

Scrum

an Agile Process

Topics

- 1) Who does what in a Scrum team?
- 2) What does a week as a Scrum developer look like?
- 3) How does a Scrum team estimate work?

Scrum: the Big Picture

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

- .. **Keeper of the product vision**
 - Understands needs of the customer
 - Works closely with the stakeholders to determine what needs to be built, and feature priorities
- .. **Manages backlog**
 - Adds new feature requests
 - Prioritizes features: directs the team towards most valued work
- Responsibility:.. **to maximize value to the business**

Role: Scrum Master

- .. **The coach**
 - guides team towards more cohesion, self-organizing, performance
 - scrum master's deliverable is the self-organizing team.
- .. **Not the boss**

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:.. **a well functioning agile team**

Role: Team Member

- Teams are.. **collaborative and self-organizing**
 - Have total authority over how to get work done
 - Estimates work for each feature
 - 7 +/-2 team members
- Responsibility:
 - Delivering stories that the team committed to**
 - No singled out "experts"; everyone does what is needed for this iteration.
 - No “silos of knowledge”

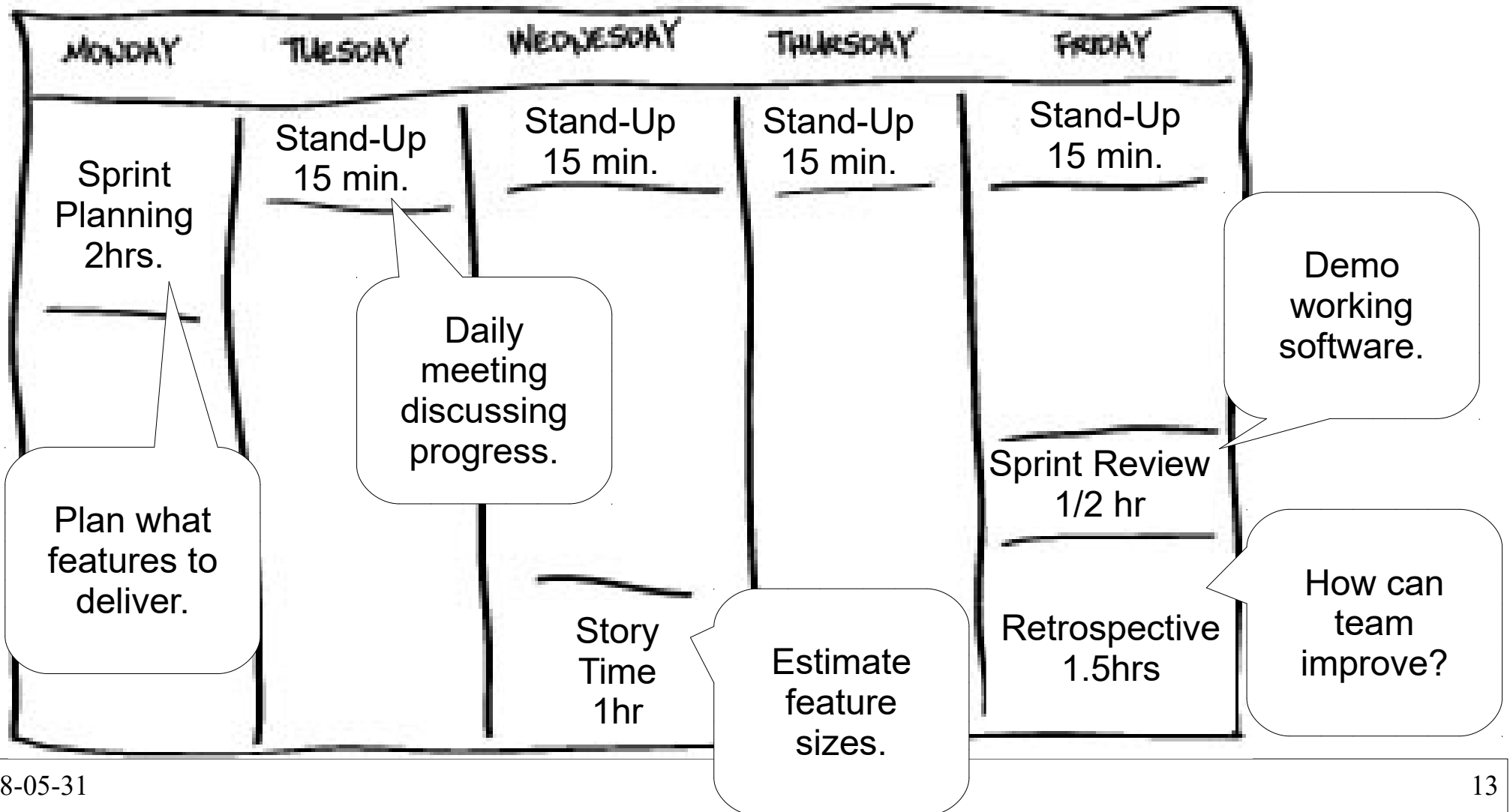
Extra Role: Repository Manager

- Not part of normal Scrum;
added as part of a GitLab development work-flow.
- .. **Accepts merge requests when they are ready**
 - Helps resolve Git problems
 - Helps enforce code quality
- Responsibility:.. **Ensures team's process is followed to commit code**
review project code on repo, must meet guidelines, unit tests, style, reviews
 - 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



Sprint Planning [2Hr]

- Team pick what stories to commit to this iteration
 - Backlog must be well maintained:
Each story has a "size" estimate.
- Velocity... **Amount of work a team finished last iteration**
 - 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 accomplished** since the last stand-up
 2. **I what I expect to accomplish** by next stand-up
 3. **What obstacles** are slowing me down
- Benefit
 - If "accomplished" < yesterday's "expected", then..
