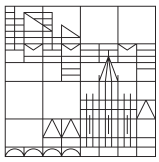
Assignment 1

Issue Date: October 22, 2018
Due Date: ∞
$\sum$ 0 Points

Compiler Construction
INF-21440
WS 2018/2019

Universität Konstanz



University of Konstanz
Database and Information Systems
Prof. Dr. Michael Grossniklaus

Introduction

i General Notes

Please observe the following points in order to ensure full participation in the lecture and to get full credit for the exercises.

- Register for this course in **ZEuS** (to receive course-related e-mail), in **Ilias** (to submit exercises), and in **StudIS** (to be admitted to the exam).
- We do not want to see excerpts from books, papers, e-mail, or the web in your solutions. Reasonable use of external code libraries is permitted, e.g., libraries to support I/O, math, etc.
- For written assignments, only **PDF documents** are accepted. Other formats, such as plain text, hand-written, and Word will not be graded.
- For programming assignments, submit a **zipped archive** that only contains the **relevant** source code files.

Exercise 1: Compiler or Interpreter (0 Points)

For the following software systems, argue whether you would classify them as a compiler or an interpreter.

a) a program that renders and displays Scalable Vector Graphics (SVG)
b) the LaTeXdocument preparation system
c) the SQL-processor of a relational database management system

Exercise 2: Design Trade-offs (0 Points)

Compilers are used in many different circumstances. What differences might you expect in compilers designed for the following applications?

a) a just-in-time compiler used to translate user interface code downloaded over a network
b) a compiler that targets the embedded processor used in a cellular telephone
c) a compiler used in an introductory programming course at a high-school
d) a compiler used to build wind-tunnel simulations that run on a massively parallel processor (where all processors are identical)
e) a compiler that targets numerically intensive programs to a large number of diverse machines