Project Management

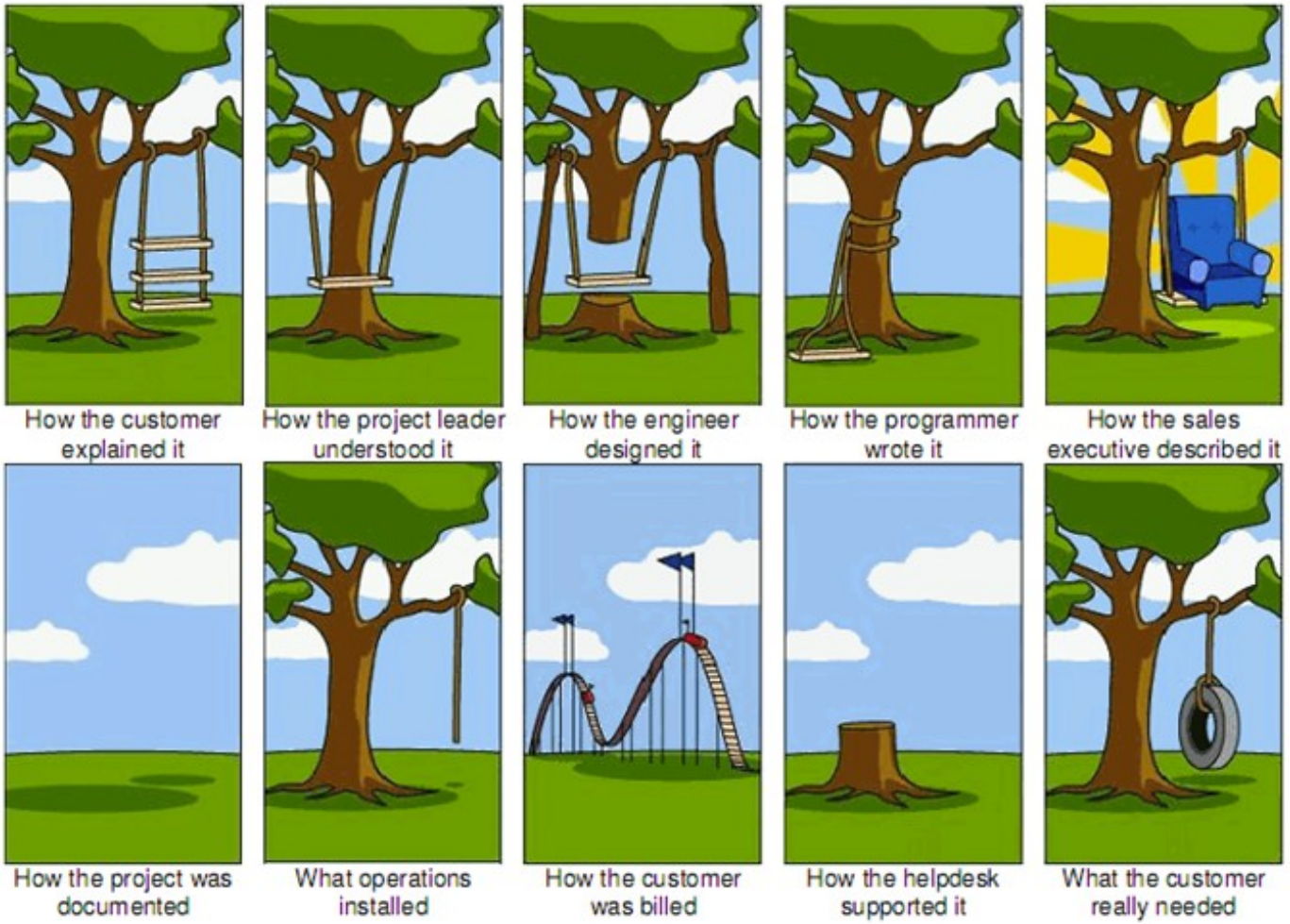

Image: http://tamingdata.com/2010/07/08/the-project-management-tree-swing-cartoon-past-and-present/

CS/IT 490 WD, Fall 2013

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Breakdown

- Why Project Management is Important
- Team Expectations
- Software Development Methodologies
  - Waterfall
  - Spiral
  - Agile
- Group Project Milestones

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Why Project Management is Important

Weeks of programming can save you hours of planning. -- unknown

- Project Management is important in companies that build software, as with any other type of company.
- Need to be able to figure out resources needed (time, money, manpower) & make deals on when a product will be done.

