Personas and user stories
Backlog and sprints

Hannu Markkanen, Amir Dirin

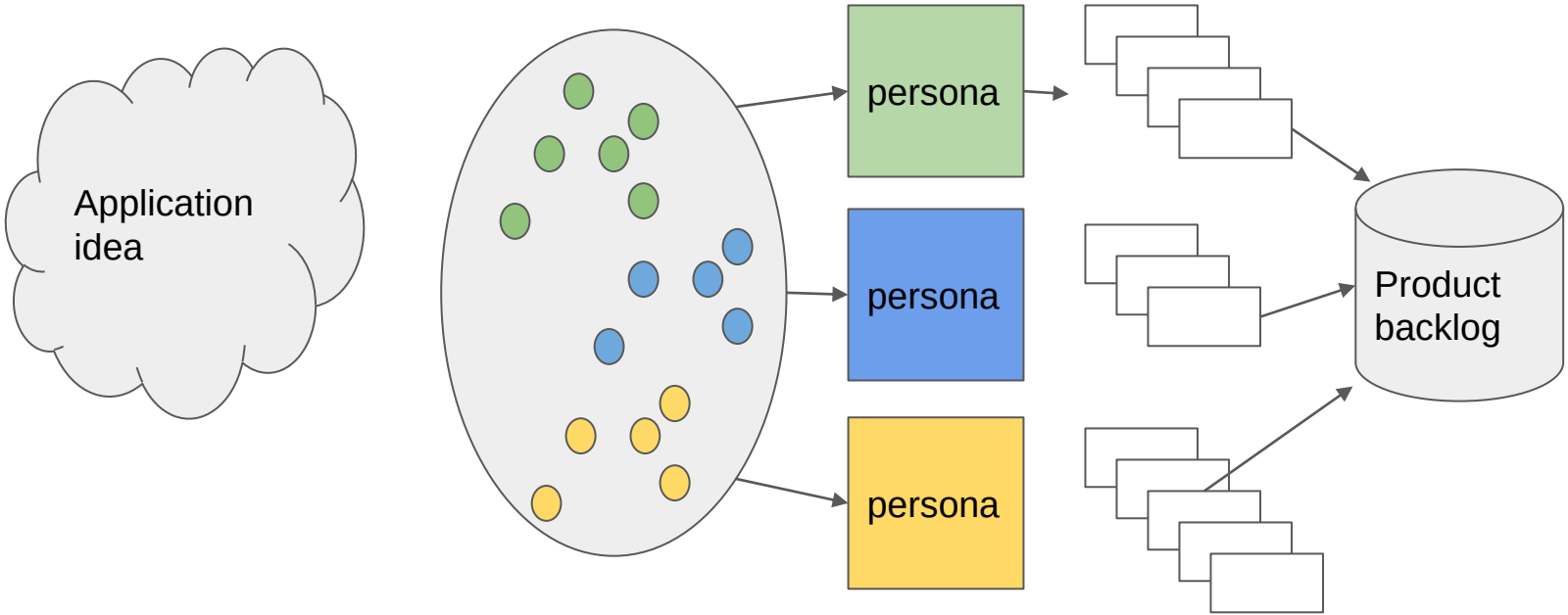
Who are the users, why and how they would use your application?

- Persona - fictive or research based description of a typical user.

- User story - what the user would like to accomplish, why and how does one know the application does what the user wanted to do

