

# Morden Software Development

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# Course Assessment

- Participation (10%)
  - Survey of topic of interest
  - Your role: present materials and lead discussion

# Software Applications



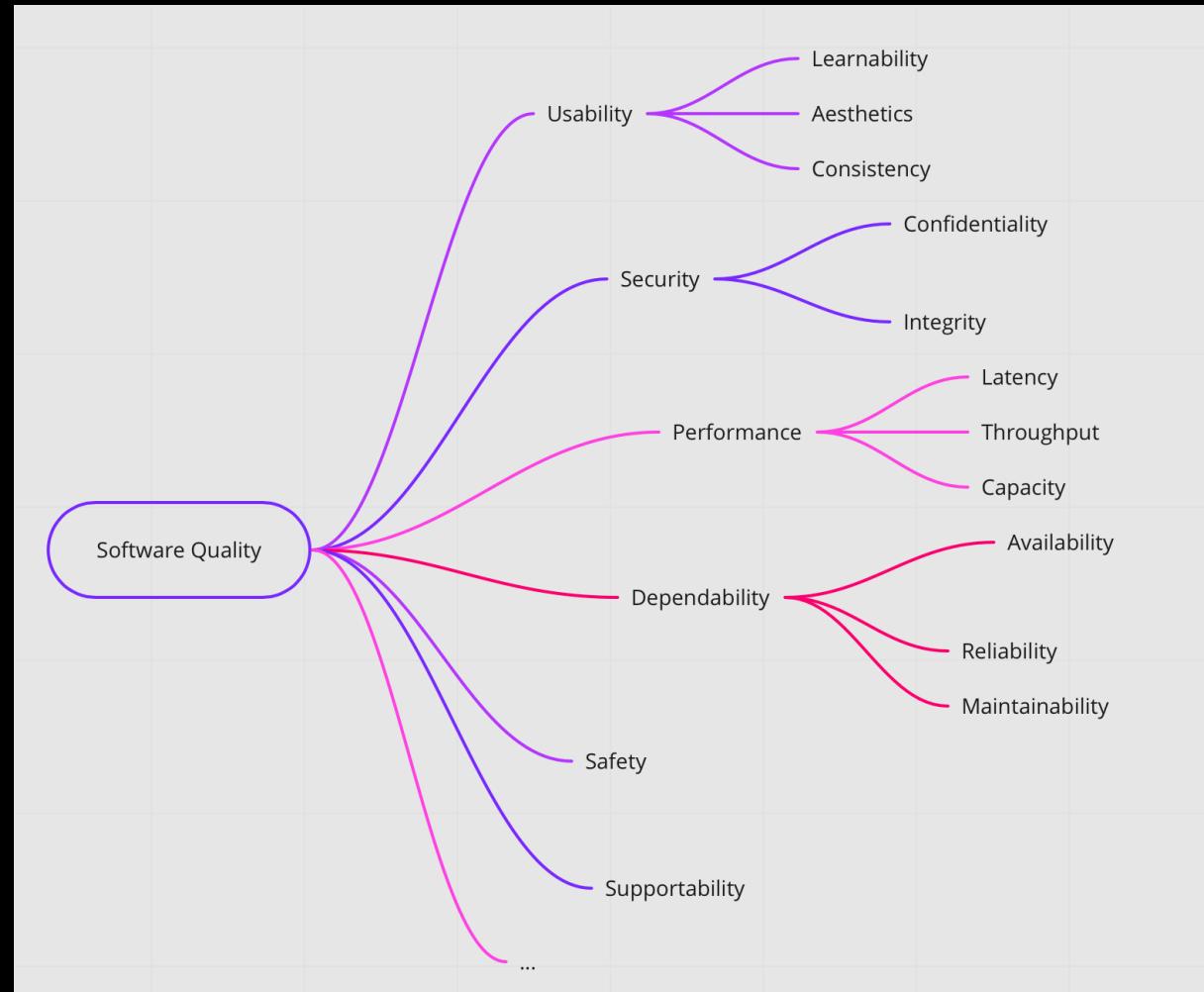
**What are the attributes of a “good” software for those applications?**

# Activity 1

- In your breakout room:
  - Please list five such attributes for each type of applications;
  - Draw an mind graph to organize all the attributes that are related to each other
    - Use Miro (use your slack account for our workspace), AWW, ...

