Scrum

• An evolutionary/iterative/incremental/agile software process

• The main roles in Scrum are:
  – Scrum team: Team of software developers
  – Scrum master: Project manager
  – Product owner: Client

• Characteristics of Scrum:
  – Self-organizing teams
  – Product development in two to four week sprints
  – Requirements are captures as items in a list of product backlog
Scrum Overview

- Product Backlog
- Sprint Backlog
- Daily Scrum Meeting
- 24 Hours
- 2-4 Weeks
- Potentially Shippable Product Increment
Scrum Roles

• **Product owner**
  – Defines the features of the product
  – Decides on release date and content
  – Prioritize features according to market value
  – Adjust features and priority every iteration as needed
  – Accepts or rejects work results

• **Scrum Master**
  – Represents management of the project
  – Responsible for following the Scrum process
  – Ensures that the team is fully functional and productive
  – Shields the team from external influences
Scrum Roles

• **Scrum Team**
  – Typically 5 to 9 people
  – Cross-functional team that does the software development including designing, programming and testing
  – Co-location and verbal communication among team members
  – Teams are self-organizing, no titles
  – Team membership should not change during a sprint
Scrum Meetings

• **Sprint Planning** (at most 8 hours)
  – This is done at the beginning of every sprint cycle (2 to 4 weeks)
  – Team selects items from the product backlog they can commit to completing
  – Sprint backlog is created
    • Tasks for this sprint are identified and each is estimated (1 to 16 hours). This is done collaboratively, not by ScrumMaster
  – High-level design is discussed

• **Daily Scrum** (at most 15 minutes)
  – Daily, stand-up meeting
  – Not for problem solving
  – Every team member answers three questions:
    • What did you do yesterday?
    • What will you do today?
    • Is anything in your way? (ScrumMaster is responsible for following up and resolving the impediments)
Scrum Meetings

- **Sprint Review** (at most 4 hours)
  - Team presents what it accomplished during the sprint
    - Typically a demo of new features or underlying architecture
    - Incomplete work should not be demonstrated
  - Informal meeting, no slides
  - Whole team participates
  - Open to everybody
Scrum Meetings

• **Sprint Retrospective** (at most 3 hours)
  – Periodically take a look at what is and is not working
  – Done after every sprint
  – ScrumMaster, Product owner, Team and possibly customers and others can participate
  – One way of doing sprint retrospective is to ask everyone what they would like to
    • 1) Start doing, 2) Stop doing, 3) Continue doing
Scrum Artifacts

• **Product Backlog**
  – These are the requirements
  – A list of all desired work on the project
  – Prioritized by the product owner
    • Reprioritized at the start of each sprint
  – Each backlog item also has an estimated time it will take to complete it
Scrum Artifacts

• **Sprint Backlog**
  – Team members sign up for work of their own choosing
  – Estimated work remaining is updated daily
  – Any team member can add, delete or change the sprint backlog
  – Each sprint backlog item has daily estimates for the amount of time that will be spent on that item each day

• **Burn Down Chart**
  – A daily updated chart displaying the remaining cumulative work on the sprint backlog. It gives a simple view of the sprint progress.

• **Many tools on the web to track sprint**
  – Backlogs, burndown
  – Trello, PivotalTracker
More on Scrum

• More information about Scrum process is available at:
  – www.mountaingoatsoftware.com/scrum
  – www_scrumalliance.org
  – www.controlchaos.com

• Required reading
  – "Scrum/XP From the Trenches" by H. Kniberg. (Free with registration).
  – Intro, sprint planning, scrum chapters