

LTAT.05.003

Software Engineering

Lecture 01.3:

Homework Assignment 1

Fall 2020



UNIVERSITY OF TARTU

INSTITUTE OF COMPUTER SCIENCE

Dietmar Pfahl

email: dietmar.pfahl@ut.ee

Lab 1 Assignment

Joostes Marss AS

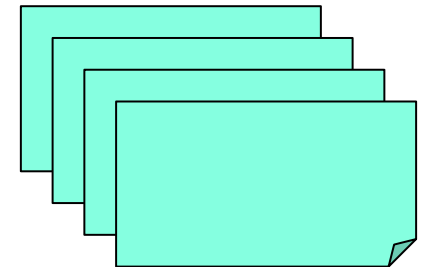
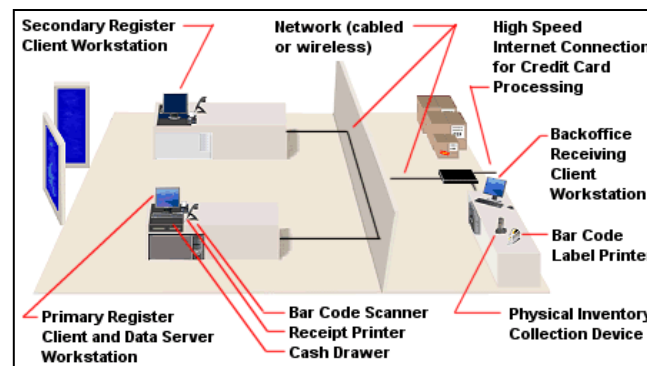


POS System

To do:

- Interviews to identify roles and requirements (user stories)
- List of 20 functional user stories
- List of 10 non-functional user stories (5 performance & 5 usability)

Customer: Home Improvement International (HII)



Lab 1 Assignment

Joostes Marss AS

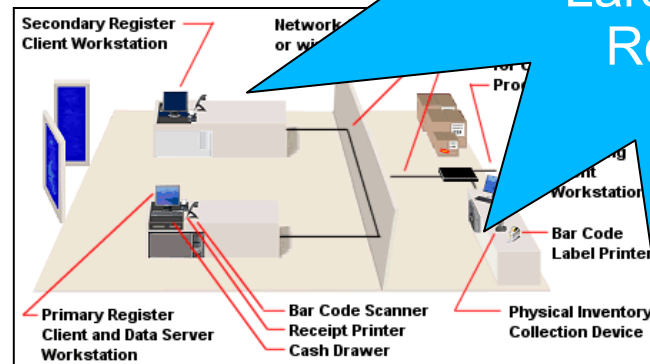


Customer: Home

POS System

To do:

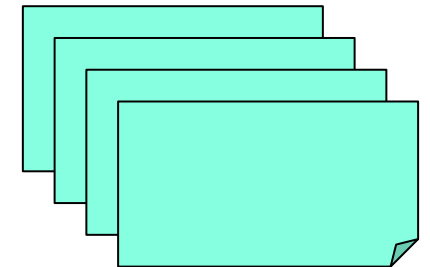
- Interviews to identify roles and requirements (user stories)
- List of 20 functional user stories
- List of 10 non-functional user stories (5 performance & 5 usability)



Have a look at the videos on the course wiki:

→ YouTube videos by Lars Bilde (Kaj Car Rental Service)

(HII)



YouTube videos by Lars Bilde (Kaj Car Rental Service)

edit page

≡ Main

≡ Message Board (Slack)

≡ Lectures

≡ Labs

≡ Exams

≡ Grading

≡ Reading

Edit sidebar

Lectures

Note: Information on how the lectures are conducted can be found [here](#).

Also, the handouts and materials are still from last year's lecture (2019). Updated sides, videos, and materials will be posted as we go. The overall structure and the topics will not change. According to the coronavirus rules for large classes in our institute, the lectures have to be conducted online.

- **Lecture 1 (04-Sep-2020) - Introduction to Software Engineering**
 - Course Organization: ([pdf-2020-1](#)) ([video-2020-1](#))
 - Overview of Software Engineering: ([pdf-2020-2](#)) ([video-2020-2](#))
 - Background / Motivation of Homework Assignment 1: ([pdf-2020-3](#))
 - Zoom Lecture Recording:
- **Lecture 2 (11-Sep-2020) - Requirements Engineering I**
 - Slides: ([pdf-2019](#))
 - Video: ([video-2019](#))
 - Lean requirements (by Atlassian)
 - INVEST in good Stories, and SMART Tasks (by Bill Wake)
 - Hints on how to write testable requirements
 - Balsamiq - A tool for developing wireframes (Mockups)
 - A series of You Tube videos by Lars Bilde explaining the steps from first interviews with stakeholders to user stories, tasks, and sprint planning (note: these videos promote the use of the commercial tool ScrumWise - any other backlog management and sprint planning tool may be used instead):
 - Initial user stories extracted from interview
 - First backlog items (user stories)
 - Finding more User Stories from existing User Stories (e.g., by splitting up)
 - Splitting User Stories into Tasks?
 - General remarks about the right level of backlog planning detail
 - Planning the first (or next) sprint
 - Time tracking with the Task Board
 - Sprint Burndown Chart