# Quality Attributes

- What's missing?
  - Relations between some attributes
  - Methods to achieve those attributes
  - Values that can be delivered



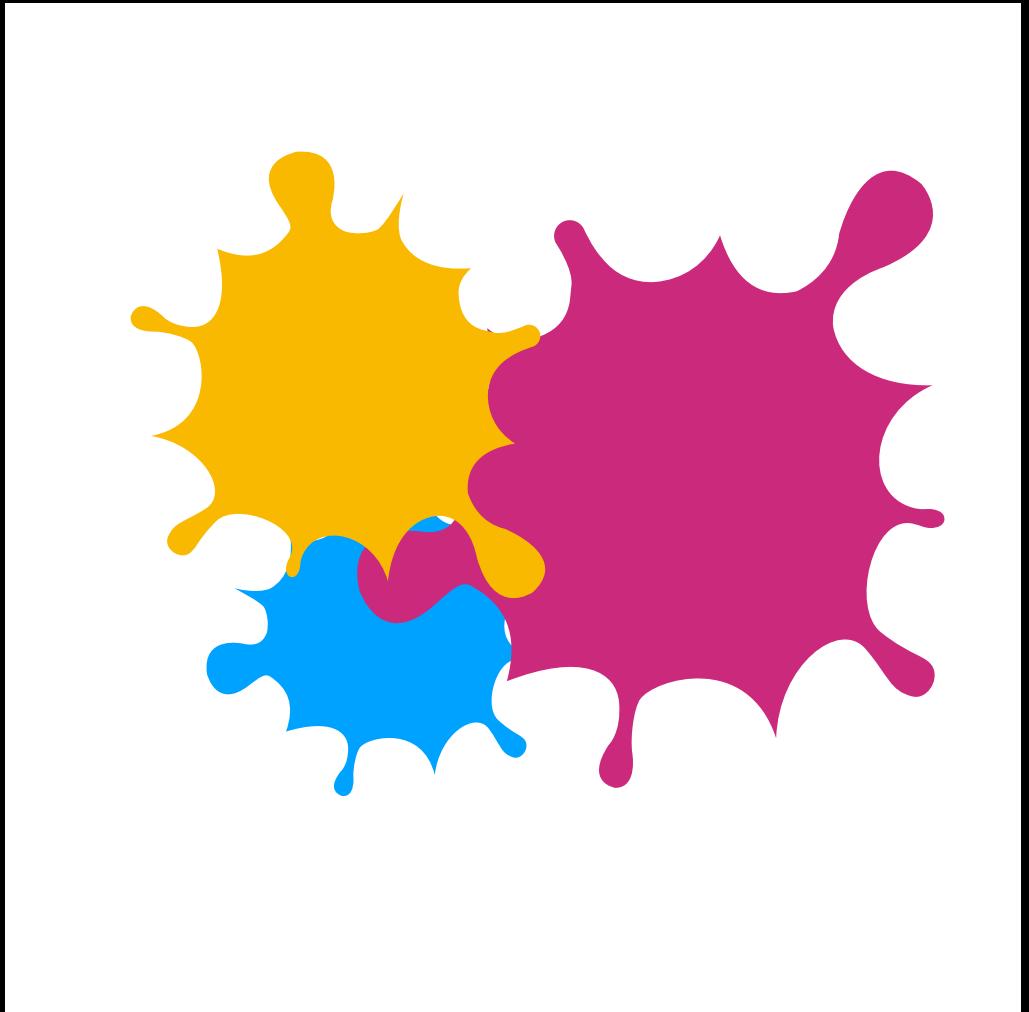
# Foundational Software Activities

- Write down the software activities you know
- Does it fall into those categories?
  - specification, design and implementation, validation and evolution
  - If not, where is it situated?

