Course title: Compilers and virtual machines

Course code: 63722

ECTS: 6

Professor: Boštjan Slivnik

Undergraduate program

Prerequisite knowledge:

Knowledge gained at the courses with the outcome which can be compared to courses at FRI

- Programming 2 (Java)
- Computer Architecture & Computer Organization
- Algorithms and Data Structures 1

Short course decription:

The course covers the techniques needed to implement a compiler for an imperative programming language, e.g., C. It consists of the following: Introduction, Lexical Analysis, Parsing, Abstract Syntax, Semantic Analysis, Activation Records, Translation to Intermediate Code, Basic Blocks and Traces.

During the semester, each student is expected to write their own compiler that translates a small imperative language into an intermediate code of a small virtual machine. To make the implementation easier, the backbone of the compiler and its phases is provided.