Agile Software Development for Developers

Session 6: Sprint Planning

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Review

- Session 1
  - Paradigm and paradigm shift
  - Agility: An elephant in the dark
  - Agility: A definition
  - Agile values, principles, and practices
  - The Cynefin: clear, complicated, complex, chaotic, disorder
- Session 2
  - Product backlog items: feature (user story), defects, technical work, and knowledge acquisition (spike)
  - User story: title, description, acceptance criteria
  - Questions words: who, what, why
  - User story is something like order
- Session 3
  - Estimation: what and when
  - Estimation: Basic concepts
  - Estimation: Product backlog estimation concepts

Review

- Session 4
  - PBI Estimation Units
  - Estimation Scale
  - Planning Poker
- Session 5
  - Velocity in Physics
  - Velocity for An Agile Team
  - Velocity like Stock Price
  - Yesterday's Weather
  - Release Planning (Fixed Scope)
  - Exercise: Story points are influenced by
    - The Amount of Work
    - Uncertainty and Risk
    - Complexity
    - Definition of Done
  -

I'm not a great programmer; I'm just a good programmer with great habits.

Kent Beck

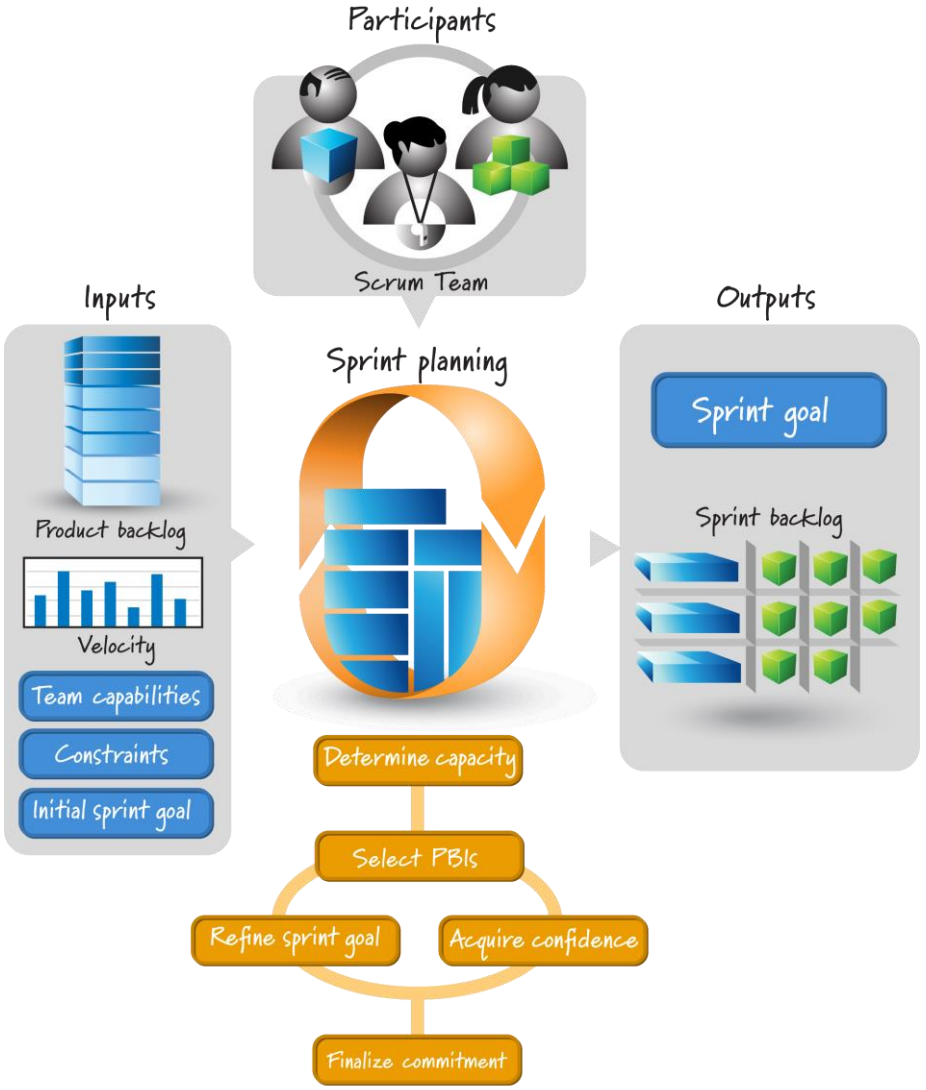
Sprint Planning

Context and Approaches

Sprint Planning: Overview

Sprint Planning answers the following:

- What can be delivered in the Increment resulting from the upcoming Sprint?
- How will the work needed to deliver the Increment be achieved?



