DM519 - Concurrent Programming (F2016) Evaluation and Action Plan

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Course and Evaluation Summary

This year, DM519 (Concurrent Programming) underwent a radical change in its content and the way it is taught. We shifted from the previous format – which revolved around a formal model and an abstract approach to concurrency – to a new one where the activity of programming is the main focus. To this end, lectures were oriented towards practice from the very start, and most of the course content was tackled during live coding sessions. All concepts, from nondeterminism to deadlocks, were explained hand-in-hand with code examples. To support this intense coding activity during the lectures, students were asked to prepare on assigned book chapters before coming to class, and special hours were assigned to book reading in the exercise classes with the help of the TA (a sort of lightweight flipped classroom approach). The motivation behind the new format is twofold; specifically, we wished for:

- a good constructive alignment with the concrete activity of programming concurrent software;

- strengthening the programming and program reasoning skills of students right after the 1st semester in the 1st year.

Out of 88 registered students, 36 completed the student evaluation of the course. Almost half of them (42%) found this course to be of average difficulty (8% even easier than average), while the other half (50%) found it to be more difficult than usual. This is to be expected, since following the course depends heavily on the programming skills acquired before. In general, most of the feedback is positive (comments for improvements are discussed in the next section). Students generally agree that there is a good alignment with the course description. All students are happy with the teacher of the course (with a "strong" satisfaction by 83% of them). There is also a general satisfaction with the TA (61% satisfied, 39% with no opinion). The free-form comments left at the end of the evaluation give a sense of general satisfaction and confirm that the format of the course has generally been well received.

Action Plan

Reading Assignments. Three students ask for reading assignments to be announced earlier. (In fact, this is the only comment for improvement shared by more than one student.) In the future, a reading plan will be given at the beginning of the course, such that students will know the roadmap more in advance. Part of this action was already implemented midterm, after the teacher got feedback in a discussion session.

One student did not like reading during the first hour of exercise classes. This is, however, not compulsory, as noted in the lectures. This will be written in the course webpage in the future, to improve communication. There has been much positive feedback about this from other students during the lecture.

Exercises. One student says that it would be nice to have hints for the exercises. These will be integrated in the next course.

Textbook. One student comments that the textbook is not the best. I believe that it is still the best choice for the current format of the course, due to lack of alternatives. If new alternatives come up, they will be considered.

Slides. One student comments that the lectures are great but would benefit from slides. Alas, using slides in all lectures would diminish the time spent on live coding, which is the cornerstone of the course format. However, I could surely add some slides on the core concepts of the course. Note that much of this content risks to overlap with the explanations in the book, which is a required read for lectures. Slides should not be seen as a replacement for the textbook in this course format, so I will be conservative in this action.