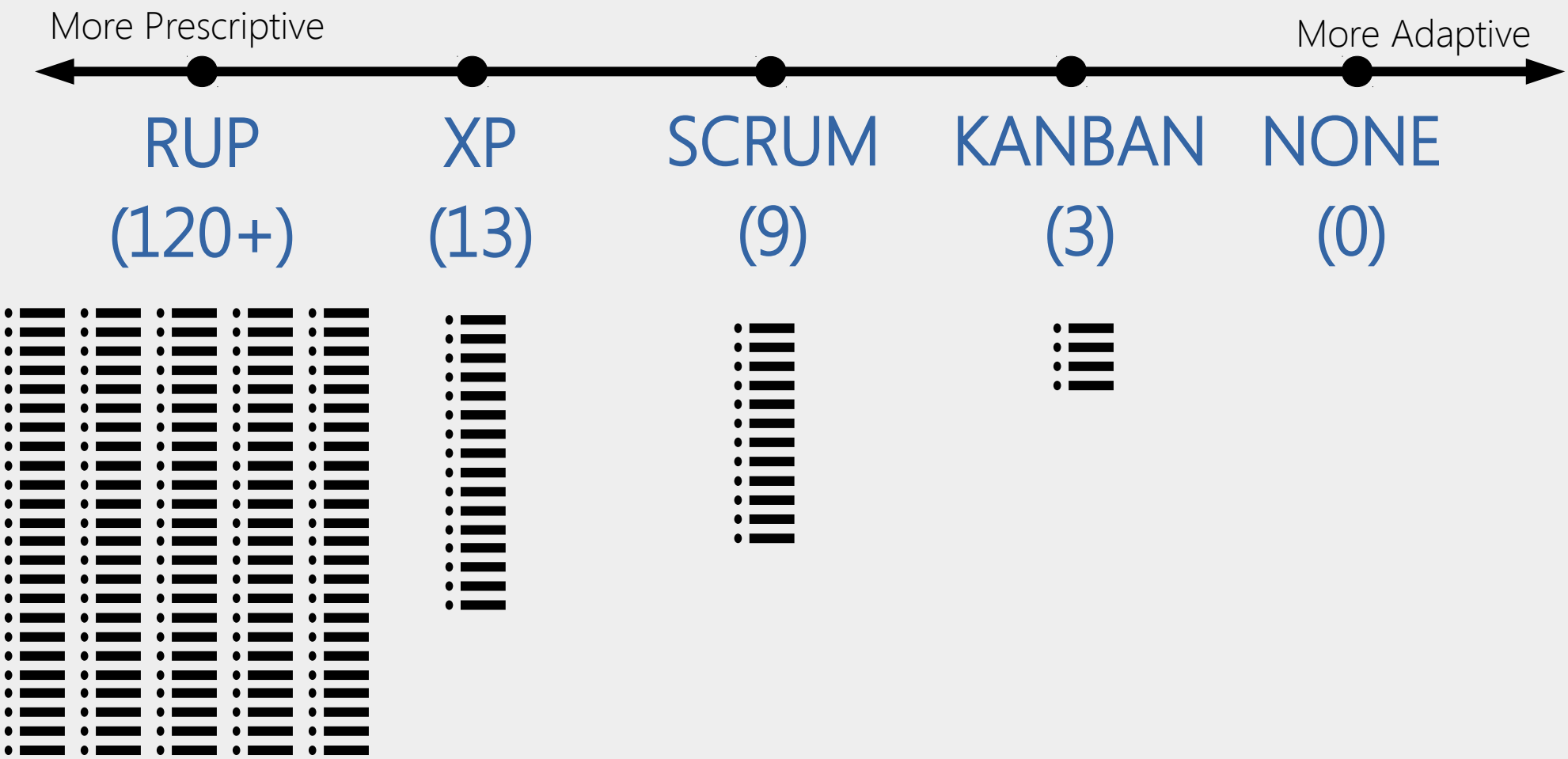
Agile Software Development Advantages

- Lower risk
- Close customer involvement
- Better visibility
- Compliant with changes

Agile Software Development Disadvantages

- Harder to enforce with inexperienced programmers
- Close customer involvement (again!)
- Hard to estimate completion schedule
- Increases the risk of feature creep
- Can be inefficient

