

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?

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- What are the two (planning) paradigms in software development?

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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

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Sprint Planning 2hrs.	Stand-Up 15 min.	Stand-Up 15 min.	Stand-Up 15 min.	Stand-Up 15 min.
		Story Time 1hr		Sprint Review 1/2 hr
				Retrospective 1.5hrs

Plan what features to deliver.

Daily meeting discussing progress.

Estimate feature sizes.

Demo working software.

How can team improve?

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. What I did since the last stand-up
 2. What I plan to do by next stand-up
 3. What obstacles or impediments 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