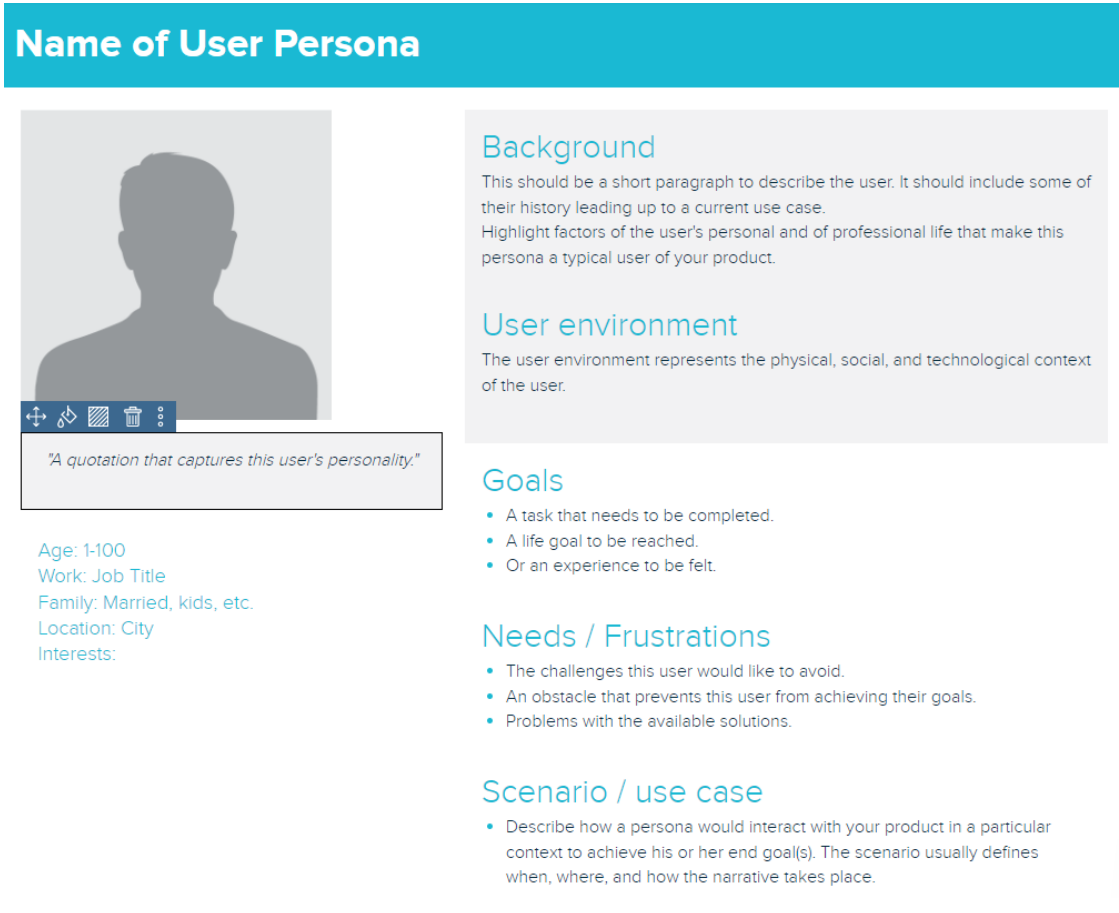
Personas and user stories as tools for requirement capture