Velocity-Driven vs. Capacity-Driven Sprint Planning

Two alternative approaches to sprint planning:

- Velocity-Driven Sprint Planning
- Capacity-Driven Sprint Planning

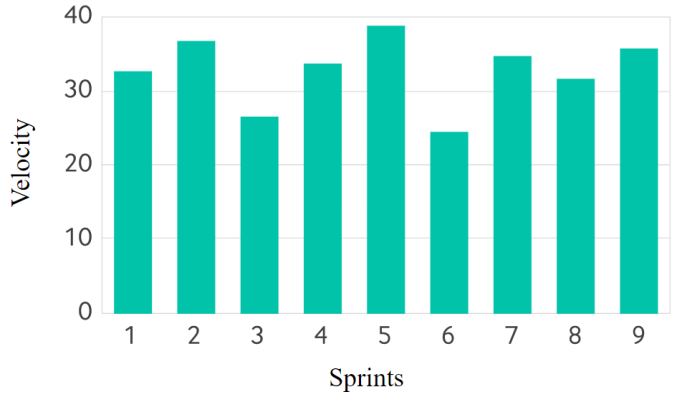
Sprint Planning

Velocity-Driven Sprint Planning

Velocity-Driven vs. Capacity-Driven Sprint Planning

- Velocity-driven sprint planning
  - a team selects a set of product backlog items whose high-level estimates (usually in story points but possibly in ideal days) equals their **average velocity**.

  - 1. Determine the team's historical average velocity.
  - 2. Select a number of product backlog items equal to that velocity.



- Reference: mountaingoatsoftware.com

Sprint Planning

Capacity-Driven Sprint Planning

Velocity-Driven vs. Capacity-Driven Sprint Planning

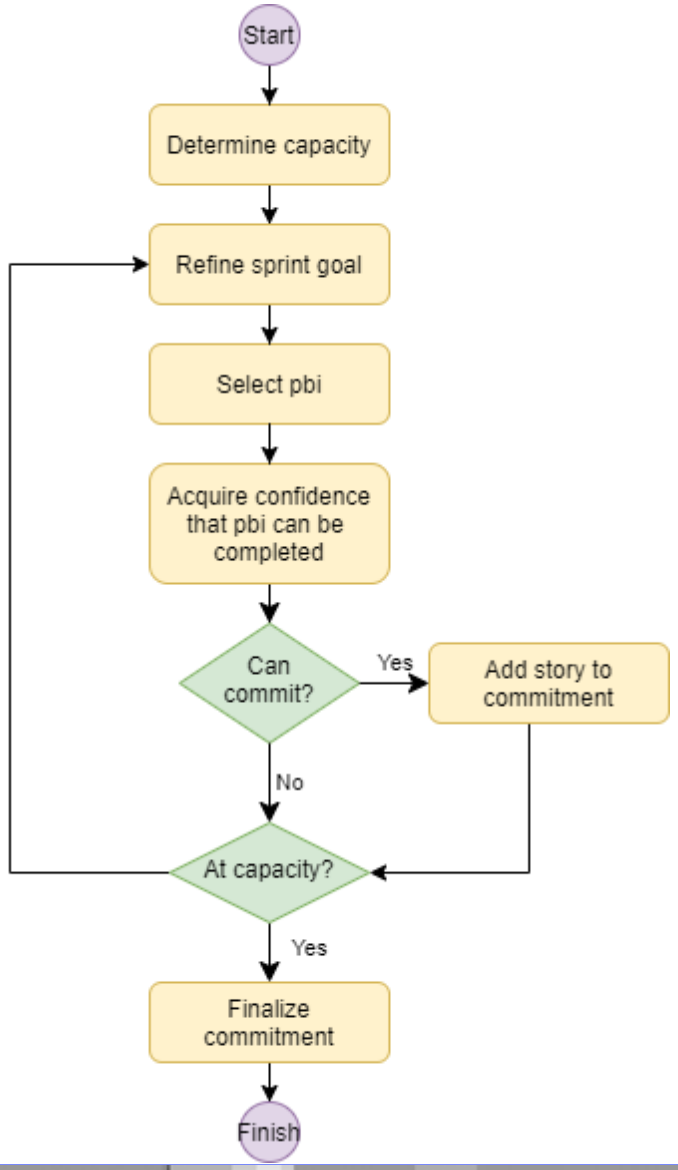
- Capacity-driven sprint planning
  - In capacity-driven sprint planning, a team selects one product backlog item at a time by roughly identifying and estimating the tasks that will be involved and stopping when they feel the sprint is full.

