Lecture

Topics:

- Survey of approaches to designing software for real-time systems

Readings

You may read the small note *Design of Reactive Programs* [Design] (on DTU Learn) which presents a (rather simple and naive) approach to designing reactive and real-time systems.

A more comprehensive discussion of design approaches for real-time systems may be found in chapter 6 of the book:

Philips A. Laplante and Seppo J. Ovaska:
Real-Time Systems Design and Analysis: Tools for the Practitioner (4th ed.)
John Wiley & Sons, 2011. ISBN 978–0470768648.

[You may find a shortened version of this chapter on DTU Learn. The full chapter (and book!) should be freely available through `findit.dtu.dk`.]

A very thorough, model-based design method is presented in the the book:

Hassan Gooma:
Real-Time Software Design for Embeddeed Systems
Cambridge University Press, 2016. ISBN 978-1-107-04109-7.

Focusses on using SysML and UML models for designing real-time systems with emphasis on identifying the concurrent components of the system. Provides a number of worked-through case studies. This book is not available online.

Exercises

There are no exercises this week. You are expected to work on the second assignment.

During the lab session, HHL will be available for questions regarding the assignments.