Effective Team Communications

SWEN-261

Introduction to Software Engineering

Department of Software Engineering
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There are multiple stakeholders who have an interest in a software development project.

- 'an individual, group, or organization, who may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project' (Project Management Institute, 2013)

- Some of the project stakeholders include:
  - *Product owner (customer/sponsor)*
  - *Product users*
  - *Project team members*
  - *Manager*

- Each stakeholder has a different set of interests and communication needs.

The Product Owner is mainly concerned that the project satisfies their needs.

- Is the team building the right project?
  - *Vision statement for features*
  - *Enumeration of epics and user stories*
  - *Priority of user stories*

- Is the team building the project right?
  - *Acceptance tests for each story*

- Term project
  - *Instructor is the Product Owner*
  - *Trello board for detailing epics and user stories with priority and acceptance criteria*
  - *If it is not in the Trello board, it is not in the project*

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The Product Users are concerned with the overall user experience.

- What is the user experience?
  - *User interface design*
  - *Workflow for using the product*
  - *Interface with other elements of the business processes*

- Project teams, unfortunately, often do not directly deal with the user or only do so through a proxy.

- Term project
  - *Instructor and course assistants as users*
  - *Other teams during cross-team testing*

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Project team members must communicate about the technical aspects of the project.

- Requirements
  - *User story creation with Product Owner (Trello board)*

- Design
  - *Architectural design (UI – Application – Model)*
  - *Structural design (UML class structure diagrams)*
  - *Behavioral design (UML sequence and statechart diagrams, web application interface)*
  - *Design narratives (Design discussion)*
  - *Whiteboard designs*

- Code
  - *Coding style guidelines (Google Java style)*
  - *Code reviews (GitHub pull requests)*
  - *Version control support (GitHub)*

Elements in ()s are related to term project

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Project team members must communicate about the process of doing the project.

- Planning
  - *Sprint planning and backlog refinement (Trello board)*

- Operational information
  - *Stand-up meetings (in-person, Skype/Hangout, Slack)*
  - *Information exchange (Slack)*
  - *Information archive (Trello card)*

- Team coordination
  - *Meeting scheduling (Doodle, When2Meet)*
  - *Information exchange (Slack)*

- Telling others about the project
  - *(Demos and presentations)*

Elements in ()s are related to term project

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Your team must determine what communication can be virtual and what is better face-to-face.

- Improved communication is the #1 item that teams say would help them be more effective

- Most would agree that a face-to-face meeting is the best for communication.

- The nature of modern software development often does not permit this.

- An effective software development team balances
  - *Virtual vs face-to-face meeting*
  - *Asynchronous vs synchronous communication*

- **BUT**…most work will be done asynchronously including coding

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A *Standup Meeting* is a nearly daily form of team communication. Here's how it works…

- A standup is a time-boxed meeting that relates progress and commitments across the team.
  - *This is the Development Team's meeting to run*
  - *The Product Owner may be present*

- Each team member answers three questions:
  - *What did I do yesterday?*
  - *What will I do today?*
  - *Are there any impediments to achieve my task?*

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What are some common gotchas running a Standup Meeting?