Idea -> identify user groups -> personas -> user stories -> product backlog

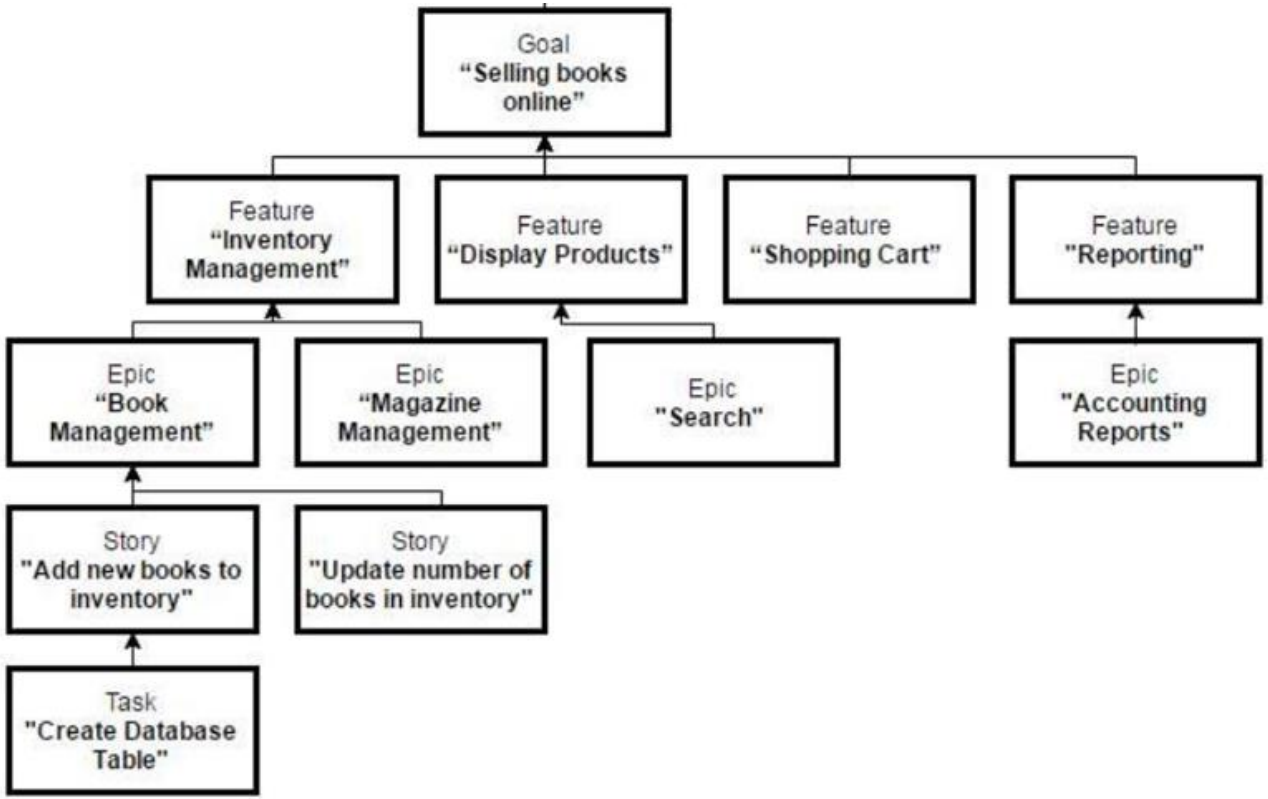


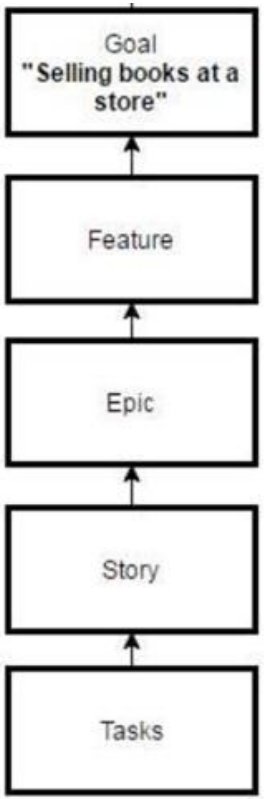
Personas

- Representation of the goals and behavior of a hypothesized group of users
- Synthesize data collected from interviews with users
- Captured in one or two-page document that include background, goals, needs, as well as the environment in which a persona operates



User stories, epics and features





https://www.linkedin.com/pulse/definition-agile-feature-mike-burns/

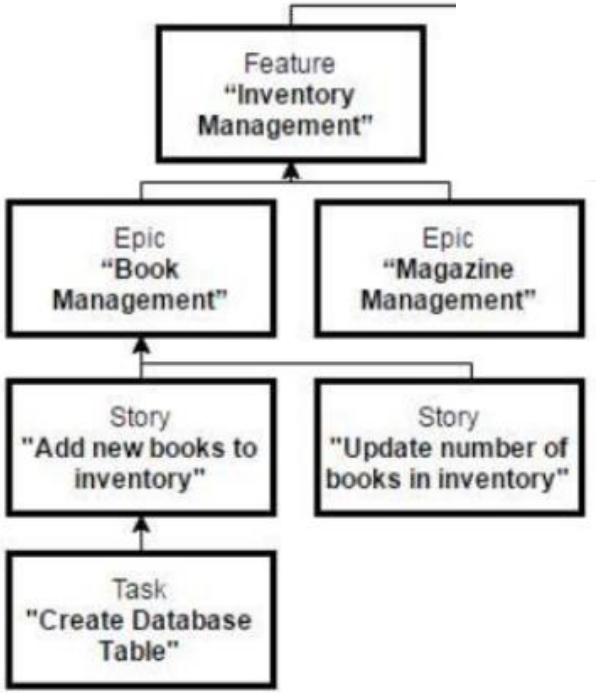
User story captures a requirement: Who, What, Why

a concise description of a piece of functionality that will be valuable to a user or owner of the software

As a [type of the user / persona]
I want [to do something]
so that [I can achieve a goal]

Should be written in language that the user understands.

User stories - examples



Epic: Book management
As a inventory manager,
I want to control the inventory of the books in our warehouses,
so that I can ensure that there is enough stock to meet demand without excess inventory.

User story: Add new books to inventory
As a inventory manager,
I want to add a new book to the inventory,
so that a new arrival can be included in our web shop for purchase.