- Reference: mountaingoatsoftware.com

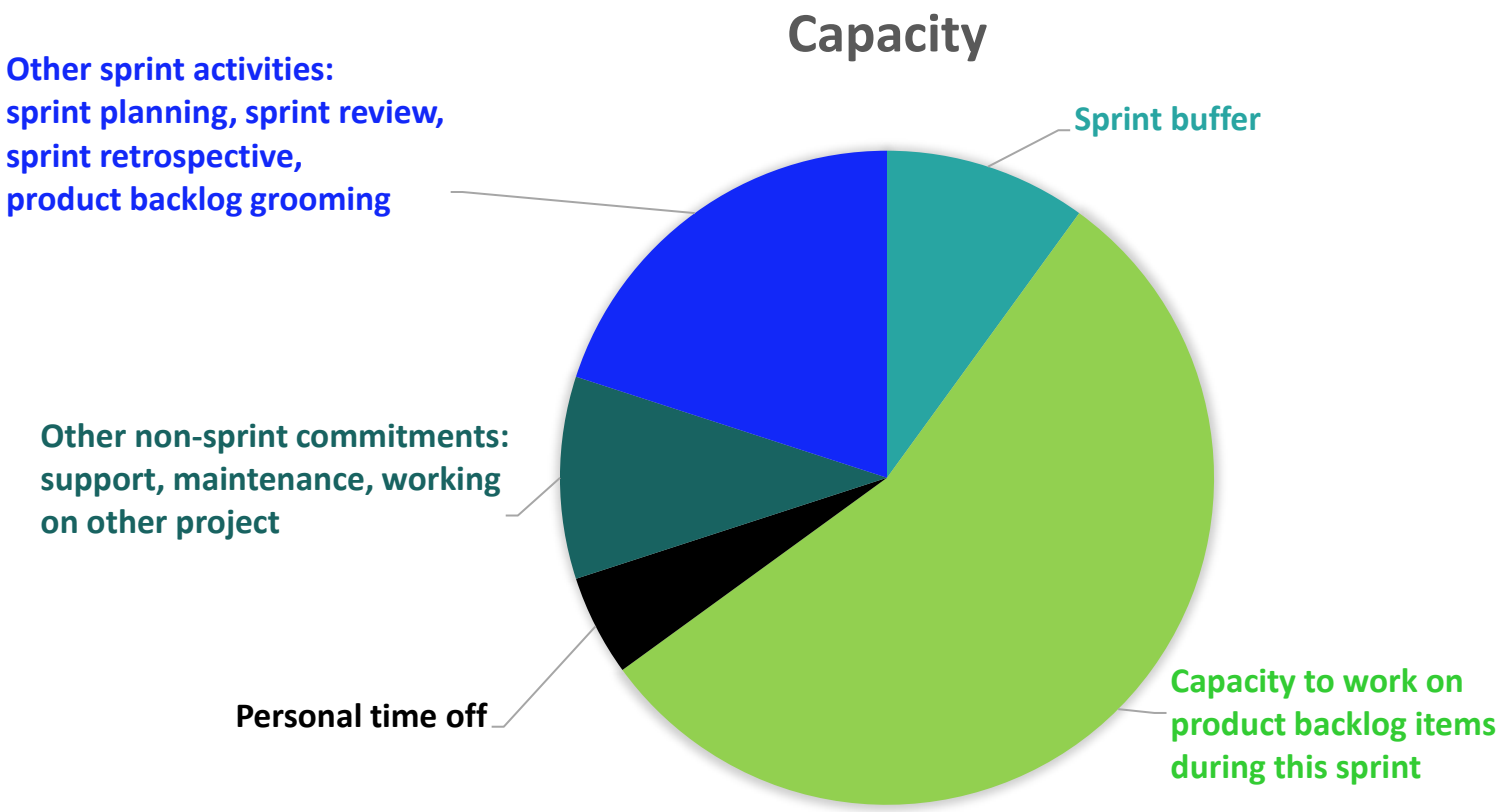
Capacity-Driven Sprint Planning: The Approaches