# Activity 2

## Pictionary

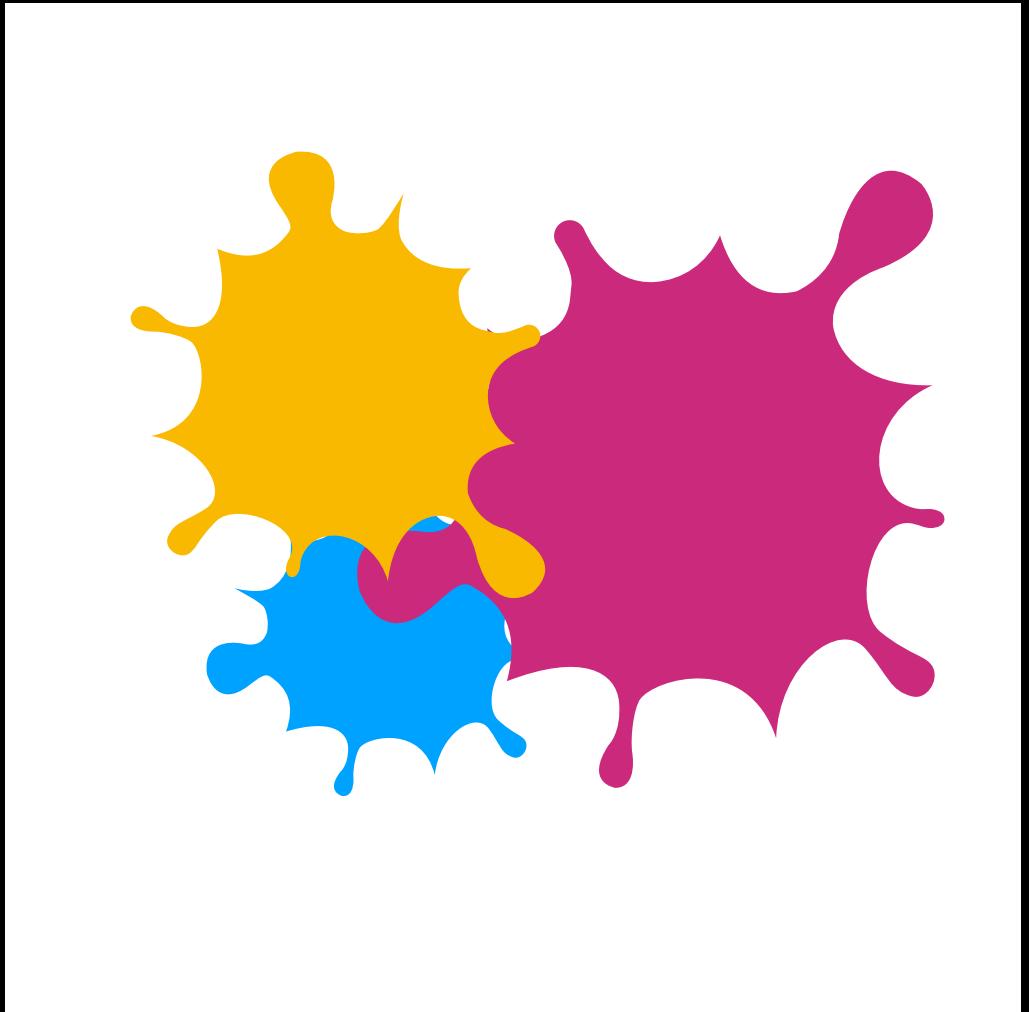
- Two round of game
  - 2 mins each
- Role in each room
  - Drawer: no numbers nor letters
  - Timer: control and record the time
  - Guesser: guess the word