User story: Update number of books in inventory
As a warehouse clerk,
I want to update the number of a books in inventory,
so that the received items are correctly registered in the warehouse system.

User stories are used as a basis for app development

Who - description of the user
What - describes the functionality user wants => design & implementation
Why - what the user wants to achieve => test acceptance criteria

Pre-conditions - description of state before the user story actions => pre-conditions for a test case

Acceptance criteria - set of conditions a user story should satisfy to be considered as done => test acceptance criteria

Pre-conditions and acceptance criteria - example

User story: Add new books to inventory
As a inventory manager,
I want to add a new book to the inventory,
so that a new arrival can be included in our web shop for purchase.

Pre-conditions:

- User logged in as a inventory manager (a user role in the system)
- User has browsed to the "Manage inventory" page

Acceptance criteria

- Information of the new book added in to the database
- Success message & information of the added book displayed to the user

Sample personas

Kurt Lagerfeldt., 38 years

Background:

Kurt lives in Helsinki region and works in media and is very comfortable with new gadgets and technology. Kurt doesn't have a cottage of his own, but he looks after his parents' cottage in central Finland. He doesn't have a car but can borrow one from his father when going to the cottage. He tries to visit cottage once a month to take a week of from stressful city life. Kurt enjoys eating out and long bike rides. He lives alone with his dog Madde. Madde is 2-year old Alaskan Malamute, that enjoys running in the snow and pulling sleds.

Needs:

Kurts dog Madde is very energetic and has been able to turn on the stove when alone in the house. Kurt needs to know that everything is fine at home in daytime and he can concentrate to his work. He also worries about the state that his elderly father leaves the cottage in fall and winter. Kurt would like know that her forgetful father hasn't left the attic window open or shut down the heaters, so that the cottage is not freezing when he comes to unwind there.

Anna Lindström

- A 28-year-old woman who lives in Helsinki
- Customer Manager in Nordea
- often goes to the sauna along or with friends at her free time
- wants a smart system, that can manipulate saunas temperature, make reservations, and pay for reservations with her mobile phone

Sinnu Kortelainen, 64 years

Background:

Sinnu is a retired physiotherapist and lives in Järvenpää, 50 kilometers from Helsinki. She had a hip operation few years back and has problems walking long distances. She is unsure of her driving and hasn't drove a car in 10 years so when ever she visits her family cottage in central Finland, she needs some one to chauffeur for her. Her cottage is a very dear place for her, and she tries to spend as much time as she can there in the summer time when it is warm. She likes when her grandchildren come to visit the old family cottage and she can look after them. Sinnu is not very good with new gadgets and usually her son must fix and update her computer. Last Christmas she got a new tablet which she has been learning to use. She has problems with small smart phones and uses her 10-year-old Nokia phone, because it's reliable and simple.

Needs:

Sinnu constantly worries about her family cottage whenever she isn't there. She worries about storm falling a tree on the house or a mouse chewing up electric cord and causing a fire. She needs to know her little cottage is fine. She is also afraid of burglars. She would like to have guard mechanism at the cottage.

Sample user stories

Sinnu Kortelainen, 64 years

Background:

Sinnu is a retired physiotherapist and lives in Järvenpää, 50 kilometers from Hel
operation few years back and has problems walking long distances. She is unsu
hasn't drove a car in 10 years so when ever she visits her family cottage in cent
some one to chauffeur for her. Her cottage is a very dear place for her, and she
time as she can there in the summer time when it is warm. She likes when her g
visit the old family cottage and she can look after them. Sinnu is not very good with new gadgets and
usually her son must fix and update her computer. Last Christmas she got a new tablet which she has
been learning to use. She has problems with small smart phones and uses her 1
because it's reliable and simple.

Needs:

Sinnu constantly worries about her family cottage whenever she isn't there. She
falling a tree on the house or a mouse chewing up electric cord and causing a fi
her little cottage is fine. She is also afraid of burglars. She would like to have gu
cottage.

2.5 As a User I receive notification if Sensor threshold is surpassed because I don't want to manually check readings all the time.

Requirements:

US 2.3 met

Threshold criteria met on sensor

Notifications are on

(push notifications / SMS allowed on Applications system)

End condition:

System sends notification that shows up in the Applications device.

