



**FACULTY
OF INFORMATION
TECHNOLOGY
CTU IN PRAGUE**

Assignment of master's thesis

Title: Tiny86 Debugger
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Study program: Informatics
Branch / specialization: System Programming
Department: Department of Theoretical Computer Science
Validity: until the end of summer semester 2023/2024

Instructions

Familiarize yourself with the architecture and instruction set of the Tiny86 virtual machine used in the NI-GEN course. Investigate native debuggers on the Windows and UNIX platforms and their principles. Improve the debugging capabilities of Tiny86 so that they are comparable to modern native debuggers. Design a debugging interface and implement a debugger as a reference client. The debugger must support native and source level debugging, but be extensible for intermediate level debugging (such as IR).