Scrum
an Agile Process
Topics

1) Who does what in a Scrum team?
2) What does a week as a Scrum developer look like?
Scrum: the Big Picture
Software Development Process Recap

- Is most software done on-time and on-budget?
  1995:
  - 31% cancelled
  - 53% are 189% over budget

- What are software development activities?
  - ...
  - ...
  - ...
  - ...
  - ...

- What are the two (planning) paradigms in software development?
  - ..
  - ..
Scrum Big Picture

• ..
  create the plan, then development works to the plan.
• ..
  each iteration you are constantly planning for the best path.

• Some Changes in Agile (vs BDUF)
  - Document as you go; only as needed
  - Deliver product early and often
  - Plan as you go: not just at the start of the project
  - Test as you go: not just at the end of project

• Scrum is one of many agile processes.
Key items in Scrum

• Backlog:...
  – Ex: As a cashier, I want to be able to apply a dollar amount discount to a single item so that I can accept a coupon.
  – Highest priority features ("stories") at top of backlog.
  – Team picks stories to complete from top of backlog.

• Iteration: a week (or 2-3) where team..
  – At end of iteration, team delivers working software.
  – Customer then tries out software & gives feedback
  – Use feedback to plan next iteration.
Scrum Roles:
Who does what?
Roles

- The scrum team identifies a few roles:
  - Product Owner
  - Scrum Master
  - Team member
- And we’ll add in
  - Repository Manager
Role: Project Owner

- Understands needs of the customer
- Works closely with the stakeholders to determine what needs to be built, and feature priorities

- Adds new feature requests
- Prioritizes features: directs the team towards most valued work

Responsibility:...
Role: Scrum Master

- ..
  - guides team towards more cohesion, self-organizing, performance
  - scrum master's deliverable is the self-organizing team.

- ..
  - Is a trusted advisor, and team-advocate
  - pushes decision making back to team
  - removes impediments (Ex: getting equipment)
  - Expert on scrum process; facilitates meetings.

- Responsibility:..

Role: Team Member

- Teams are..
  - Have total authority over how to get work done
  - Estimates work for each feature
  - 7 +/-2 team members

- Responsibility:..
  - No singled out "experts"; everyone does what is needed for this iteration.
  - No “silos of knowledge”
Extra Role: Repository Manager

- Not part of normal Scrum; added as part of a GitLab development work-flow.
- ..
  - Helps resolve Git problems
  - Helps enforce code quality
- Responsibility:
  - It must meet coding style; have unit tests, system pass all unit tests, code reviewed, etc.
Sprint is Scrum’s Iterations
## Sprint “Ceremonies”

### Daily Schedule for a One-Week Sprint

<table>
<thead>
<tr>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
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</thead>
<tbody>
<tr>
<td>Sprint Planning 2hrs.</td>
<td>Stand-Up 15 min.</td>
<td>Stand-Up 15 min.</td>
<td>Stand-Up 15 min.</td>
<td>Stand-Up 15 min.</td>
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<tr>
<td>Plan what features to deliver.</td>
<td>Daily meeting discussing progress.</td>
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<tr>
<td>Story Time 1hr</td>
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<tr>
<td>Estimate feature sizes.</td>
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<td>Demo working software.</td>
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<td>How can team improve?</td>
</tr>
</tbody>
</table>

- **Sprint Planning:** 2hrs.
- **Stand-Up:** 15 min.
- **Daily meeting:** Discussing progress.
- **Story Time:** 1hr
- **Sprint Review:** 1/2 hr
- **Retrospective:** 1.5hrs
Sprint Planning [2Hr]

• Team pick what stories to commit to this iteration
  - Backlog must be well maintained:
    Each story has a "size" estimate.

• Velocity:..
  - Team generally picks to do as much work this iteration as they completed last iteration.
  - Self correcting to become accurate at predicting performance.
Stand-Up Meeting [15min]

• Daily. Only team members. Brief.

• Each team member briefly answers:
  1. since the last stand-up
  2. by next stand-up
  3. are slowing me down

• Benefit
  - If "accomplished" < yesterday’s "expected", then..
  - Others jump in with brief, "I can help you with that";
    but no long discussions of the details.

• Scrum master facilitates meeting, takes notes.
Sprint Review [30min]

• Demonstrate..
  – Report on stories that did not get finished.

• Product owner..
  from stakeholders:
  – New feature requests or changes
  – Clarifies priorities

• Make no promises!
Retrospective [1.5hr]

- Goals
  - ..
  - create an action plan to implement those changes

- Team reviews what happened during iteration
  - Generates insights into what happened (no finger pointing)
  - Choose 1-2 specific improvements.

- Appreciate each other's work.
Project’s Scrum Role Cheat Sheet

- **Scrum Master**
  - coach, help, lead
  - ensure team is communicating well
  - help teammates engage
  - book rooms for meetings

- **Repo Manager**
  - help teammates use Git
  - ensure all code is reviewed (by someone); enforce code quality
  - accept GitLab merge requests

- **Product Owner**
  - manage backlog: add new requests, prioritize, ensure team is working on high-value features
  - understand customer requirements, communicate with customer

- **Team Member**
  - no singled out expert: do high-value work
  - contribute to discussions
  - pick up tasks
Summary

- Scrum team
  - Product Owner, Scrum Master, Team Member, (extra) Repository Manager.

- Ceremonies
  - Sprint planning, Daily standup, Review, Retrospective, Story time