# Föreläsning Agila metoder
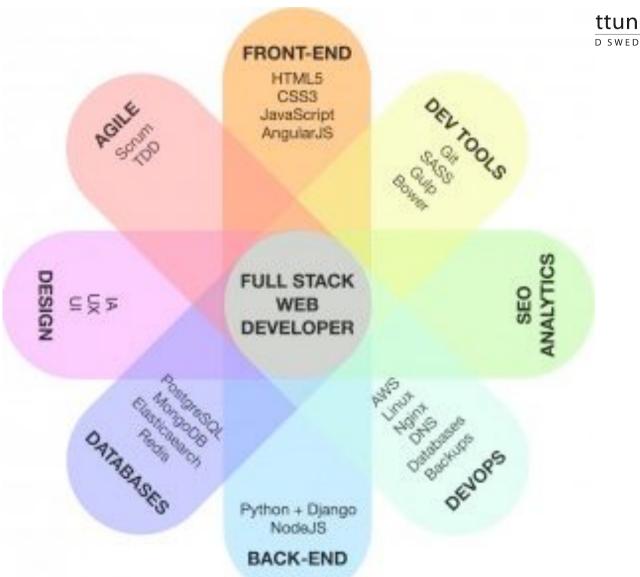
Lisa Sällvin 2017-02-01          DT170G
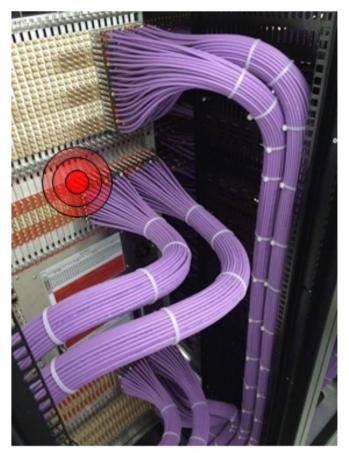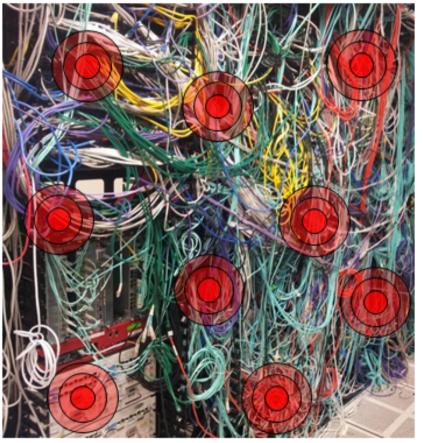
http://www.indiaeducation.net/computers-it-courses/full-stack-development.html

# Clean code

# Legacy code



Locations in the code base that require modification for a new feature

Time to implement a new feature

Probability of breaking existing functionality

created by @rundavidrun

**A full stack developer…**

- understands what the customer and the business need

- cares about the user experience

- designs the user / front end (html, css, node, js, mobile app)

- (designs any API interfaces)

- designs the business logic / back end (e.g. Java, ruby)

- designs the data model (database, sql)

- understands the hardware (server, network)
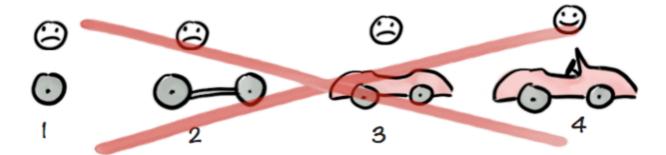
http://www.laurencegellert.com/2012/08/what-is-a-full-stack-developer/
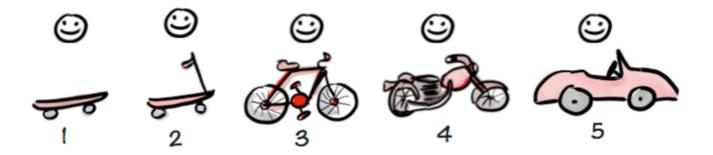
# Agil utveckling

## - mer nytta för kunden under hela projektet

# Några begrepp. Känner ni till…?

Scrum

XP

TDD

CI

YAGNI

Refactoring

# eXtrem Programmering (XP)

https://sv.wikipedia.org/wiki/Extrem_programmering
http://ronjeffries.com/xprog/what-is-extreme-programming/

