

# CS353 Team Project

## Week 7

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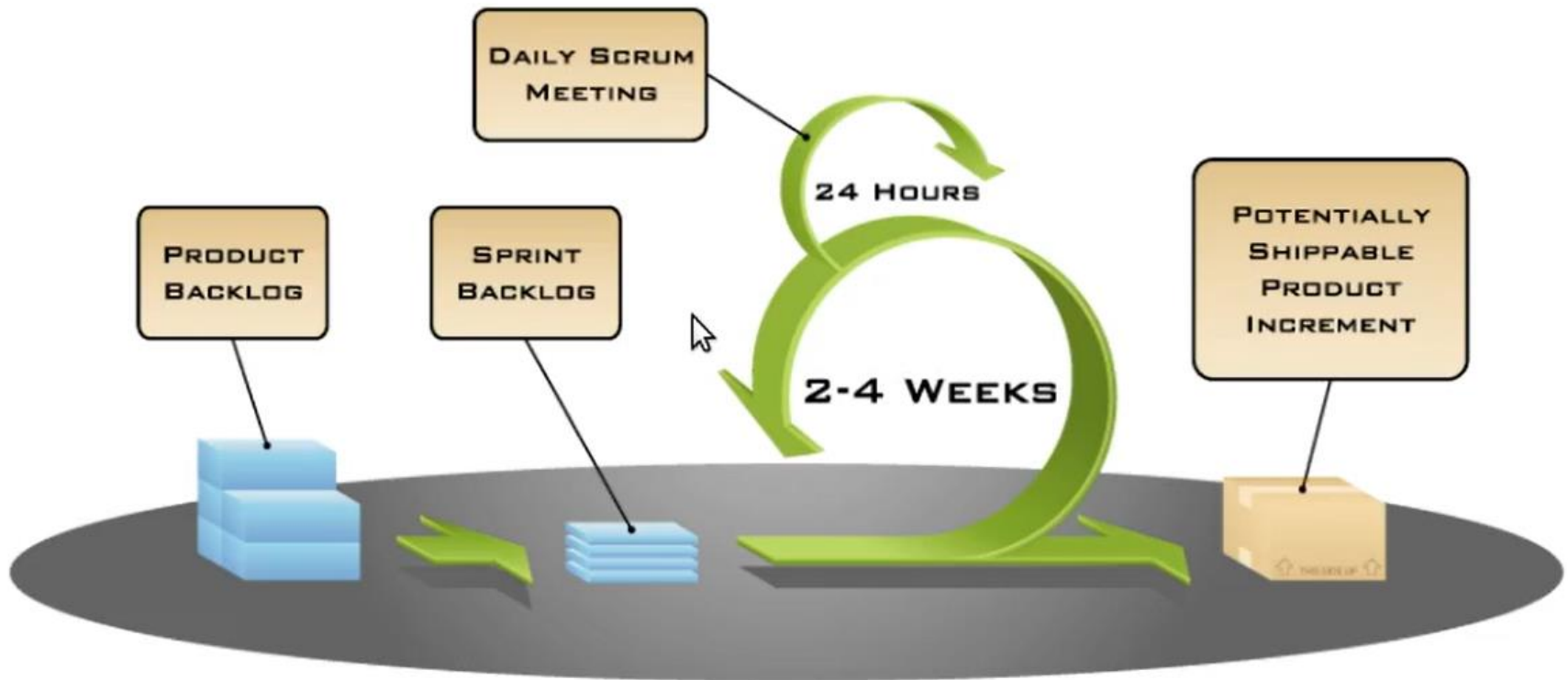
ASSISTANT PROFESSOR, MAYNOOTH UNIVERSITY, IRELAND

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# Plan

week	date	content
3	15/09/2021	Introduction
4	22/09/2021	Scrum, team allocation, initial introductions
5	29/09/2021	Supervisor allocation, project decision , Special Projects
6	06/10/2021	Project sign off, Sprint 1, Week 1. Sprint Planning
7	13/10/2021	Sprint 1, Week 2
8	20/10/2021	Sprint 1, Week 3. Sprint Review, Sprint Retrospective
9	27/10/2021	Sprint 2, Week 1. Sprint Planning
10	03/11/2021	Sprint 2, Week 2
11	10/11/2021	Sprint 2, Week 3. Sprint Review, Sprint Retrospective
12	17/11/2021	Sprint 3, Week 1. Sprint Planning
13	24/11/2021	Sprint 3, Week 2
14	01/12/2021	Sprint 3, Week 3. Sprint Review, Sprint Retrospective
15	08/12/2021	Sprint 4, Week 1. Sprint Planning
16	15/12/2021	Sprint 4, Week 2
17	22/12/2021	Sprint 4, Week 3. Sprint Review, Sprint Retrospective
18	29/12/2021	Wrap up, submission deadline ?

