Concurrent and Distributed Systems Exercise Sheet

Mike Cachopo

July 11, 2020

Questions

Each supervision is split into three sections:

Bookwork
> This section focuses on the key concepts you need to understand and remember to do well in the course. It's not worth including these definitions in your answers, but they should be on the tip of your tongue if you're asked about them in a supervision! If there is anything here you don't understand please send me an email, so that we can address it in advance and you can take the most out of the supervision.

Exercises
> This is where I expect you to spend most of your time and effort. If you get stuck on a question, move onto the others and come back to it later. If you're still stuck, either send me an email or leave a note to discuss during the supervision.

Extensions
> If you have some spare time or interest after finishing the core exercises, have a look at the extensions. They cover topics that are just beyond the scope of the course, so attempting these questions is optional. However, spending some time here will give you a deeper understanding of the course, which will be helpful later.

Submitting work

Submit your answers to the questions as a single PDF file TODO: email address?. I am rarely in Cambridge so I can't accept paper submissions. I strongly suggest using LaTeX to typeset your answers — you'll need it next year for your dissertation, and the sooner you start practicing the better.

The sooner you submit work the more time I have to mark it and give detailed feedback. Aim to submit your work 48 hours before the corresponding supervision. If for some reason you can't do that, please let me know not to wait for it. I am happy to mark work submitted after a supervision in exceptional circumstances, but keep in mind that you'll be missing out on most of the benefit of the supervision.

General advice

In Cambridge, it is easy to feel overwhelmed by all the work to be done, and like your supervisors expect your life to revolve around work. They don't, and it shouldn't. Take care of your physical and mental health first, and then your work.

If you're struggling, let your relevant supervisors, DoS and Tutor know so that they can help. TODO: Maybe include a link to a student helpline?

Lastly, enjoy learning through these questions!

Contents

Supervision 1

Locks and stuff

Supervision 2

Hopefully a bit of STMS

Supervision 3

Clocks I think?

Supervision 4

Some more distributed stuff