

Project outside course scope

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Introduction Language Notes

An imperative language with static verification

Advisor: Ken Friis Larsen

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Abstract

Contents

IFC is a small imperative programming language with a build in assertion language enabling the possibility for statically verifying programs by the use of external provers. In this section we will present the syntax and semantics of the imperative language and the assertion language.

$$\begin{aligned}\langle statement \rangle & ::= \langle ident \rangle '=' \langle expr \rangle \\ & \quad | \textbf{for} \langle ident \rangle '=' \langle expr \rangle \textbf{to} \langle expr \rangle \textbf{do} \langle statement \rangle \\ & \quad | \{ \langle stat-list \rangle \} \\ & \quad | \langle empty \rangle\end{aligned}$$
$$\langle stat-list \rangle ::= \langle statement \rangle ';' \langle stat-list \rangle \mid \langle statement \rangle$$

Abstract: Udpensl delen om forventningen til projektet. Hvad er den korte version om alt hvad vi har lavet (forklar det til en hypotetisk Fritz) Background - husk weakest precondition vs wlp vs strongest postcondition Designvalg - fx method 1 vs method 2 Spekulationer om udvidelse til PER - er det nemt at udvide det vi har skrevet Concurrency? Et nondeterministisk valg mellem s1 og s2? At tænke over hvor nemt det er at udvide er en måde at lave en evaluering af vores arbejde Skal vi skrive noget contribution? Så skal vi have nogle overvejelser at basere det på