# Putting it all together



# Scrum framework

## Roles

- Product owner
- ScrumMaster
- Team

## Ceremonies

- Sprint planning
- Sprint review
- Sprint retrospective
- Daily scrum meeting

## Artifacts

- Product backlog
- Sprint backlog
- Burndown charts



# Sprint planning

- Team selects items from the product backlog they can commit to completing
- Sprint backlog is created
  - Tasks are identified and each is estimated (1-16 hours)
  - Collaboratively, not done alone by the ScrumMaster

As a vacation planner, I want to see photos of the hotels.

Code the middle tier (8 hours)  
Code the user interface (4)  
Write test fixtures (4)  
Code the foo class (6)  
Update performance tests (4)



# The daily scrum

- Parameters
  - Daily
  - 15-minutes
  - Stand-up
- Not for problem solving
  - Whole world is invited
  - Only team members, ScrumMaster, product owner, can talk
- Helps avoid other unnecessary meetings



# Everyone answers 3 questions

1  
What did you do yesterday?

2  
What will you do today?

3  
Is anything in your way?

- These are commitments in front of peers



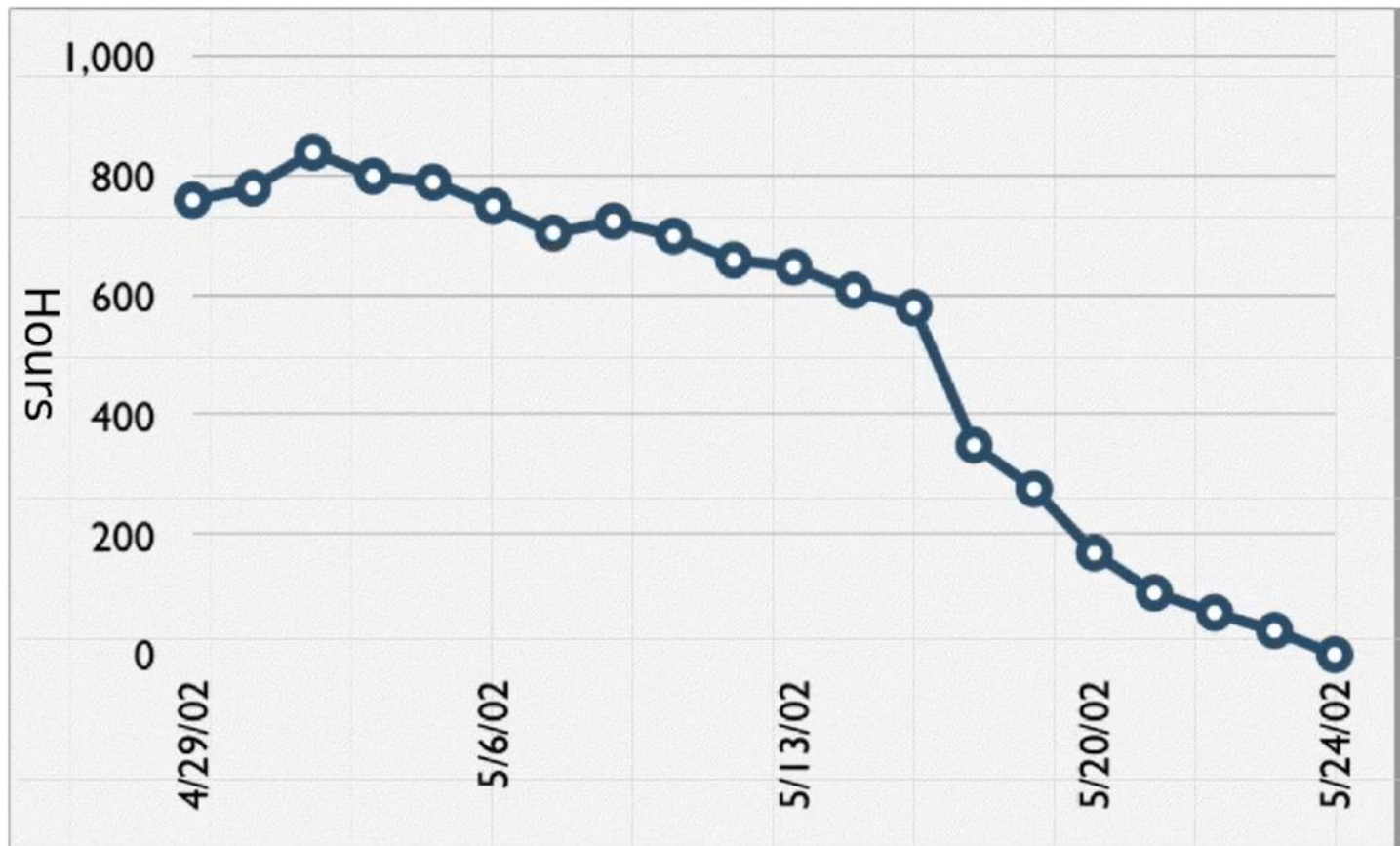
# Managing the sprint backlog

- Individuals sign up for work of their own choosing
  - Work is never assigned
- Estimated work remaining is updated daily
- Any team member can add, delete or change the sprint backlog
- Work for the sprint emerges
- If work is unclear, define a sprint backlog item with a larger amount of time and break it down later
- Update work remaining as more becomes known