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Why Project Management is Important

- Organization is important to keep everybody on the same page.
  - What are you working on?
  - What am I working on?
  - How much time do we have?
  - What does the customer expect?
  - What are the known bugs to be fixed?

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Why Project Management is Important

- BitBucket (our Source Control hosting solution this semester) has an ***Issues Tracking*** feature on the webpage.
  - You can use this as a To-Do list and bug tracking list, to sync tasks between teammates.

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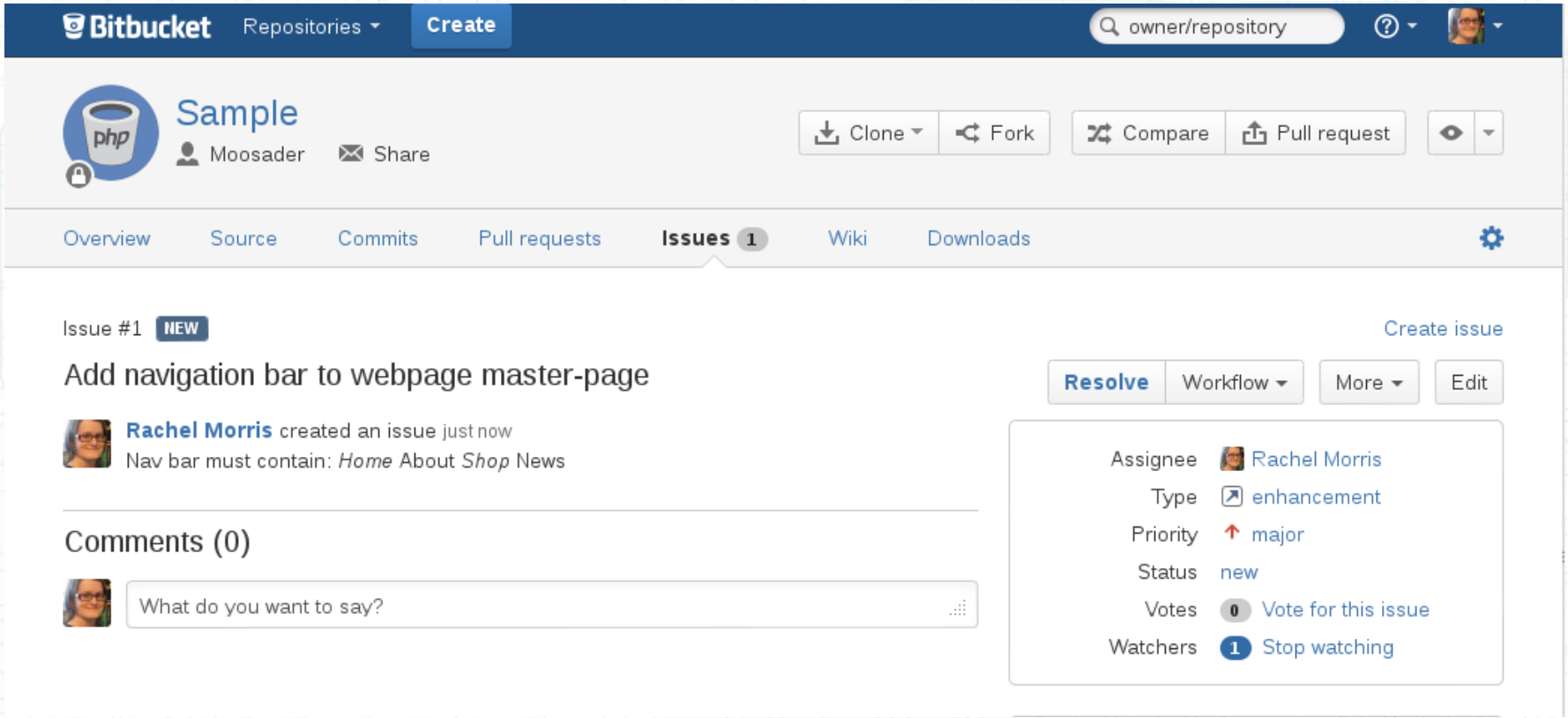
Why Project Management is Important