- Examples:
  - *A non-team-member is directing the meeting*
  - *Team lets the meeting run too long*
  - *People sit and get too comfortable*
  - *People digress on technical issues*
  - *People try to solve the impediment*
  - *People try to debate the merits of alternate solutions*
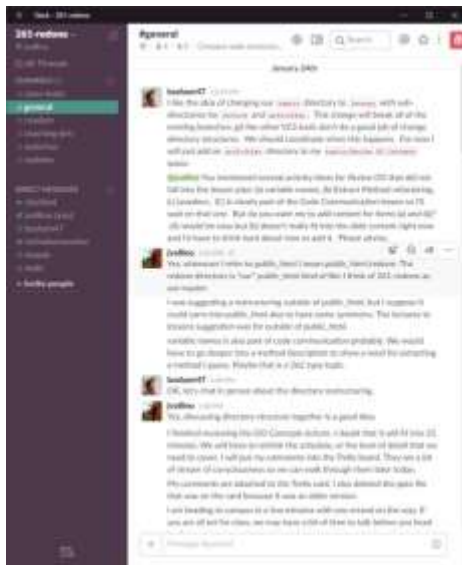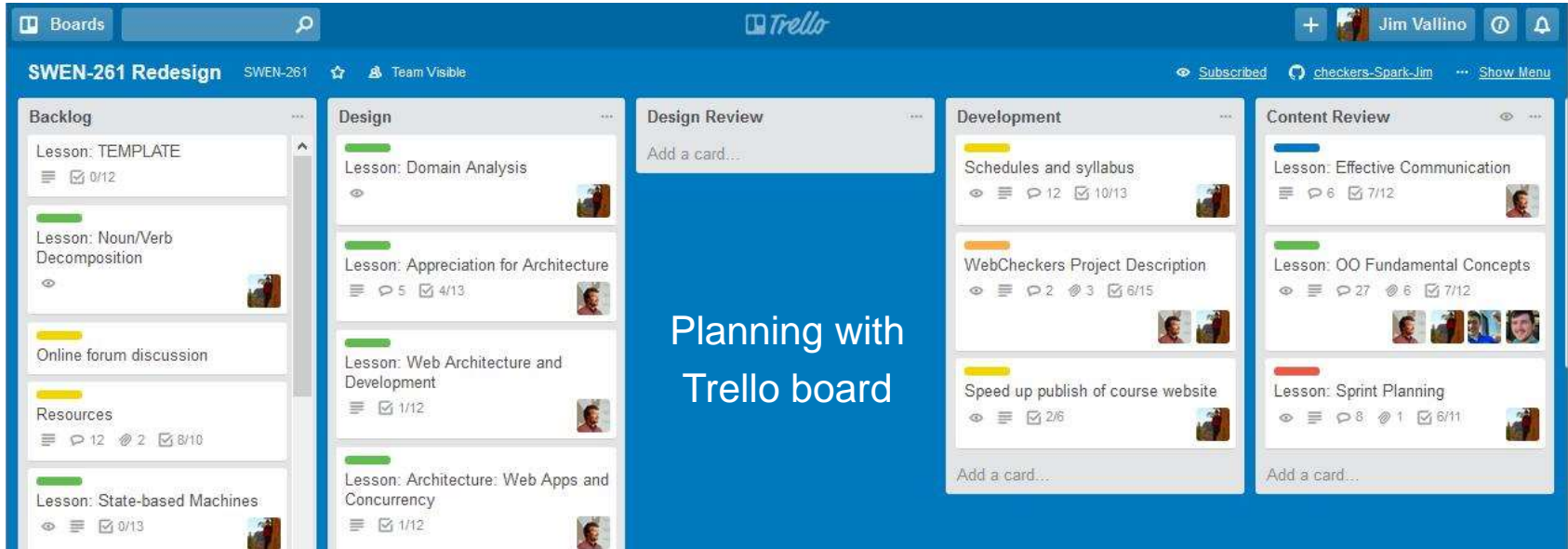
- Solutions?
  - *Team must have discipline to cut-off rambling*
  - *And to take debates and solutions out of the meeting*
    - Identify someone to help the person
    - And move on

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The Manager is interested in progress and individual accountability.

- Project progress and projections
  - *Card flow through lists (Trello board)*
  - *Product backlog (Trello board)*

- Individual accountability
  - *The Manager (your Instructor) needs to know who has done what work on the project.*
  - *Team members need visibility in artifacts*
    - Trello card log
    - Slack channel presence with meaningful contributions
    - Code level contributions
      - Commits performed
      - Issues opened/closed
      - Pull requests issued/reviewed
    - Peer evaluations

<u>Elements in ()s are related to term project</u>

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These same tools were used while developing the course and every term while it is taught.

Planning with Trello board

Communication and coordination using Slack channels

Content development using Git with a feature branch for each topic

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