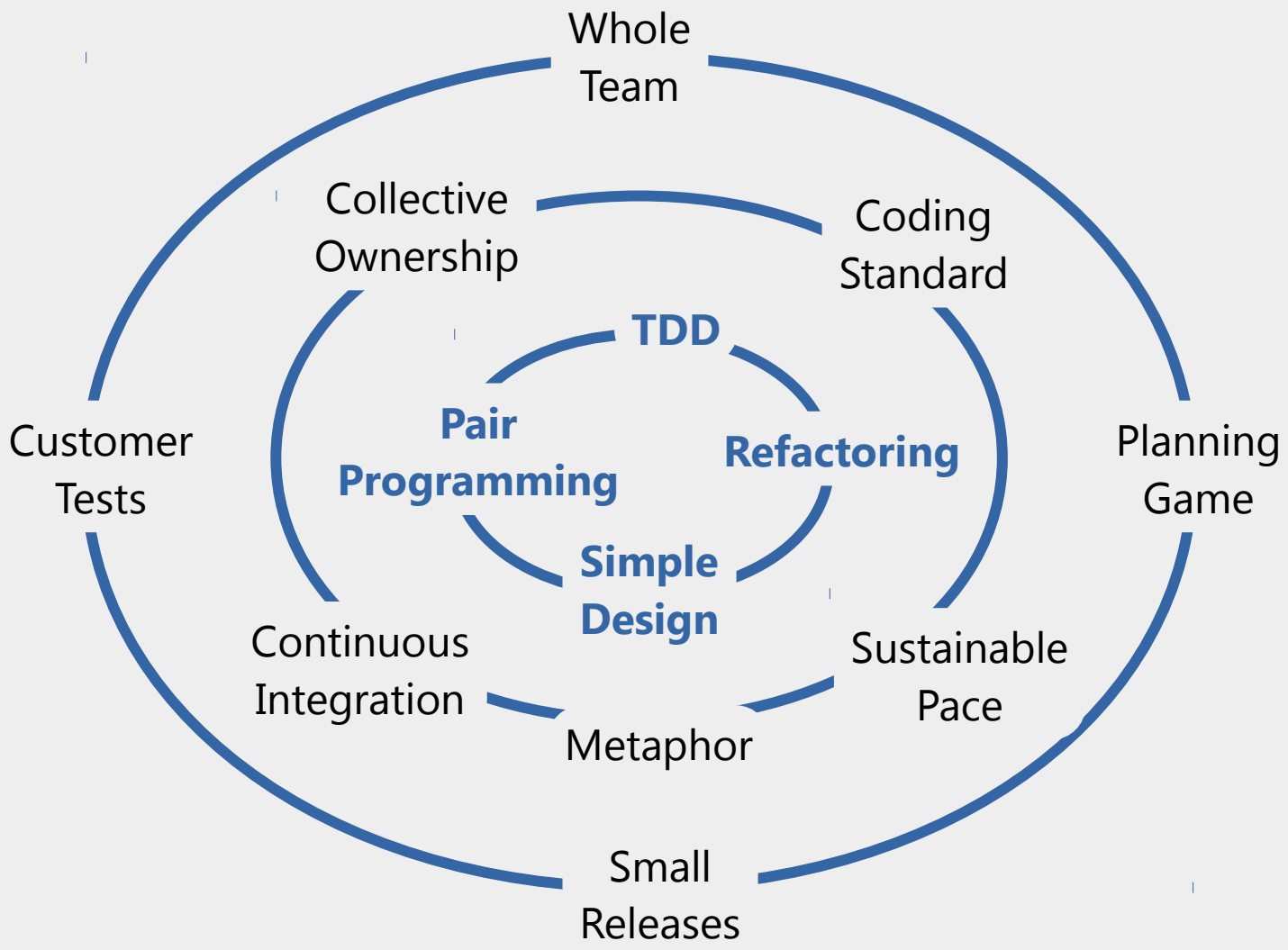
The Agile Landscape



Do not develop an attachment to any one weapon or any one school of fighting.

Miyamoto Musashi
17th century Samurai

Extreme programming (XP)



