COURSE DETAIL

IMPLEMENTATION OF PROGRAMMING LANGUAGES
Country Denmark
Host Institution University of Copenhagen
Program(s) University of Copenhagen
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Computer Science
UCEAP Course Number 130
UCEAP Course Suffix
UCEAP Official Title IMPLEMENTATION OF PROGRAMMING LANGUAGES
UCEAP Transcript Title IMPLEMENT PROG LANG
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

This course provides insight into how programs written in high-level language are implemented on a computer. It covers various elements of interpretation and translation of programming languages: lexical analysis, syntax analysis, type checking, interpretation, code generation, register allocation, and storage management. It reviews the basic methods for implementing these elements, including the use and operation of semi-automatic tools. In connection with lexical analysis and syntax analysis, the course demonstrates how descriptions that are convenient for people (respectively, regular expressions and context-free grammar) are transformed into automata that are convenient for machines. These transformations are the foundation for tools that can automatically produce lexical analyzers and syntax analyzers based on descriptions. In connection with the generation of intermediate and machine code, the course reviews how machine code can be generated on the basis of the syntactic structure of a program and presents different methods for optimizing code.

Language(s) of Instruction
Danish

Host Institution Course Number
NDAB16006U

Host Institution Course Title
IMPLEMENTERING AF PROGRAMMERINGSSPROG

Host Institution Course Details
https://kurser.ku.dk/course/ndab16006u/2022-2023

Host Institution Campus

Host Institution Faculty
Science

Host Institution Degree
Bachelor

Host Institution Department
Computer Science

Course Last Reviewed
2022-2023

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