CSE 115A - Introduction to Software Engineering

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Agile Planning and Estimation Cont.

User Story Format

> As a [user] I want [goal] [for reason]

Idea is to have a more direct summary of what is important. The user story informs an experience that the developers want to create rather than a feature or implementation.

MoSCoW

1. Must Have
2. Should Have
3. Could Have
4. Won't Have

User stories should be sorted into these buckets in order to begin the process of determining what the product should be.

MoSCoW is one scheme, other schemes can be simpler or more complicated depending on the team and the product.

Estimating Cost

- Development Effort required
  - Story points
  - Not measured in hours since many parts of the project are vague or unknown. The goal is to get a general feel for the effort rather than exact or even approximate estimates.
- Story points are abstract, delibrately vague

  Points are allocated to small, medium, large, etc. depending on the team. Generally using fibbonacci numbers is common, the goal is to capture how more difficult tasks tend to take longer in a non linear fashion.

Planning Poker

Game to determine and align everyone's estimations of effort.

- Discuss effort
- Each team member makes a secret estimate
- Check if every one matches
- repeat until everyone is 'close enough'

The ultimate goal is to spend more time upfront in order to prevent wasted work. Time spent planning to hopefully improve efficiency and give accurate costs for changes.

Assigning Stories

- How many story points can reasonably be done in a sprint
- Should be revised based on how development progresses

> Note:
>
> Sprint goals are estimates not commitments, if a task is larger than expected it is okay to overrun a sprint.

The end of a sprint should result in a working version of the product, meaning that user stories should be doable in a single sprint, at least in principle.

Goal of Planning

Prioritized list of user stories, estimated in points. What to do and estimates of how much work it will take.

I mean sprint wise I would just push it into the next sprint but the professor seems to be like oh you already have a plan for each sprint and then it overruns so whatever.

Backlogs

Multiple backlogs, product backlog is every single story for the product. A portion of the product backlog is selected for the release, then a portion of the release backlog is allocated to each sprint. Each user story is broken down into tasks to be completed.

Product Owners handle the product and release backlogs, the developers handle the sprints and specific tasks. However they also inform the Product Owners on what is and isn't possible.

Sprint Plan

More of a commitment than a release plan. The sprint plan involves actual time and resources.

Dude Idk why he keeps going back to me saying roll it over. I literally assumed we were planning the sprint, not that the release had been planned and we ran out of story points like bro.

For a story to be done in a sprint it means that the entire feature should be present. This means both front and backend, enough to test and use the feature even if unpolished.

Spring Planning Meeting

- Prioritize

  Analyze and develop goals based on current knowledge. Generally done by the PO with input from the team regarding what is and isn't possible.
- Planning

  How to achieve goals. Create tasks for the current sprint and goals, estimate the tasks in hours.

  This is mostly done by the team since it regards the technical details and final design work.

Estimations

- Units are in ideal hours
  - full knowledge and no surprises
  - Generally underestimation by 2 or more times
- How much can each person do?
  - Assume conservative figure, 8-12 hours
  - Over time update with actual work completed.

Possibilities

- Not enough time
  - reasses stories
  - update priorities
  - put down lower priority stories
- Too much time
  - Unlikely
  - Add story midway
  - update priorities

Expectations for Planning

- Task listing with time estimate and prioritized
- Team Roles
- Initial task assignments
- Initial task burn-up / burn-down chart
- Initial Scrum board set up
- Schedule of Scrum meetings

Managing the Sprint

- Individuals sign up for tasks
- Work remaining is estimated daily
- Any team can edit the backlog
- Revaluate and edit amount of work as things are discovered.

Daily Scrum

- Daily meeting
- 15 mins
  - Strict time
  - Follow up after for bigger issues
  - Stand-up, keep everything fast and short
- Not for problem solving
  - Only team members, scrum master, and product owner can talk
  - Anyone can attend
- Goal is to avoid other meetings

Topics

1. What did you do yesterday?
2. What will you do today?
3. Is there anything in your way?

> Personally the first 2 could be done async, and the third could be done just between the people managing both sides of the issue.

Pitfalls

- Being late or missing the meeting has a penalty
  - if not present assumed nothing happened
  - disrespectful
  - can block people
- Grandstanding

  Own up to whether you didn't get much done be honest and concise
- Over time
  - Stay in time
  - Big issues should be discussed by involved team members after Scrum
- Failure to commit to work
- Failure to update Scrum Board

Scrum Board

Table which represents the current sprint progress. For each story there are tasks which are sorted into To-Do, In-Progress, and Done.

As tasks are completed they move from the To-Do column to the In-Progress and eventually the Done column.

As tasks are picked up the name of the person doing the task is noted.

Only valuable if it is up to date.

Sprint Post Mortem

Evaluate product and process.

Reflect on how things went and what went wrong or could have been done better, as well as what went well and what worked.

If you missed the goal you need to replan the future sprints and reevaluate the time cost of each task.

Sprints are never extended, they are just checkpoints and not deadlines. Unfinished work is not necessarily a failure to deliver.

Sprint Review

- Demo of product at end of sprint
- Informal, less than 2 hour prep no slides
- Who
  - Whole team
  - Anyone interested
- Show what actually exists and what is actually finished.

Sprint Retrospective

- After every sprint
- process improvement
- 15-30 mins
- Whole team

One way

- Start Doing
- Stop Doing
- Continue Doing

Goal is to improve the infrastruture and practicies by reviewing and reflecting on them.

Initial Presentations Template is on Canvas.

Can use any slides as long as all the same info is on the slides.