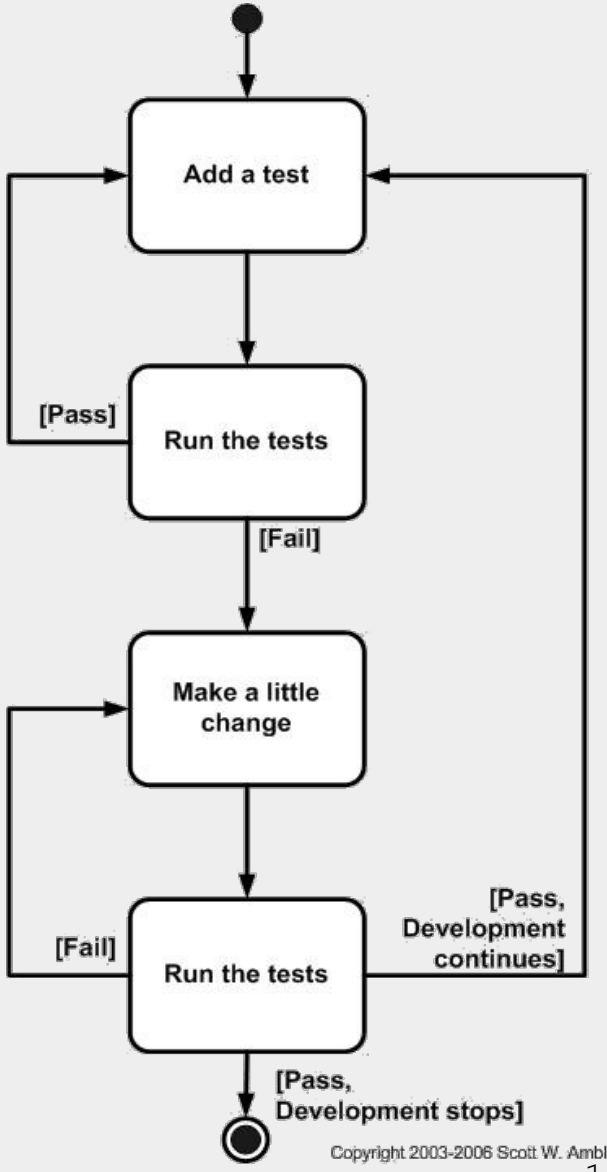
Kent Beck

mid 90s

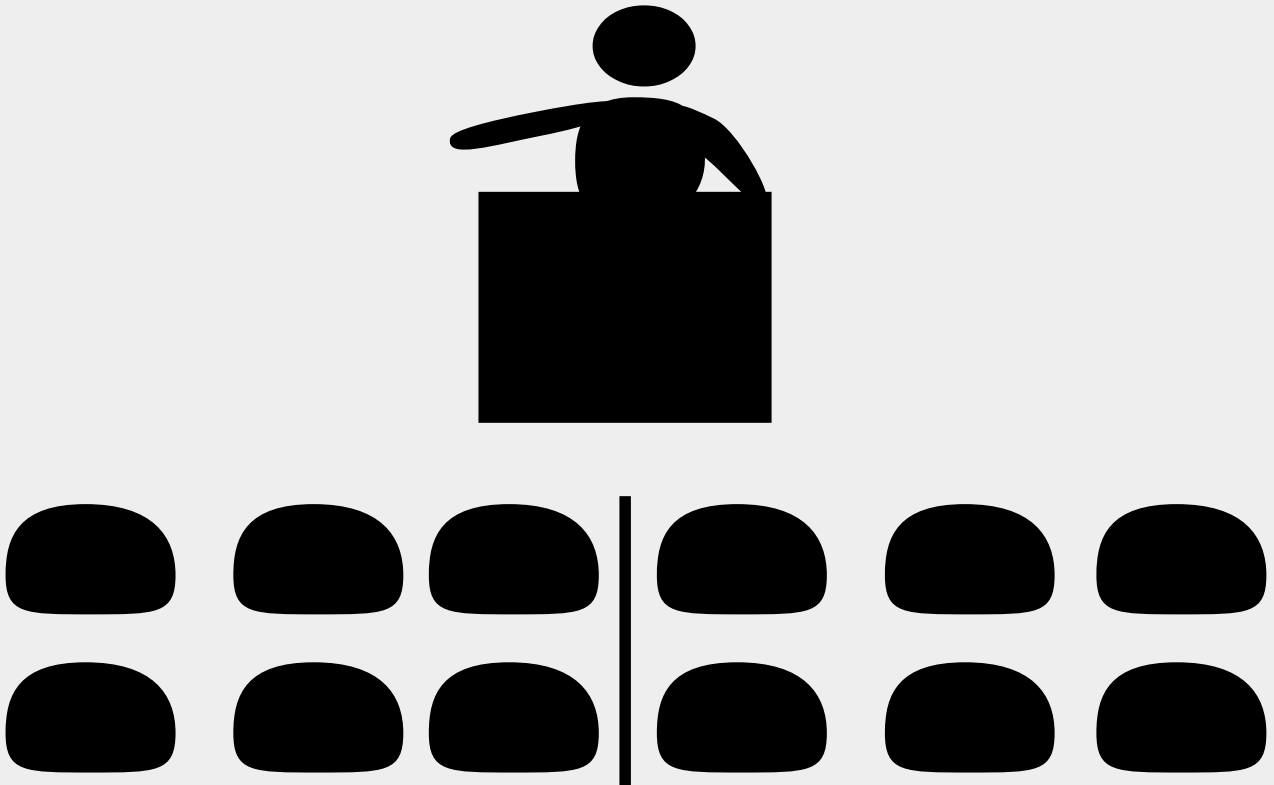
http://www.extremeprogramming.org/rules.html

Test-Driven Development (TDD)

- Test cases are written first
  - Cover new functionality or improvement
- Then the necessary function is implemented
- Code is "complete" when all tests pass
- Refactor before adding feature if design could be better



Class Activity: TDD



Advantages ?

Disadvantages ?

Next Lecture

We will talk about SCRUM

Please watch this video (one or many times) before next time to familiarize yourself with the terminology:

http://youtu.be/XU0llRltyFM