- Two-Part Sprint Planning
  - Part One: What
    - the development team determines its capacity to complete work and then forecasts the product backlog items that it believes it can deliver by the end of the sprint.
    - If the team believes it can accomplish 20 story points, it will select about 20 story points' worth of work.
  - Part Two: How
    - The team acquires confidence in its ability to complete the items by creating a plan.
    - **Most** teams create the plan by breaking the product backlog items into tasks and then estimating (in hours) the effort required to complete each task.
- One-Part Sprint Planning
  - Next slide

Capacity-Driven: One-Part Sprint Planning



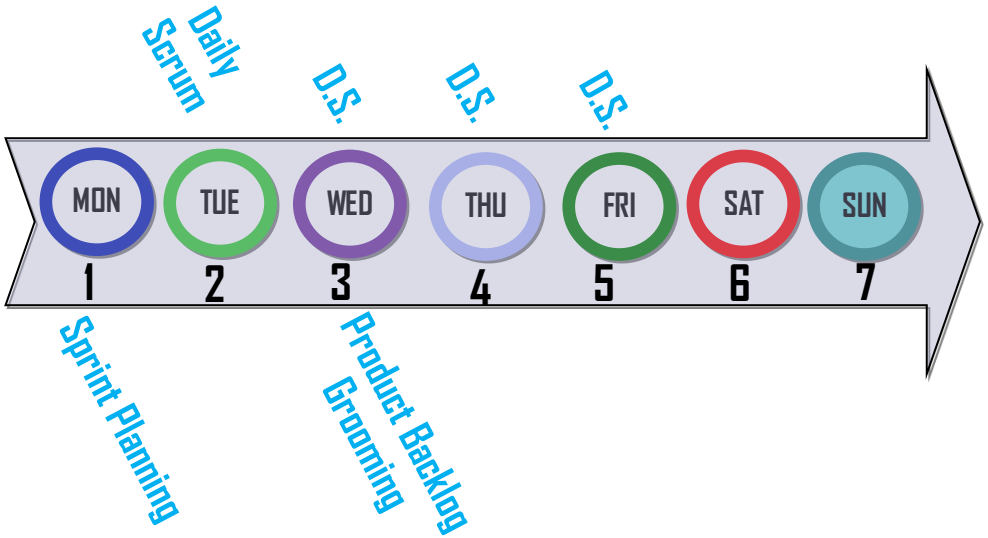
Determine Team Capacity



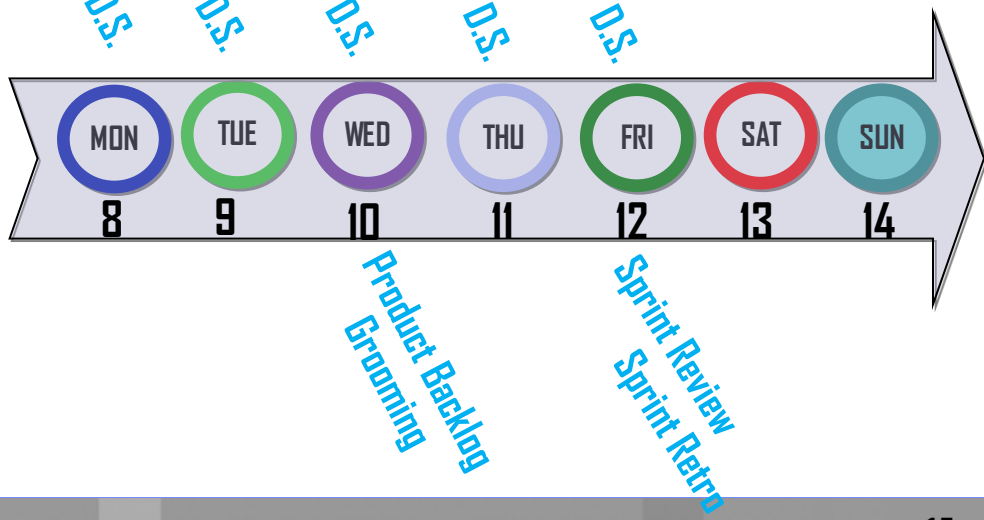
- Capacity can be measured in
  - Story Point
  - Effort-Hours (My recommendation)

