Linnéuniversitetet
Linnaeus University

Degree Project Proposal

Department of Computer Science

Thesis Topic	**Defining Testing Processes for ASPLe Methodology**
Degree level	Bachelor/Master
Company	None
Description	Autonomic Software Product Lines Engineering (ASPLe) is a novel methodology that provides process support to design and develop product lines of self-adaptive systems with systematic reuse. It is comprised of three main processes: 1) ASPL Domain Engineering, 2) Specialization, and 3) Integration. Each of these processes is further composed of four subprocesses namely 1) requirements engineering, 2) design, 3) implementation, and 4) testing subprocesses. First two of these four subprocesses have been already defined, while the last two processes need to be worked on. This project focuses on testing subprocesses and requires work to define, apply, and evaluate testing processes in association with the other ASPLe processes.
Tasks	The degree project involves following major tasks: • Extending the ASPLe methodology by defining roles, activities, and work products for testing subprocesses • Identify and compare testing tools, frameworks, and techniques, which are suitable for tests in dynamic conditions and environments with runtime changes • Demonstrate and evaluate the defined subprocesses through their application in practice
Requirements	• 4DV610, Adaptive Software Systems • Good knowledge about software testing tools and techniques.
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