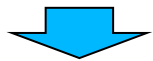
A Requirement in NL

- The software should enable locking and unlocking of apartment doors.

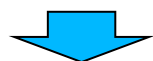
Good / Bad requirement?

User Stories

As a tenant | I can lock the doors | to protect my apartment.



role
(benefactor)



capability
(action/means)



business-value
(motivation/rationale/end)

who - what - why

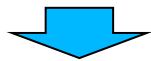
- Similar to NL requirements, but focus on the user benefits, instead on system characteristics (alone).
- Unfortunately, third element (business-value) is often omitted
- Preferred technique in **agile methods**.

User Story

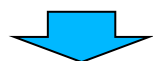
... to make sure my child (or my pet) cannot get out unexpectedly

... to make sure I don't forget my keys when I leave again

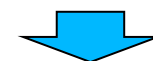
As a tenant | I can lock the doors | to protect my apartment.



role
(benefactor)



capability
(action/means)



business-value
(motivation/rationale/end)

who - what - why

- Similar to NL requirements, but focus on the user benefits, instead on system characteristics (alone).
- Unfortunately, third element (business-value) is often omitted
- Preferred technique in **agile methods**.

'Normal' User Story

<Actor/Role> As a logged-out user
...
<Action> I want to be able to
sign in to my app
...
<Value> so I can access my
personal profile

A good User Story is:

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

INVEST

'Normal' User Story

<Actor/Role> As a logged-out user
...
<Action> I want to be able to
sign in to my app
...
<Value> so I can access my
personal profile

Acceptance test:

Given I'm a logged-out
system user
And I'm on the sign-In
page

When I fill in the fields
"Username" and
"Password" with my
credentials
And I click the sign-In
button

Then the system signs
me in

'Non-Functional' User Story

<Actor/Role> As an end user
...
<Action> I want error messages
be shown always at the
same place of the
screen
...
<Value> so I can easily detect them

A good User Story is:

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

INVEST

'Device' or 'System' User Story

<Actor/System> As a web crawler
...
<Action> I need a URL
dictionary without
duplicates or dead
links
...
<Value> so that the crawling
process is faster

A good User Story is:

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

INVEST

'Technical' User Story

<Actor/Role>

N/A

...

<Action>

Implement Smart
Distance Algorithm
for multi-paragraph
web-pages

...

<Value>

so that relevant and random
connections between search entities
could be distinguished

A good User Story is:

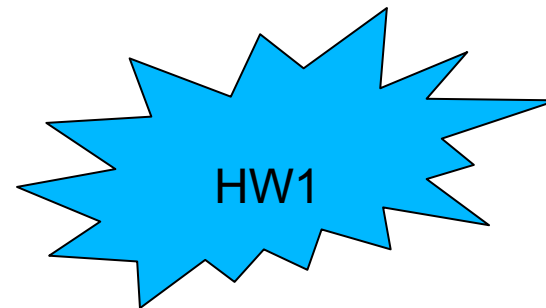
- Independent
- Negotiable
- Valuable
- Estimable
- Small
- Testable

INVEST

What is a good (or bad) User Story?

At the beginning of next lecture, I will

- *explain INVEST and discuss quality characteristics of User Stories and*
- *present/discuss examples of good/bad User Stories*



- *To prepare, look at the following examples ...*

User Story Example – Wrong or Right?

I want to see an error when I cannot see recommendations after I updated an article.

User Story Example – Wrong or Right?

As a User, I am able to click a particular location from the map and thereby perform a search of landmarks associated with that latitude longitude combination.

User Story Example – Wrong or Right?

As a care professional I want to save a reimbursement—add save button on top right (never grayed out).

User Story Example – Wrong or Right?

As a User, I am able to edit the content that I added to a person's profile page.

User Story Example – Wrong or Right?

As a care professional I want to see my route list for next/future days, so that I can prepare myself (for example I can see at what time I should start traveling).

User Story Example – Wrong or Right?

As an Administrator, I am able to add a new person to the database.

As a Visitor, I am able to view a person's profile