- BitBucket



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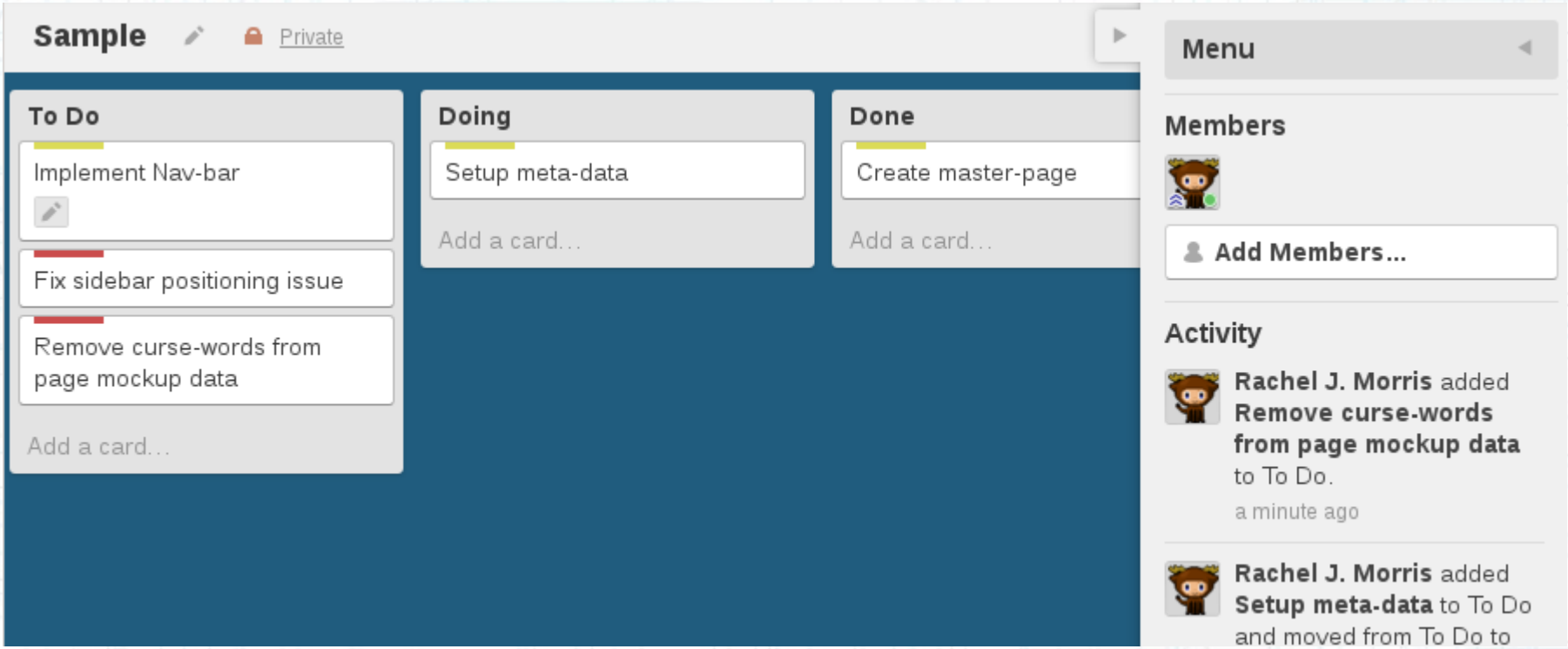
Why Project Management is Important

- Alternatively, you can use Trello to organize tasks between teammates



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Why Project Management is Important

- Use one or the other for a project “To-Do”
- Once you're in teams, choose which one you would prefer; I'll be setting up the repositories and tracking tools.
- Please make sure to keep the tracking data up-to-date and make sure to assign tasks.

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Team Expectations

- Everybody does everything.
  - Nobody is just a “tester” or “royalty-free-artwork procurement technician”
  - Nobody is just the “CSS guy” or “Database lady”
  - Everybody should work on HTML, CSS, JavaScript, PHP, and MySQL – work should be split up
  - Everybody is responsible for filling out a *postmortem* at the end of every sprint

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Team Expectations

- Project code will be pushed to the repository by the Milestone due-dates
  - We will talk about how to do this later.
- If there is a problem with BitBucket or Git or any other tools, let me know as soon as possible.
  - There is a grace-period of one day on assignment turn-ins, but you have to let me know you're running into trouble.

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Team Expectations

- Small Teams
  - Preferably two people to a team – three at ***maximum***
  - Once you get more than that, it's hard to split up the work and coordinate appropriately

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Team Expectations

- Make something awesome
  - This isn't a required class, so hopefully you're taking it because you have something in mind you want to make.
  - Do something awesome.

