CS5030

Requirements Engineering for Agile Development

Learning objectives

- On completing this lecture and associated reading, you should
  - Be able to describe how requirements may be gathered in agile development processes
  - Be aware of how agile requirements may be specified

Requirements in IID

- Iterative and incremental development methods are more dynamic
  - Better able to avoid requirements specification becoming outdated quickly
- Agile methods use incremental requirements engineering and user stories
- This is helpful for a number of business systems but potentially problematic for others

User stories

- Short, simple description of a desired feature from a user perspective
  - Role of user / persona (*Who*)
  - *What* they want
  - *Why*

- Focus on conversations with customers rather than precise specifications

User stories - process

- 3 Cs
  - Card
  - Conversation
  - Confirmation

  https://ronjeffries.com/xprog/articles/expcardconversationconfirmation/

User stories - specification

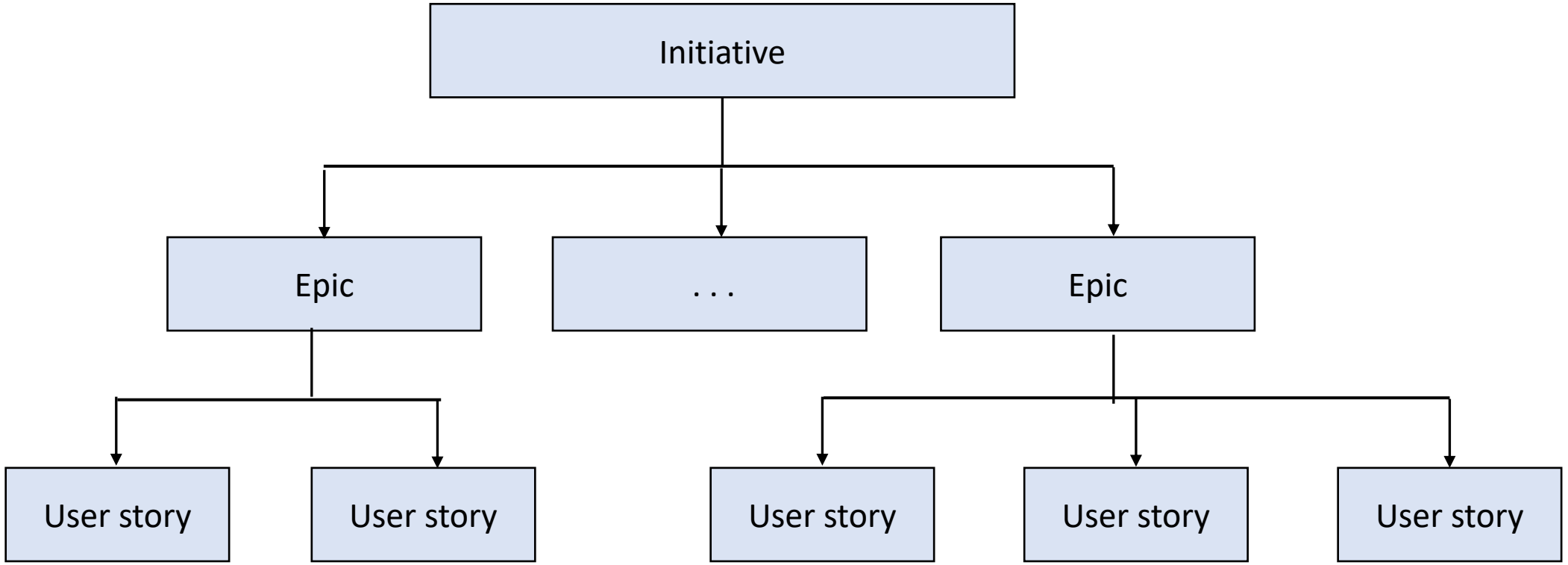
- Typically of the form:
  - As a <role>, I want to <action>, [so that <benefit>]
- Example
  - As a *customer*, I want to *use a search facility* so that *I can quickly find items of interest*
- Quality of stories can be a problem

Acceptance criteria for user stories

- As a <role>, I want to <action>, [so that <benefit>]

- Scenario <description>
  - Given <context / starting point>
  - When <action is taken>
  - Then <expected outcome>

User story hierarchy



Qualities of user stories

- INVEST
  - Independent
  - Negotiable
  - Valuable
  - Estimable
  - Small
  - Testable

Key points

- IID methods inherently support changing requirements

- Agile development typically captures requirements as user stories, with a focus on conversations with customers