



COMP2511

Object-Oriented Design and Programming

Introduction to Scrum

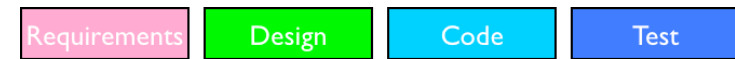
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Sequential vs Overlapping Development



Rather than doing all of one thing at a time...

...Scrum teams do a little of everything all the time

Takeuchi, H. & Nonaka, I. "The New New Product Development Game".
Harvard Business Review, January 1986, 137–146.



Characteristics of Scrum

- Self-organizing teams
- Product progresses in a series of “sprints”
- Requirements captured as a “product backlog”
- No specific engineering practices prescribed
- Uses generative rules to create an agile environment for delivering projects
- One of the “agile processes”

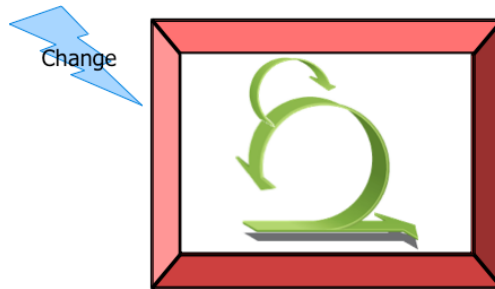


Sprints

- Scrum projects make progress in a series of “sprints”
 - ◆ Analogous to Extreme Programming iterations
- Typical duration is 2–4 weeks or a month at most
- Constant duration leads to a better rhythm
- Product is designed, coded and tested during sprint



Sprints



- Plan sprint durations around how long you can commit to keeping change out of the sprint



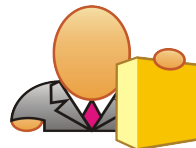
Scrum Master



- Represents management to the project
- Responsible for enacting Scrum values and practices
- Removes impediments
- Ensures that the team is fully functional and productive
- Enables close cooperation across all roles and functions
- Shields the team from external interferences
- Not a “project manager”



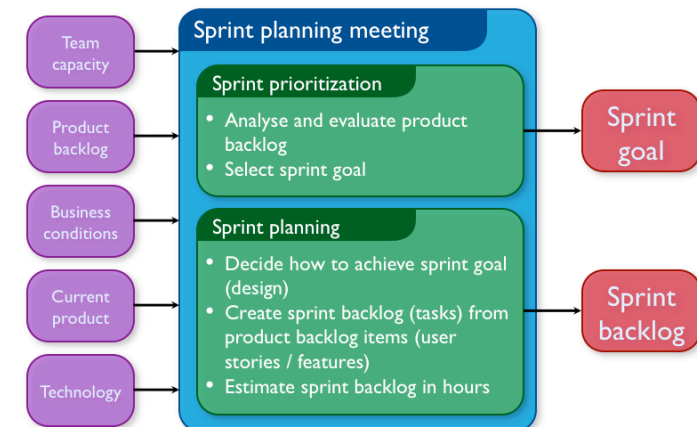
Product Owner



- Defines the features of the product
- Decides on release date and content
- Responsible for the profitability of the product (ROI)
- Prioritizes features according to market value
- Adjusts features and priority every iteration, as needed
- Accepts or reject work results



Sprint Planning Meeting





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 Scrum Master
- High-level design is considered

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)



Everyone Answers 3 Questions

1 What did you do yesterday?

2 What will you do today?

3 Is anything in your way?

- These are *not* status updates for the Scrum Master
 - ◆ They are commitments in front of peers



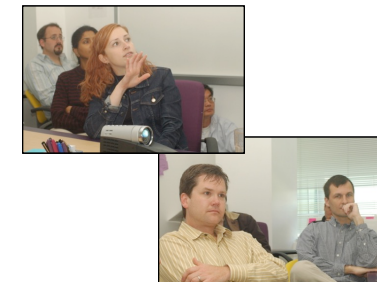
Daily Scrum/Stand-Up

- Parameters
 - ◆ Daily
 - ◆ 15-minutes
 - ◆ Stand-up
- Not for problem solving
 - ◆ Whole world is invited
 - ◆ Only team members, Scrum Master, Product Owner, can talk
- Helps avoid other unnecessary meetings



Sprint Review

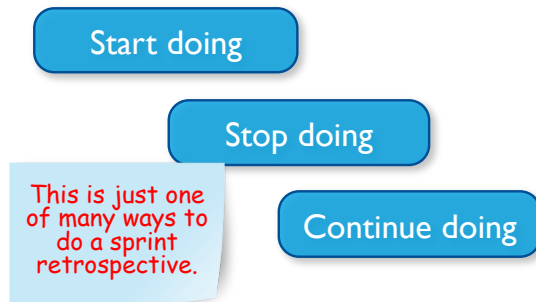
- Team presents what it accomplished during the sprint
- Typically takes the form of a demo of new features or underlying architecture
- Informal
 - ◆ 2-hour prep time rule
 - ◆ No slides
- Whole team participates
- Invite the world





Sprint Retrospective

- Internal review meeting within team
- What worked well, what didn't?
- How to improve for next sprint?



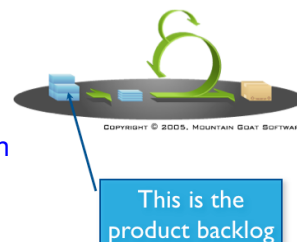
Sample Product Backlog

Backlog item	Estimate
Allow a guest to make a reservation	3
As a guest, I want to cancel a reservation.	5
As a guest, I want to change the dates of a reservation.	3
As a hotel employee, I can run RevPAR reports (revenue-per-available-room)	8
Improve exception handling	8
...	30
...	50



Product Backlog

- The requirements
- List of all desired work on the project
- Ideally expressed such that each item has value to the users or customers of the product
- Prioritized by the Product Owner
- Reprioritized at start of each sprint



Managing the Sprint Backlog

- 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

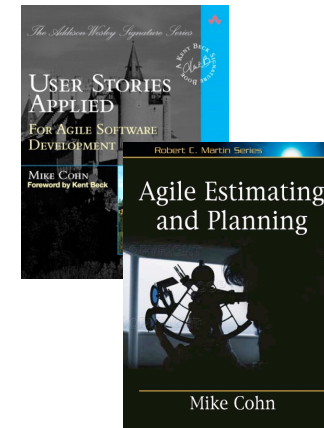


Sample Sprint Backlog

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	



More Information



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Tracking Progress: Burndown Chart