# XP beskrivs med fem värden…
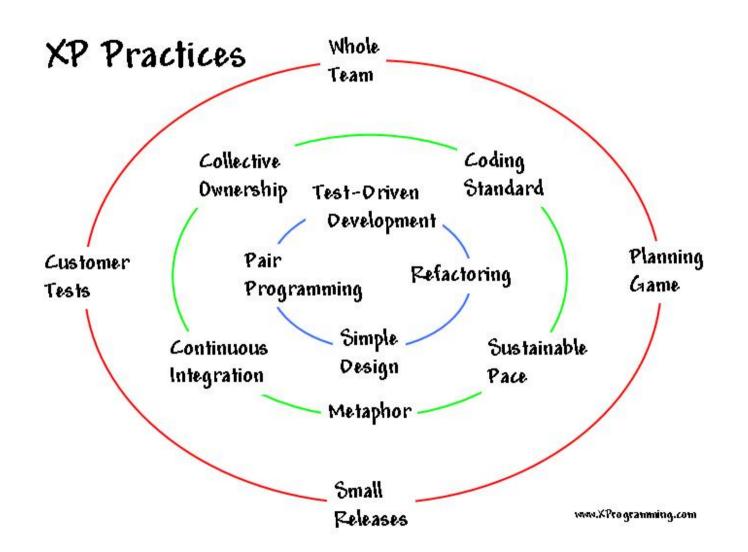
- Kommunikation

- Enkelhet

- Återkoppling

- Mod

- Respekt

**…och en massa praxis (practices).**

**Mjukvaruutveckling handlar om så mycket mer än att skriva kod.**

- Planning

- Design

- Coding

- Testing

- Release

- Collaboration

http://www.slideshare.net/aniruddha.chakrabarti/agile-practices-extreme-programming

# XP Practices

Whole
Team

Collective
Ownership

Test-Driven
Development

Coding
Standard

Customer
Tests

Pair
Programming

Refactoring

Planning
Game

Continuous
Integration

Simple
Design

Sustainable
Pace

Metaphor

Small
Releases

www.XProgramming.com

# Scrum

# Scrum



Scrum är ett exempel på en agil metod.

# Scrum
## according to mm1

**Product**

**Idea**

Product Owner

**User Stories**

Product Backlog

Potentially shippable product

Sprint Increment

**yes**

**not yet**

Mission achieved?

**Sprint Review**

**Sprint Retrospective**

Scrum Master

Team

Product Owner

**Sprint Planning 1&2**

1. What?
2. How?
Sprint Backlog   DoD

## Daily Scrum Meeting
- Taskboard (to do, in progress, done)
- Impediment Backlog
- Burndown Chart

**Sprint**

## Roles

**Product owner:** the person responsible for maintaining the product backlog by representing the interests of the stakeholders, ensuring the value of the work the development team does.

**Scrum master:** the person responsible for the scrum process, making sure it is used correctly and maximizing its benefits. Although the designation of a scrum master and its presence in scrum meetings is generally advisable, teams with a lot of scrum experience may also work without this role.
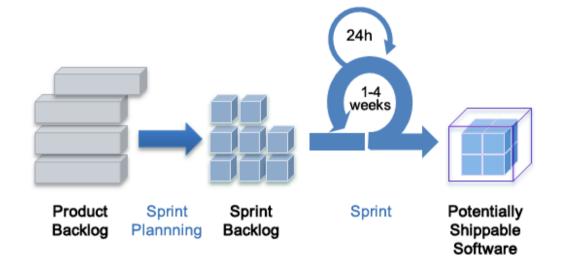
**Development team:** a cross functional group of people responsible for delivering potentially shippable increments of the product at the end of every sprint.

**Stakeholders:** the people enabling the project. They are only directly involved in the process during the reviews. Aside from that, they may solely influence the team by discussing their needs with the product owner. Typically, the main stakeholders are managers, customers and users.

## Artifacts

**Product backlog:** an ordered list of requirements that the team maintains for a product. In Scrum, one should document requirements in "user story" format. Anyone can edit the backlog, but the product owner is ultimately responsible for ordering the user stories. Stories in the product backlog contain rough estimates of both business value and development effort.

**Sprint backlog:** a list of work the development team must address during the next sprint. The list is created by selecting user stories from the top of the product backlog until the development team feels it has enough work to fill the sprint, keeping in mind the velocity of its previous sprints. The stories/features are broken down into tasks by the development team. Often an accompanying task board is used to see and change the state of the tasks of the current sprint, like "to do", "in progress" and "done".

**User story:** a description of a certain product feature or behavior, written strictly from the user's point of view. Usually, the product owner writes the user stories.

**Task:** a unit of work, which should be feasible within one working day or less. To implement a user story, you must accomplish all associated tasks.

**Burn down charts:** are publicly displayed charts showing invested and remaining work. The team uses sprint burn down charts to visualize the progress within a sprint. Release burn down charts show the amount of work left to complete the target commitment for a product release.

**Impediment backlog:** a list of current impediments maintained by the scrum master.

**Definition of done:** a checklist of activities required to declare the implementation of a story to be completed. The definition is determined at the beginning of the project but the team can change it at any time.