we know we are slipping
 - 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.. **gathers feedback** from stakeholders:
 - New feature requests or changes
 - Clarifies priorities
- **Make no promises!**

Retrospective [1.5hr]

- Goals
 - .. Identify one or two things to improve
 - 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.

think about the papers

Story Points and Estimation

Relative, not Absolute Estimates

- People are better at gauging relative size vs absolute size:
- Which is easier to answer?
 1. Which is taller, the CN tower or the Surrey's Central City tower?
 2. How tall is the Surrey Central City tower?

Relative, not Absolute Estimates

- Scrum estimates work..
in terms of relative "story points"
- Start by coding some smallest task
 - Ex: a log-in screen, or a config file, etc.
 - Give it one point.
- Each other story's size estimated in terms of points:
 - "This seems like it's about 3 times as much work as the config file, so 3 points"
- Points not based on hours, as this is hard to give absolute estimate, but..

Story Time and Estimation Game

- Team meets each week for "Story Time":
 - Assign "story points" to up-coming user stories
- Estimation Game steps
 1. .. **Pin up- coming storioies to wall ordering by size**
 - Each team member takes turns doing one of:
 - Put up a new story up where they think best
 - Move a story that's up to improve order
 - Pass (if no changes needed)
 2. Team decides how many points each story is.
 3. Done!
 - Whole team agrees on the estimates!

In Class Exercise: Estimation Game

- Estimation Game

Let's play to assign story points

- At the front are user stories from Assignment 2.
- When selected, you may:
 - put a new story on board, updating effort-order.
 - move an existing story.
 - pass (if all stories up and no corrections)

- Story Points:

- Left-most story = 1 point.
- Let's assign thresholds for points at Fibonacci numbers (1, 2, 3, 5, 8, 13, 21, 34, ...)

Summary

- Scrum team
 - Product Owner, Scrum Master, Team Member, (extra) Repository Manager.
- Ceremonies
 - Sprint planning, Daily standup, Review, Retrospective, Story time
- Estimation
 - Story points
 - Estimation game