# Activity 2

## Pictionary

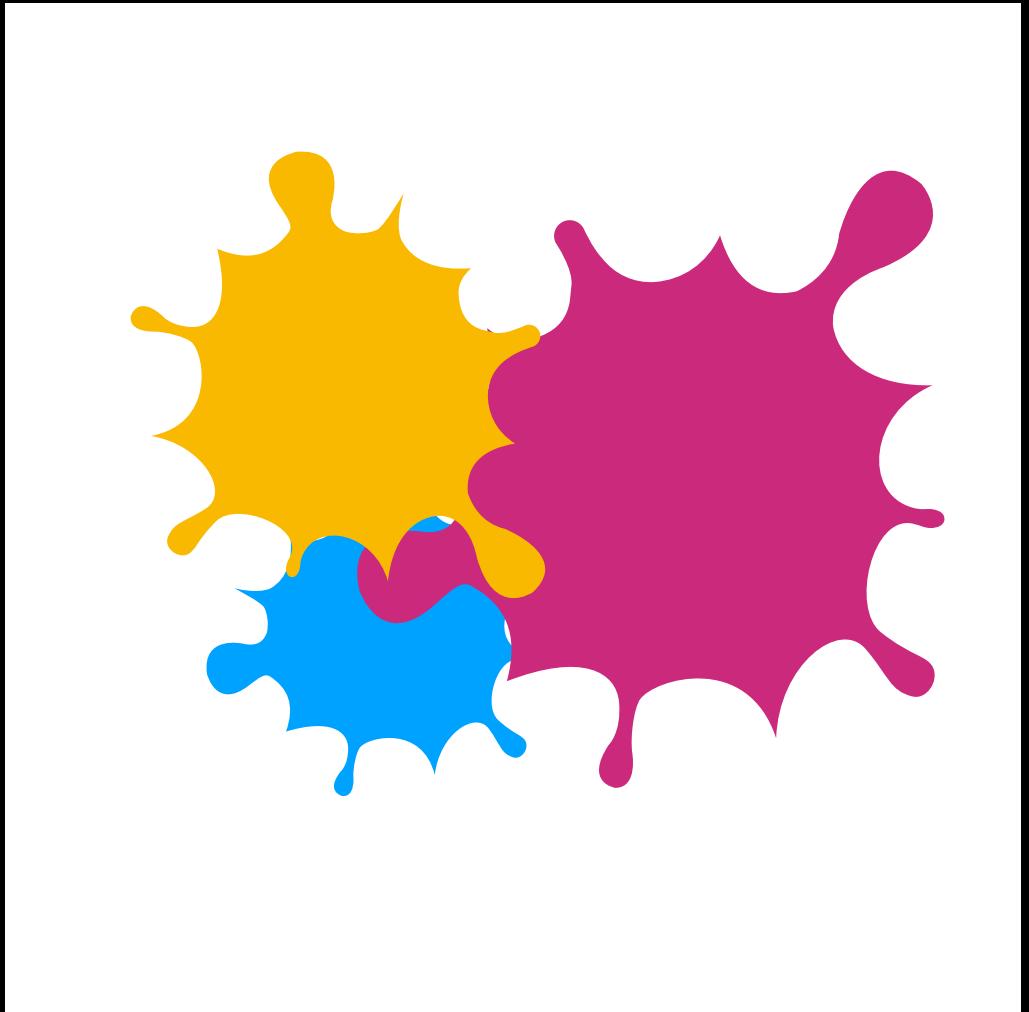
- First round
  - 1.5 mins drawing (no interaction)
  - 30 sec guessing
- Second round
  - 2 mins drawing and guessing



## Activity 2

### Pictionary

- Discuss
  - Which rule works better?
  - What are the challenges for drawer?
  - What are the challenges for guesser?



# Agile Software Development

## The Agile Manifesto

- We are uncovering better ways of developing software by doing it and helping others to do it. Through this work, we have come to value:

**individuals and interactions** over processes and tools;

**working software** over comprehensive documentation;

**customer collaboration** over contract negotiation;

**responding to change** over following a plan.

While there is value on the items on the right, we value the items on the left more.

# Agile Frameworks

- Scrum
  - <https://www.scrumalliance.org/about-scrum/framework>
- Extreme Programming
  - <https://www.agilealliance.org/glossary/xp/>

# Activity 3

- Go to one of two breakout rooms:
  - Investigate the key practices in each frame work. (10 mins)
  - Explain to the whole class once you are done.
  - Think about the how it is done in different framework.