2.3 As a User I can see current sensor data from my device because I want to know the temperature of my cottage.

Requirements:

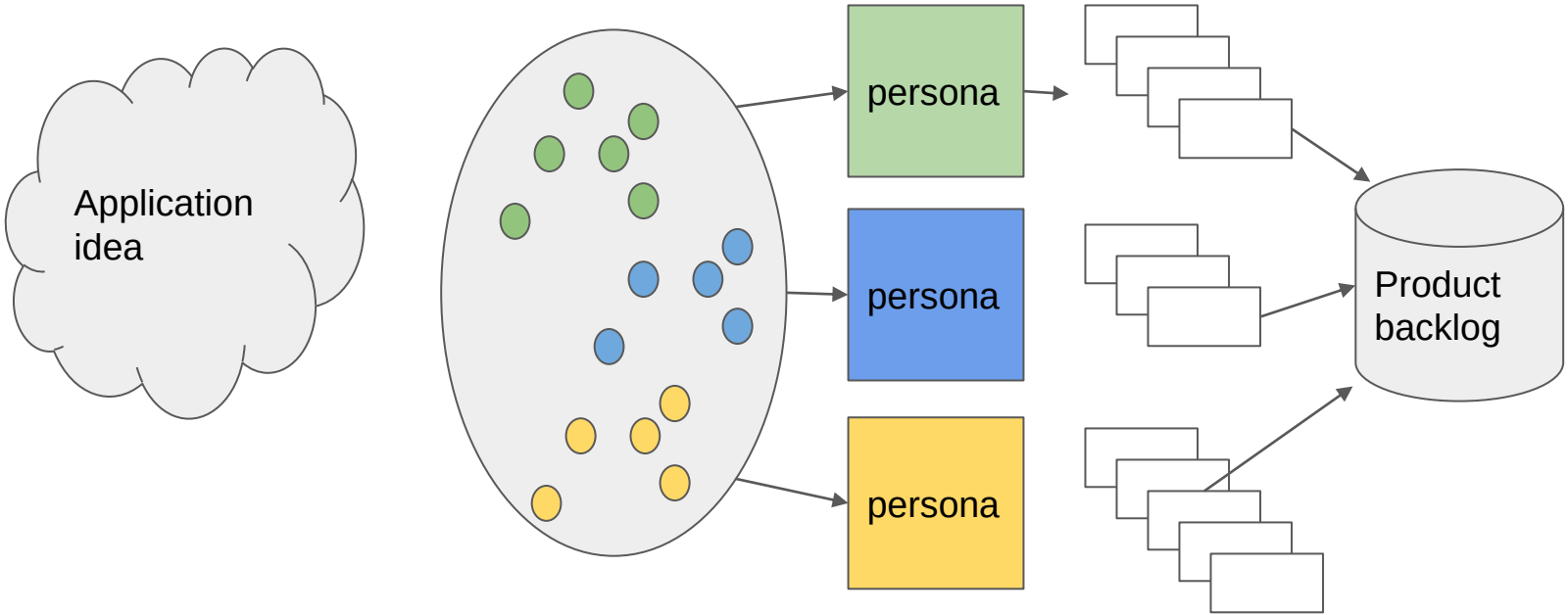
US 2.1 & 2.2 met

End condition:

Application receives and shows sensor readings.

Personas and user stories as tools for requirement capture

Idea -> identify user groups -> personas -> user stories -> product backlog



Backlog is more than a list of requirements...

Ordered / prioritised list of work to be done (work items)

