Generating Software from Specifications

Prof. Dr. Uwe Kastens

WS 2013 / 14

Lecture Generating Software from Specifications WS 2013/14 / Slide 001

Objectives:
Start

In the lecture:
Welcome

Objectives

The participants will learn

- to **use generators** for specific software tasks,

- to **design domain specific languages (DSLs)**,

- to **implement domain specific languages (DSLs)**,

- to **use the Eli system** to create generators.

The participants will **define their own application project and implement it.**

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Objectives:

Be aware of the objectives

In the lecture:

Items are explained

Questions:

Do these objectives fit to yours?

Contents

Phase 1:   Lectures, practical tutorials, and individual work are tightly interleaved

Phase 2:   Participants work in groups on their projects.
During lecture hours advice is given, problems are discussed,
and experience are exchanged.

Lecture Generating Software from Specifications WS 2013/14 / Slide 003

Objectives:

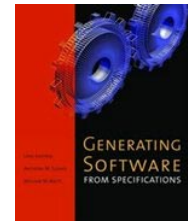Understand the lecture outline

In the lecture:

It will be explained

- Order of the topics,
- interleaving with practical work,
- project work.

References

- U. Kastens: **Generating Software from Specifications**
  Elektronic Script, SS 2012
  http://ag-kastens.upb.de/lehre/material/gss

- Uwe Kastens, Anthony M. Sloane, William M. Waite:
  Generating Software from Specifications,
  Jones and Bartlett Publishers, 2007

- **Eli Online Documentation and Download**
  http://eli-project.sourceforge.net (download)

- **DEViL - Development Environment for Visual Languages**
  http://devil.cs.upb.de

Papers on DSL and Reuse:

- Mernik, Heering, Sloane: When and How to Develop Domain-Specific Languages,
  ACM Computing Surveys, Vol. 37, No. 4, December 2005, pp. 316-344

- Ch. W. Kruger: Software Reuse, ACM Computing Surveys, 24(2), 1992

- R. Prieto-Diaz: Status Report: Software reusability, IEEE Software, 10(3), 1993

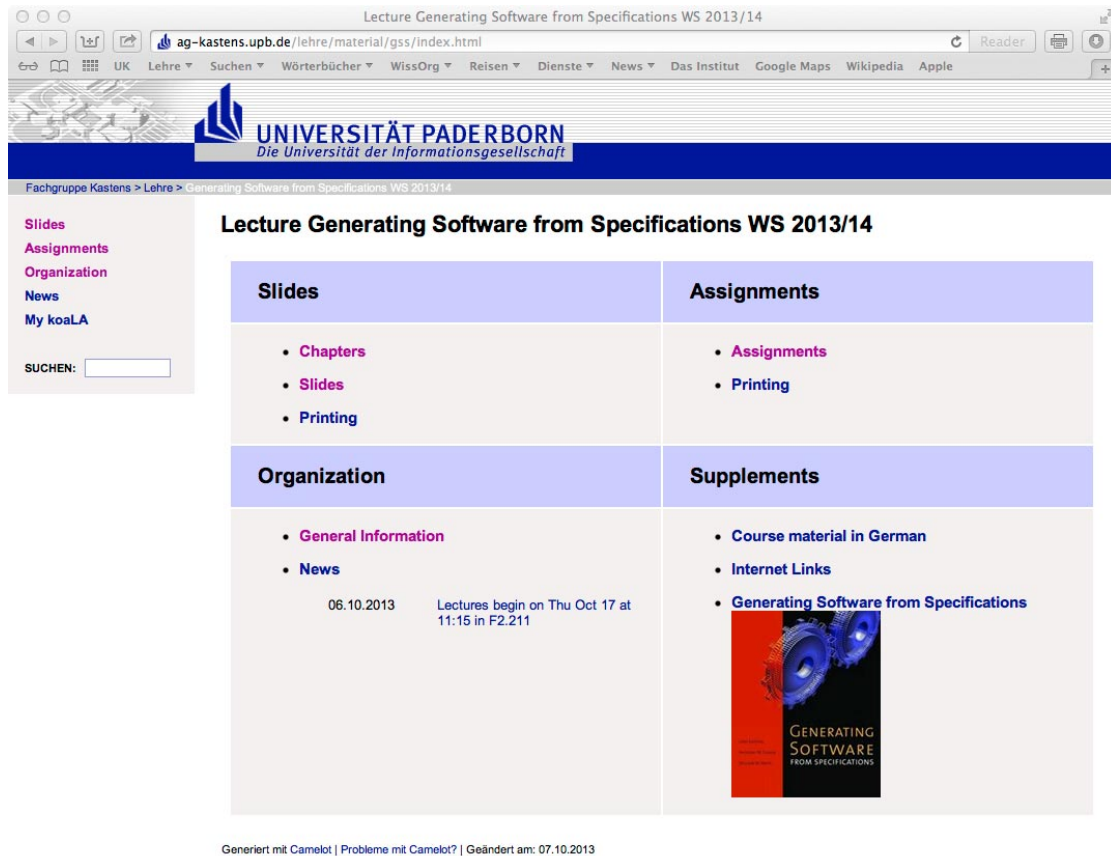**Lecture Generating Software from Specifications WS 2013/14 / Slide 004**

Objectives:

Know where to access which information

In the lecture:
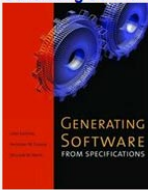
The charactristics of the references will be explained.

Home Page of GSS Lecture

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Objectives:
Find the GSS home page

In the lecture:
It will be explained how to use the lecture material.

Organization

Personen

Sprechstunde Uwe Kastens:

- Mi 16:00 – 17:00 Uhr
- Die 11:00 – 12:00 Uhr

Übungsbetreuer:

- Peter Pfahler

Termine

Vorlesung

- Di, 9:15 – 10:45 Uhr F0.530

Beginn: Di, 15. Oktober 2013 um 9:15 Uhr

Übungen

Die Übungen werden im 14-tägigen Abstand 2-stündig angeboten. Das Vorlesungsverzeichnis sieht 4 Übungsgruppen vor:

- **G1**: Dienstag 11:00 Uhr, *ungerade Wochen*, Beginn 22.10.2013, erst in F0.530, dann im Rechner-Pool F1 (hinterer Teil)
- **G2**: Dienstag 11:00 Uhr, *gerade Wochen*, Beginn 15.10.2013, erst in F0.530, dann im Rechner-Pool F1 (hinterer Teil)
- **G3**: Donnerstag 09:15 Uhr, *ungerade Wochen*, Beginn 24.10.2013, erst in F2.211, dann im Rechner-Pool F1 (hinterer Teil)
- **G4**: Freitag 09:15 Uhr, *gerade Wochen*, Beginn 18.10.2013, erst in F2.211, dann im Rechner-Pool F1 (hinterer Teil)

Prüfungstermine

Mündliche Prüfungen von ca 30 min Dauer im Rahmen von Modulprüfungen; für Studierende anderer Studiengänge als Informatik auch Einzelprüfungen.
Es werden zwei Prüfungszeiträume angeboten:

1. 12.-14. Februar 2014
2. 01.-03. April 2014

Zu Anmeldung in PAUL und Terminvergabe siehe http://www.cs.uni-paderborn.de/studierende/pruefungswesen/pruefungsanmeldung.html

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Objectives:

Find the GSS home page

In the lecture:

The organization of the lecture will be explained.