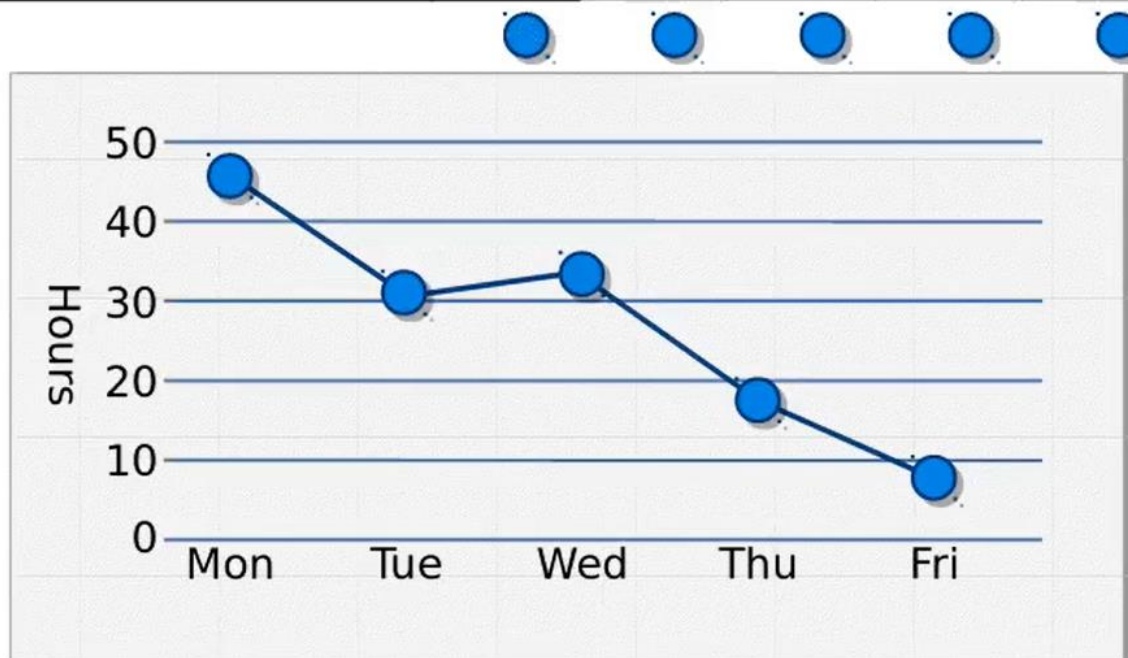
# A sprint backlog

Tasks	Mon	Tues	Wed	Thur	Fri
Code the user interface	8	4	8		
Code the middle tier	16	12	10	4	
Test the middle tier	8	16	16	11	8
Write online help	12				
Write the foo class	8	8	8	8	8
Add error logging			8	4	

# A sprint burndown chart



Tasks	Mon	Tues	Wed	Thur	Fri
Code the user interface	8	4	8		
Code the middle tier	16	12	10	7	
Test the middle tier	8	16	16	11	8
Write online help	12				



# Estimating Tasks

- A sprint or product backlog item takes up space on the y-axis
- This space is proportional to how long (or difficult) a backlog item is
- Measured in:
  - Hours
  - Points
  - Gummi bears, foot-pounds, NUTs (Nebulous Units of Time)



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# Estimating Tasks

- Two broad categories of estimation methods:
  - 1: Model based – e.g. COCOMO
    - Uses models usually built from observations
    - Perhaps tailored to the current domain
  - 2: Expert (consensus) based – e.g. Wideband Delphi
    - Uses experts and their experience



# Planning Poker

- A variation of Wideband Delphi
  - 1: Assemble a group of experts (around 10)
  - 2: Give each estimator a deck of cards (usually 0, 1, 2, 3, 5, 8, 13, 20, 40, and 100)
  - 3: Moderator reads a description of the user story. The product owner can answer questions from estimators.
  - 4: Each estimator selects a card and places it face down on the table. When all estimates are in, the cards are flipped over.
  - 5: If the estimates vary widely, the owners of the high and low estimates discuss the reasons why their estimates are so different. All estimators should participate in the discussion.
  - 6: Repeat from step 4 until estimates converge to within some predetermined threshold.

# Planning Poker

- How effective is it?:
  - One study found that estimates obtained through the Planning Poker process were less optimistic and more accurate than estimates obtained through mechanical combination of individual estimates for the same tasks.



Planning poker cards