# Agile Practices

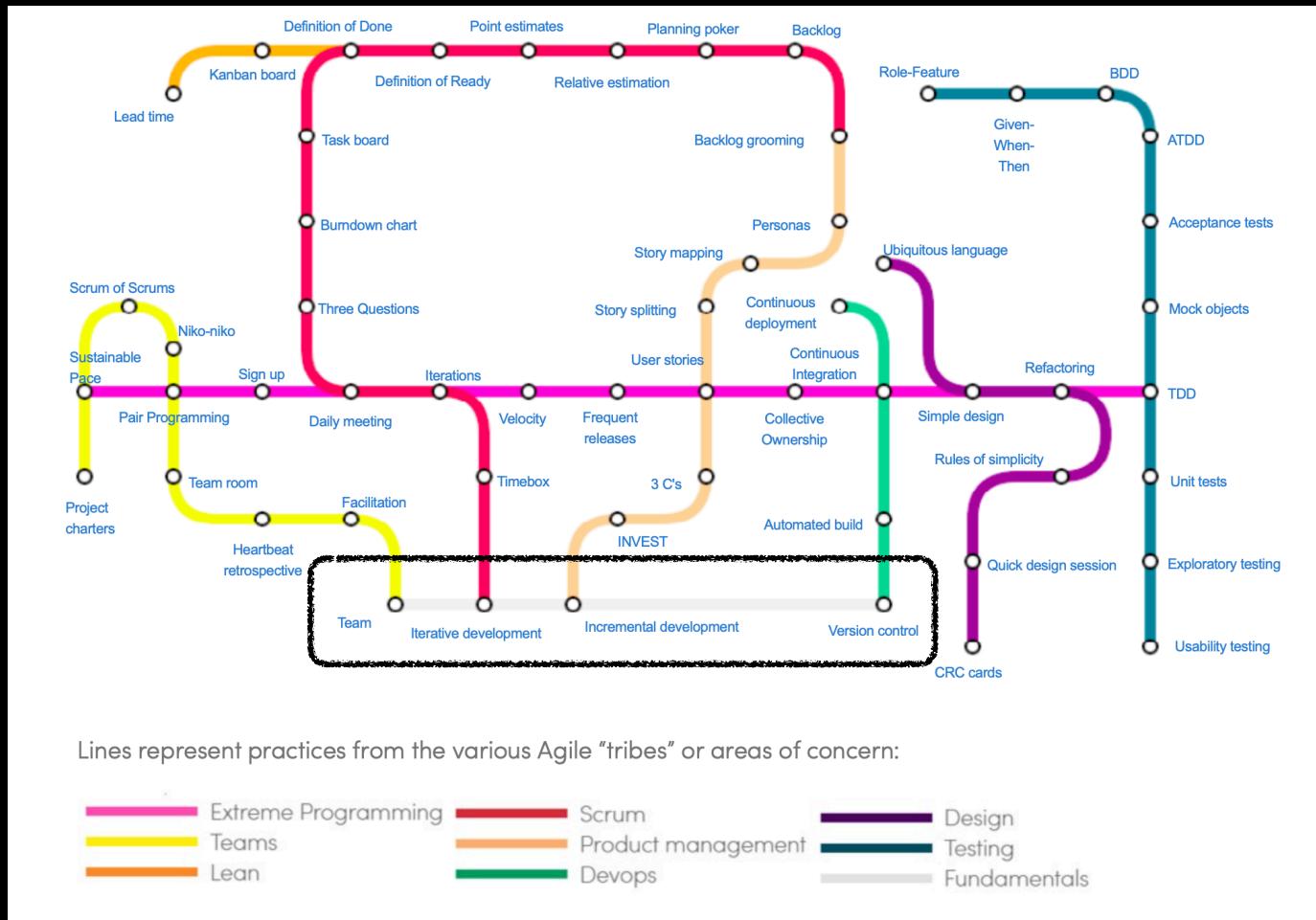


Image Credit: <https://www.agilealliance.org/agile101/subway-map-to-agile-practices/>

# **Software Engineering Ethics**

## **Code of Ethics**

- IEEE-CS/ACM Joint Task Force on Software Engineering Ethics and Professional Practices

1. PUBLIC – Software engineers shall act consistently with the public interest.
2. CLIENT AND EMPLOYER – Software engineers shall act in a manner that is in the best interests of their client and employer consistent with the public interest.
3. PRODUCT – Software engineers shall ensure that their products and related modifications meet the highest professional standards possible.
4. JUDGMENT – Software engineers shall maintain integrity and independence in their professional judgment.
5. MANAGEMENT – Software engineering managers and leaders shall subscribe to and promote an ethical approach to the management of software development and maintenance.
6. PROFESSION – Software engineers shall advance the integrity and reputation of the profession consistent with the public interest.
7. COLLEAGUES – Software engineers shall be fair to and supportive of their colleagues.
8. SELF – Software engineers shall participate in lifelong learning regarding the practice of their profession and shall promote an ethical approach to the practice of the profession.