Time Needed for Sprint Activities

1



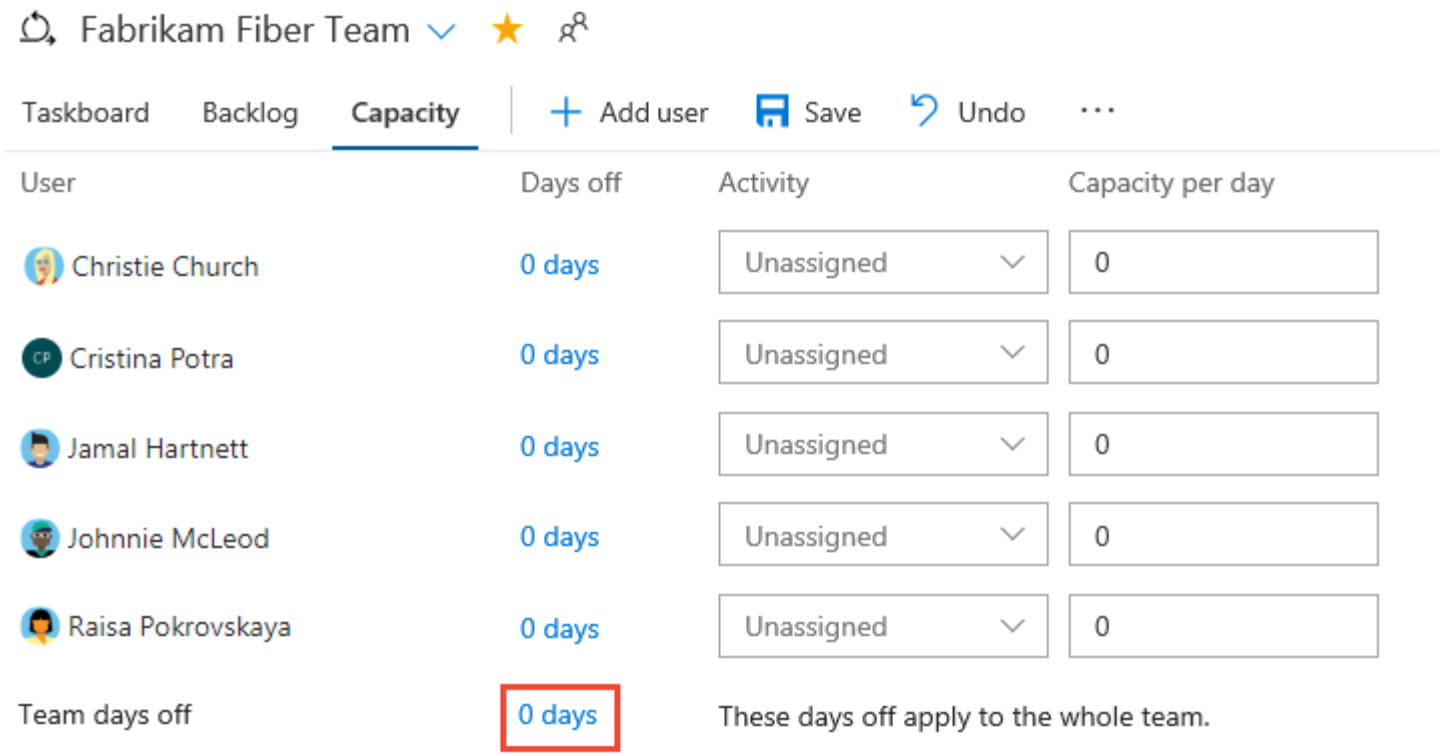
for future sprints



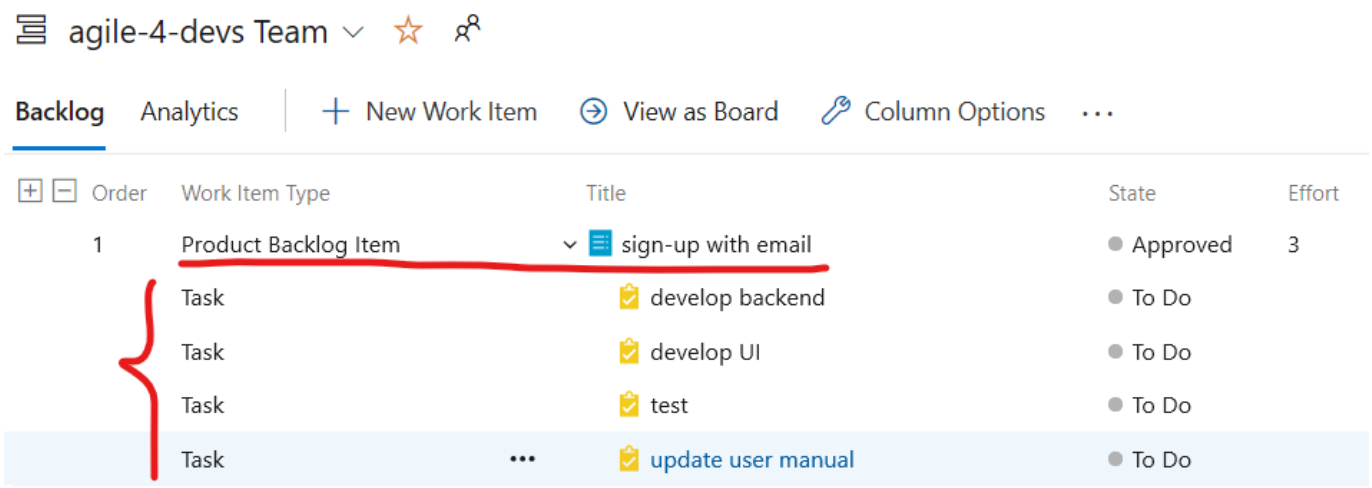
Determine Team Capacity (Effort-Hours)

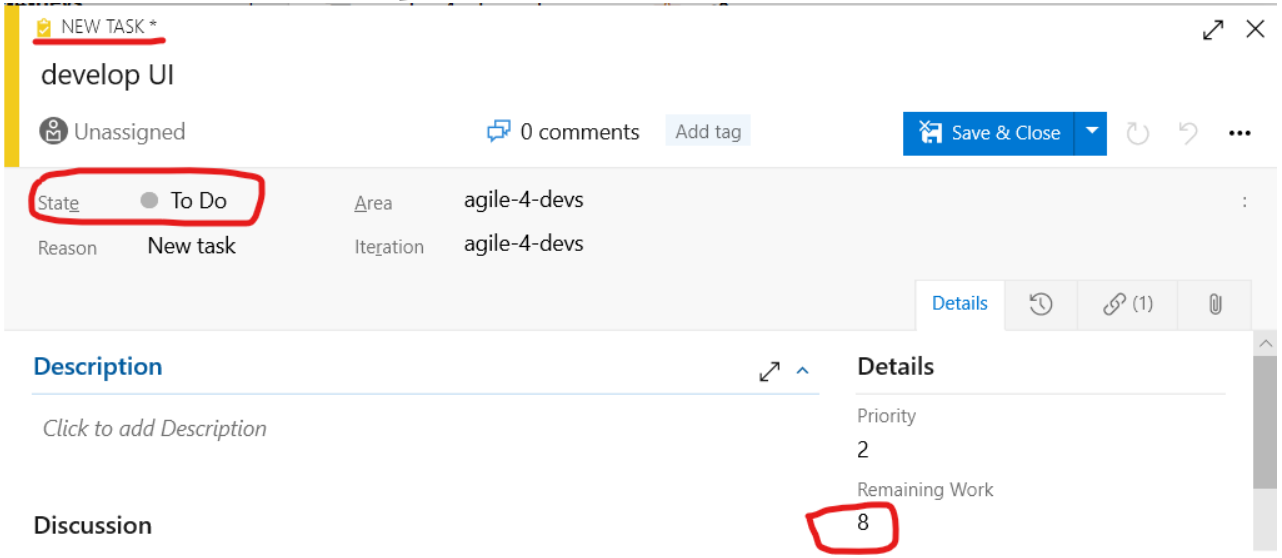
Person	Days Available	Days for Other Scrum Activities	Hours per Day	Available Effort-Hours
Mary	10	2	5-6	40-48
Reza	9	2	2-3	14-21
Mohammad	8	2	4-6	24-36
Yazan	8	2	5-6	30-36
Simon	10	2	4-7	32-56
Total				140-197