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Software Development Methodologies

- Waterfall
- Spiral
- Agile
- I want teams to think about software development as they work on their projects

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Software Development Methodologies

Waterfall

"Who read the original paper on Waterfall? Waterfall was a straw-man argument. On the first page of the paper, it went ‘Here is a system that doesn’t work.’

But it turns out when you put a really nice picture of the front page of your paper, that’s as much as people will read.”

[What is waterfall?]

"Waterfall is .. Have you ever seen the cartoon with the birds in a tree. The birds at the bottom of the tree get covered in shit, and when they look up all they see is assholes."

"It turns out that we don’t need to worry about risk management, we don’t need to worry about slack, because we’ll just make the programmers work 80 hours a week. That’s all they’re good for."

From “Programming is terrible—Lessons learned from a life wasted. EMF201” by Thomas Figg
http://youtu.be/csyL9EC0S0c?t=14m59s

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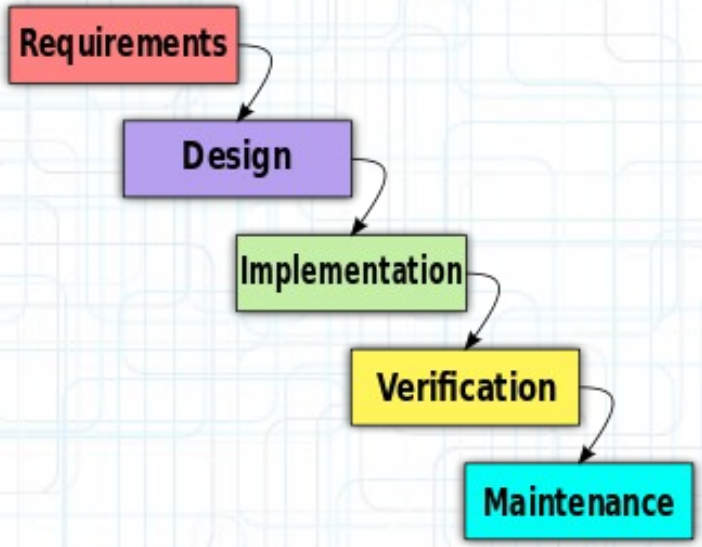
Software Development Methodologies

Waterfall



- A generally bad development methodology
- Try to figure out all of the requirements at the beginning
- Implement everything all at once
- Verify and hope everything worked as planned

Waterfall image from https://en.wikipedia.org/wiki/File:Waterfall_model_%281%29.svg

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Software Development Methodologies

Waterfall

- When does anything go according to plan?
- See also: Murphy's Law

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Software Development Methodologies

Spiral

- It's better to review and reorient the project often
- Solve development issues as soon as possible
- Feedback from customers often

- Like when you drive a car; you don't just aim at your goal and hit the gas, you are constantly adjusting your direction

Spiral image from https://en.wikipedia.org/wiki/File:Software_Development_Spiral.svg

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Software Development Methodologies

Agile

- Iterative and incremental: The software evolves over time.
- Set of values:
  - Individuals and interactions over processes and tools
  - Working software over comprehensive documentation
  - Customer collaboration over contract negotiation
  - Responding to change over following a plan

https://en.wikipedia.org/wiki/Agile_software_development

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Software Development Methodologies

Agile

- SCRUM is a type of Agile development
- What is SCRUM? (5 minutes)
  https://www.youtube.com/watch?v=niVbODz4Dnw
- What is KANBAN? (6 minutes)
  https://www.youtube.com/watch?v=0EIMxyFw9T8
- Some companies follow “SCRUMBUT”
  - i.e., they ***say*** they're Agile and follow SCRUM, but they pick-and-choose aspects
  - "(We use Scrum, but) (Retrospectives are a waste of time,) (so we don't do them.)"

http://www.scrum.org/ScrumBut

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Group Project Sprints

- This probably qualifies as “SCRUMBUT” - oh well.
- There will be four ***sprints*** this semester.
- At the beginning of each sprint, teams will create a tentative plan and set up their task list (BitBucket, Trello)
- At the end of each sprint, students will prepare a Postmortem, and gather some screenshots to show off to the class.

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Group Project Sprints

- At the end of the final sprint, teams can demo their live website to the class.
- Make sure to save your project documentation and screenshots – they can go in your portfolio!

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References

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