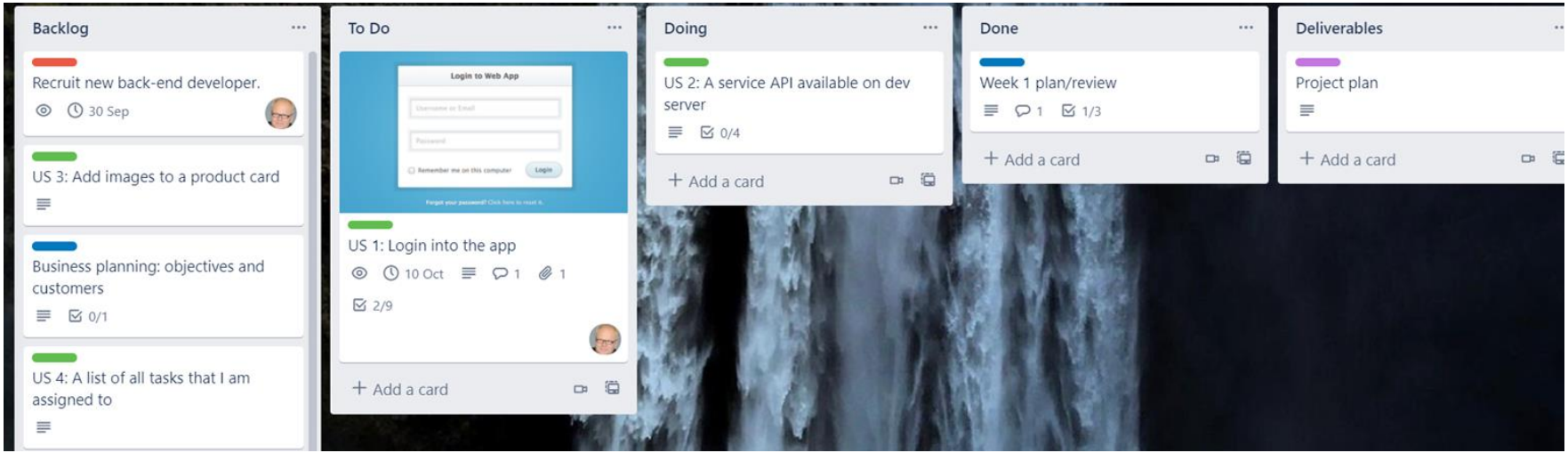
- user stories
- business planning tasks
- testing
- bug fixes, changes, improvements
- support tasks, learning

Order of the items is based on business value and on team's assessment of effort or complexity

Working on the items in the backlog

Use e.g. Trello or MS planner to manage the project work

Pull high-priority backlog items into the worklist of a sprint (sprint backlog, todo-list, …)



Backlog swimlanes

- Items in backlog are organized into lists - these lists are called “Swimlanes”
- Usual swimlanes, or lists, (might) include:
  - Backlog, To Do, Doing, Done, Deliverable, Blocked, Released, Closed
  - … more or less as needed
- When new tickets are created, they are first added to the Backlog swimlane
- Tickets selected for the sprint will be moved to the To Do
  - From here the tickets follow the flow: To Do -> Doing -> Done -> Released
  - Therefore during the sprint only tickets from the To Do would be picked for development
  - Easy to see the velocity and current situation of the project with a glance

Backlog prioritization / ordering

- Tickets can be prioritized / ordered in multiple ways
  - Business priorities / goals
  - Size of ticket
    - How many hours/days it takes to implement the ticket
    - Complexity of a ticket
  - Prioritization can be based on estimation
    - Planning poker
    - Individual estimates on the length of the task (best estimates)
- Product Owner (PO) is responsible for keeping the backlog in order
  - Scrum Master and the development team will help the PO as much as possible
- Resources:
  - https://en.wikipedia.org/wiki/Planning_poker

Sprints

- A repeatable fixed time-frame dedicated for work, usually two weeks
  - For this course one week sprints would work best
- Goal is to produce potentially shippable feature during the spring
- Items from backlog are picked for the sprint
- Sprint wraps all Scrum activities:
  - Sprints start with planning
  - Daily standups (daily scrums in literature)
    - Might have weekly standups with the whole organization
  - Completed features (the Done list) are demoed in Sprint review
  - Sprint ends with an Sprint retrospective
- Between these activities, actual development work is done

Sprints

- Sprints are commonly used in the software industry
- As items for the sprint are picked, they will not change during the sprint
- The backlog for the sprint is holy;
  - No new tickets will be added to the sprint
  - No tickets will change (fundamentally at least)
  - No tickets will be removed from the sprint (unless for a good reason)
- As the backlog does not change during the sprint, developers will have the opportunity to really focus on their work

Sprints

- Sprint lets everyone concentrate on their work
- This way no unexpected situations should happen - not foolproof
- Sprints & sprint backlog will let everyone know what the other people are working on and how much & how fast progress is done
  - Development speed or progress is called velocity
- Links:
  - https://www.atlassian.com/agile/scrum/sprints
  - https://en.wikipedia.org/wiki/Kanban_(development)
  - https://medium.com/serious-scrum/the-sprint-backlog-ecf3505224fa
  - https://www.agilealliance.org/glossary/definition-of-done/
  - https://en.wikipedia.org/wiki/Scrum_Sprint

End