Scrum
an Agile Process

Topics

1) Who does what in a Scrum team?
2) What does a week as a Scrum developer look like?

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 BUDF)
- 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.

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 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]
- 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