9. Individual Projects
Steps for the Development of a Generator

1. Task Definition
   a. Task description
   b. Examples for input (DSL)
   c. Examples for generated output
   d. Description of analysis and transformation tasks
2. Structuring Phase
   a. Develop concrete syntax
   b. Specify notation of tokens
   c. Develop abstract syntax
   d. Comprehensive tests
3. Semantic Analysis
   a. Characterize erroneous inputs by test cases
   b. Specify binding of names
   c. Specify computation and checks of properties
   d. Comprehensive tests
4. Transformation
   a. Develop output patterns
   b. Develop computations to create output
   c. Comprehensive tests
5. Documentation and Presentation of the Generator

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Objectives:

Plan the development of your generator

In the lecture:

Refer to corresponding sections of the lecture, and to the running example.

Individual Projects in Current Lecture

	Topic	Student team
A		
B		
C		
D		
E		
F		
G		
H		

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Objectives:

Overview over Projects

In the lecture:

The topics are explained by the authors

10. Visual Languages Developed using DEViL

Two conference presentations are available in the lecture material:

Domain-Specific Visual Languages: Design and Implemenation

Uwe Kastens, July 2007 CoRTA

Outline:

1. **What are visual languages?**
2. **Domain-specific visual languages**
3. **Ingredients for Language design**
4. **A Development Environment for Visual Languages**
5. **Pattern-Based Specifications in DEViL**

Specifying Generic Depictions of Language Constructs for 3D Visual Languages

Jan Wolter, September 2013, VL / HCC

Outline:

1. **3D Visual Languages**
2. **DEViL3D - Generator Framework for 3D Visual Languages**
3. **Generic Depictions**

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Objectives:

An initial understanding of visual languages

In the lecture:

Visual languages, their design and implementation is explained. The slides for the presentations can be found in the lecture material: the CoRTA presentation and the VL / HCC presentation.