The Scrum Method

* Software development methods
  + Waterfall model (sequential)
    - System requirements
    - Design
    - Implementation
    - Verification
    - Maintenance
    - Disadvantages:
      * Requirements never revisited
      * Excludes customer from development
      * Testing and verification delayed until fully developed
  + Agile model (iterative process)
    - Individuals and interactions over processes and tools
    - Working software over comprehensive documentation
    - Customer collaboration over contract negotiation
    - Responding to change over following a plan
    - Scrum
      * Framework where people can address complex adaptive problems while productively and creatively delivering products of highest possible value
* Scrum Team
  + Product owner
    - Owns what is desired and why it is desired
    - Defines requirements and prioritizing their values
    - Defines “done”
  + Scrum master
    - Facilitator, keeper of process
    - Helps team members follow the Agile practices to meet commitments
    - Shield development team from disturbances
    - Enabling close cooperation between all roles and functions
    - Removing impediments
    - Finding techniques for efficient product backlog management
    - Ensuring that the goals scope and product domain are understood
    - Facilitating scrum evens as needed
  + Development team
    - Owns how and how quickly work is delivered
    - Deliver partially releasable increment of done product at the end of each sprint
    - Self-organizing, no sub-teams, accountability is taken by group as a whole
* Scrum events
  + Sprint: time boxed effort restricted to a specific duration (usually 2 weeks)
  + Sprint timing: team determines product backlog items that will be worked on during that sprint, discusses plan to complete
    - Input: product backlog, latest product increment, past performance
    - What can be delivered in the increment
    - How will the work be achieved
  + Daily scrum
    - 5-15 min, same time and place
    - Meetings with team members
    - Examine work done and forecasting upcoming work
    - Discussion based
  + Sprint review
    - Customer meeting
    - Takes place after sprint
    - Owner explains what worked and what was completed
    - Team presents completed work and how problems were solved
    - Development team demonstrates completed work and answers questions
    - Entire group collaborates to plan what to do next
  + Sprint retrospective
    - Inspect team and create plan for improvements before next sprint
* Scrum artifacts
  + Product backlog
    - Ordered list of everything needed in the product
    - Single source of requirements for any changes
    - Evolves as product and environment changes
  + Sprint backlog
    - Set of product backlog items selected for the sprint
    - Plan for delivering the product increment and realizing the sprint goal
    - What functionality will be in the next increment
  + Product increment
    - Sum of all product backlog items completed during a sprint and the value of all previous increments
    - Must be usable and “done”
* Scrum values
  + Courage
  + Focus
  + Commitment
  + Respect
  + Openness