Assignment of master's thesis

Title:	P4 Language Server
Student:	Bc. Ondřej Kvapil
Supervisor:	Ing. Viktor Puš, Ph.D., MBA
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 P4 language, program parsing with error recovery, and the domain of language servers.

Make a language server requirement analysis, including some unique aspects of P4: Packet header parsing constructs, support for various target architectures, and frequent use of compiler-specific or target-specific pragmas.

Design a P4 language server that provides autocompletion, go-to-definition and other common features, and can be integrated in VSCode.

Implement the language server and show its integration to VSCode.