Determine Team Capacity: Tools

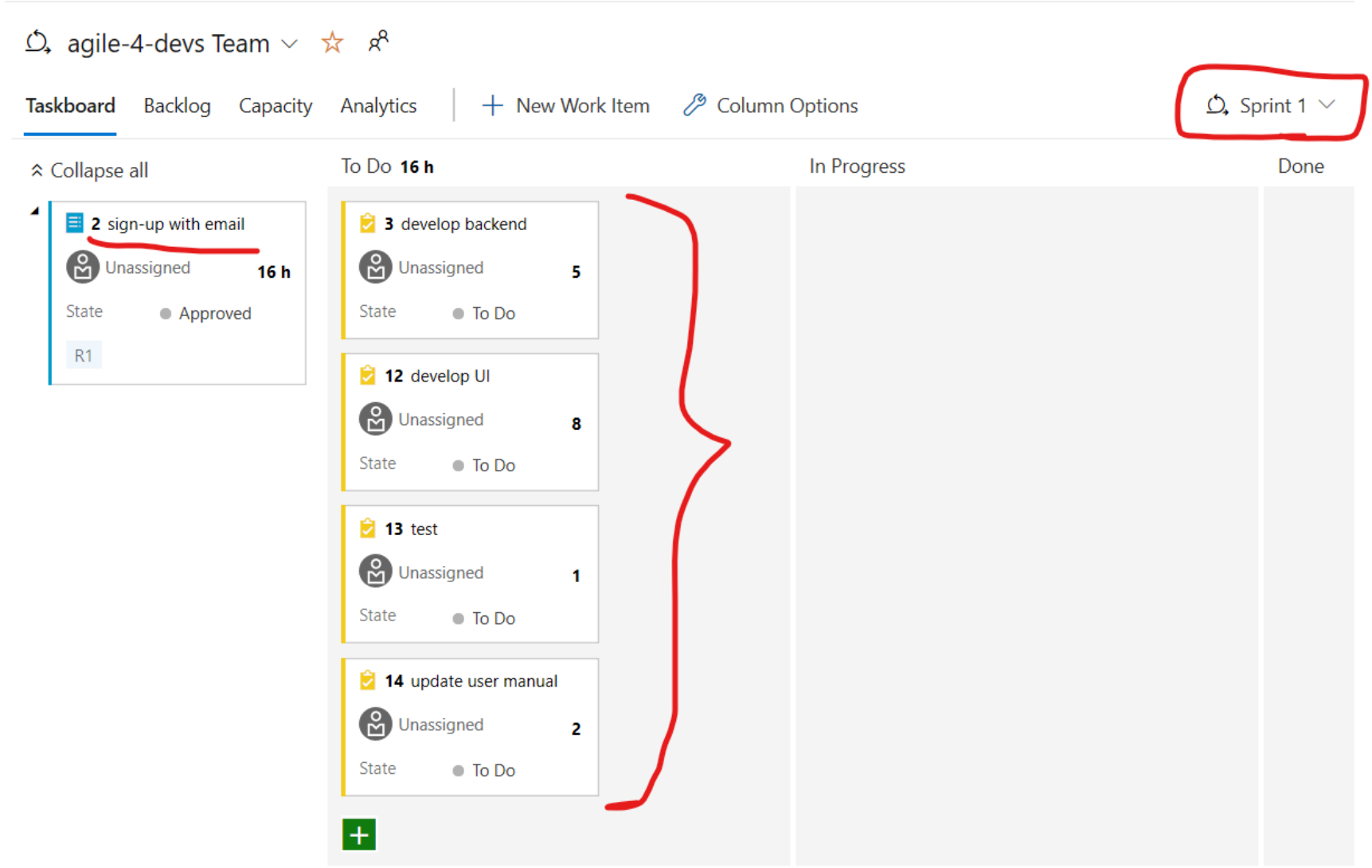


Create Tasks in Azure DevOps





Sprint Backlog



Sprint Planning

Tips

Do We Assign Team Members to Tasks?

Size of Tasks

4 Hours?
10 Hours?
30 Hours?

Sprint Planning: Estimation, Commitment or Guarantee

"Responsibility cannot be assigned; it can only be accepted. If someone tries to give you responsibility, only you can decide if you are responsible or if you aren't."
— Kent Beck

Exercise

Create an Agile Project in Azure DevOps

Steps

- Create a Project
- Add Product Backlog Items
- Groom Product Backlog

Thanks

- Faezeh Eshragh
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