## Meetings

**Sprint planning 1:** (60 min per sprint week) is held to select the work to be done for the next sprint (the "what"). The product owner explains the stories of the product backlog to the team and answers their question. After the planning, the team should have understood the requirements and its commits the scope for the sprint.

**Sprint planning 2:** (60 min per sprint week) the designing phase for the selected backlog (the "how"). The team discusses a solution for the selected stories and creates according task for each story.

**Daily scrum:** (ca. 15 min) short, time boxed meeting, every day at the same time. Every team member answers three questions:
1) What have I done since yesterday?
2) What am I planning to do today?
3) What are my impediments?

**Sprint review:** (ca. 60 min per sprint week) used to present and review the work that was completed and not completed during a sprint. It should include a demonstration of the realized product increment.

**Sprint retrospective:** (ca. 45 min per sprint week) a reflection on the past sprint used to make continuous process improvements. Two main questions are asked in the sprint retrospective:
1) What went well during the sprint?
2) What could be improved in the next sprint?

**Estimation meeting:** (max. 60 min) used to introduce and estimate new backlog items and to refine existing estimations as well as acceptance criteria. It is also used to break large stories into smaller ones.

**mm1**

1 uppstartmöte

2 planering

3 daily scrum

4 demo

5 retrospektiv

# Några ord om ledarskap i agila projektgrupper…

# Tuckman's Team & Group Development Model



Effectiveness of Team

Performing

Norming

Forming

Storming

Performance of Team

## FORMING

### BEHAVIORS

- The purpose and goals for the team are unclear.
- Members feel varying degrees of commitment.
- Members are cautious, don't initiate and avoid responsibility.
- Communication is low and a few members often dominate.
- Members are dependent on directive leadership.

### TASKS

- Build a common purpose. Clearly establish the expectations of the customers or sponsors.
- Understand personal expectations and interests.
- Clarify accountability, recognition, and rewards.
- Assess resources; see who has what to contribute.
- Leader provides direction and drives the team process.

Catalyst Consulting Team

## STORMING

### BEHAVIORS

- Differences and confusion arise over goals and roles.
- Struggles erupt over approaches, direction, and control.
- Team members react toward leadership with counterproductive behaviors.
- Team is uncertain about how to deal with issues openly.
- Team wrestles with issues of communication.
- Members act from an independent stance.

### TASKS

- Involve everyone in the discussion.
- Inquire into differences; include all ideas and opinions.
- Seek further clarity about purpose and develop a common approach to meeting project objectives.
- Assess and test resource needs; make necessary adjustments.
- Define operational agreements (norms).
- Leader raises difficult issues and coaches team through struggles.

## NORMING

### BEHAVIORS

- Team gains confidence, feels a sense of momentum.
- "What," "How," "Who," and "When" become clarified.
- Team develops agreements on approaches, goals, communication, and leadership roles.
- Team builds relationships with externals (customers, key stakeholders).
- Members begin to relate interdependently.

### TASKS

- Develop processes for information sharing, feedback, and resource distribution.
- Have open forums on tasks and relationships, both internal and external.
- Build appropriate feedback loops with external relationships.
- Work toward consensus on overarching issues. Negotiate where appropriate.
- Leader uses a facilitative style to create the opportunity for others to lead.

## PERFORMING

### BEHAVIORS

- Members take full responsibility for tasks and relationships.
- Team achieves effective and satisfying results.
- Team takes the initiative to continually assess external forces.
- Team facilitates itself easily through the various stages.
- Members work proactively for the benefit of the team.

### TASKS

- Continuously seek to improve tasks and relationships.
- Assess and evaluate results against purpose and external forces.
- Celebrate successes—reward and recognize both team and individuals wins.
- Continuously test for better methods and approaches.
- Leader focuses on purpose, interdependent relationships, and conditions that shift the stages.

Mittuniversitetet

# Vad gör ni nu?

# Två leverabler i projektet, ska beskrivas i projektrapporten

## 1. Team rules

Vilka XP praxis ska ni använda och hur?

Roller?

Möten?

Kommunikationsverktyg?

## 2. Backlog

Planering – Vad vill kunden ha? Bryt ner i en backlog

# Utvalda XP/Agila metoder i denna kursen

Planering

- *User stories*, prioriteras och bryts ner i *tasks*

Kodning/samarbete

- Sitt tillsammans
- Gemensam kodstandard
- Parprogrammering / Kollektivt ägarskap
- Ständig förbättring – av kod (refactor) och av arbetssätt (retrospektiv)

Test/integration

- Laga buggar först – de har högsta prio
- Alla commit-ar sin kod ofta

**Måndag 6/2 (Lisa är facilitator)**

**10.15 – 11.00 Grupp "Restaurang"**

**11.15  - 12.00 Grupp "Gitarrverkstad"**