FACULTY
OF INFORMATION
TECHNOLOGY
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Assignment of master's thesis

Title:	A system for signals manipulation on the automotive ethernet
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Study program:	Informatics
Branch / specialization:	Software Engineering
Department:	Department of Software Engineering
Validity:	until the end of summer semester 2023/2024

Instructions

To test automotive control units, it is mandatory to simulate all the necessary values/ states of the input signals that are sent in Ethernet packets (frames). In some cases, it is easier to manipulate with data and simulate all the states directly in the packet than to use the simulation of other control units.

1) Perform research on signals and SAE levels in automotive ethernet
2) Perform research on possibilities of manipulation with data in ethernet packet and data security
3) Collect RQ for the test system
4) Design SW architecture
5) Design and implement SW for signal manipulation
6) Design a test strategy for the developed SW
7) Perform the test of implemented SW
8) Implementation should be done on Linux OS