

Report Pedagogisk Utveckling Projekt 2019: Programmeringprep 2.0

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Project Objectives

A large share of students in our programs in Datateknik start their studies without programming experience. In 2018, we developed a special introductory course that was successfully given before the traditional introductory week. The current project aimed at extending the introductory programming course both for a wider audience and also temporally.

Basic Idea of the *Programmeringsprep*

The idea of the *Programmeringsprep* was to give a short and superficial introduction in programming to students before they start with their studies. We wanted to show that programming is fun and nothing to be afraid of. Students shall start with confidence into their first programming course.

Advancements 2019

The *Programmeringsprep* 2019 was extended by 1 day and run on August 21-23. The first two days were similar to last year; we tried to start a little bit slower. In the third day we extended the topic with introduction to LaTeX and finishing programming examples that we could not finish on the day before. Despite of opening for all HIng programs, Mate and CivIng Industrial Economy, There were 34 registered students with a large share actually attending. However, there was some chaos with registrations; more than 1/3 of the students registered by email only a few days before the start. Eventually, students from the following programs registered: 14 HIng Data, 6 CivIng Data, 4 CivIng IndEk, 4 HIng Bygg, 1 HIng Ind. Design, 1 HIng Maskin and 2 Matematikerprogrammet (1 unknown). Among those were 9 female students, unfortunately only 1 from a Data program. We made it very clear in the announcement that this course is really for students without programming experience. Also, the technical and infrastructural problems that we faced in 2018 were as much fixed as possible. We had help of three students: Kinfaï Chin and Karl Eriksson (CivIng Data), Sakaryia Mustaf Cali (HIng Data). Again, in personal discussions, we received positive feedback. However, we had expected more registrations.

Evaluation

In 2019, we did not do an evaluation directly after the *Programmeringsprep*, but sent a questionnaire to all participants at the end of Läsperiod 2. That is the point in time in which students in HIng Data and CivIng Data have done their first programming course.

Only 9 students answered the questionnaire. 1 student out of those 9 dropped out of the program. Answers came from students from almost all participating programs, 6 from data. The majority of the students rated themselves as unexperienced in programming before the course. The questionnaire showed that students rated the course as mostly difficult. Also the answer to the question

concerning how useful they found the knowledge now after the first programming courses (in Data) was not particular positive. Unfortunately, we did not collect immediate feedback. In 2018, we just asked for immediate feedback which was very positive.

As a consequence, we need to discuss/work on the following issues

- Does it really make sense to offer this course also for other programs, not just data? We would need to look closer into, when programming knowledge would be actually needed.
- The placement of the course before the introduction week is confirmed to be problematic. We should not do that again, but what is the alternative?
- Do we need to look over the difficulty level of the *Programmeringsprep*? Was the idea of bringing in some features of excel and introducing LaTeX a good choice? Programming has two important ingredients: Formulating an algorithm, translating it into the syntax of a programming language. Students are overwhelmed with syntax in the *Programmeringsprep*. How can we lift algorithmic thinking in a few days with simpler programming, but stay attractive at the same time?
- How do the students, who took the *Programmeringsprep* in 2018, see the value now? Is the *Programmeringsprep* a truly sustainable activity?

A new student group, called Syntax mostly initiated by CivIng Data students, contacted us as they want to take over more responsibility in the programming prep activity. We will discuss the future editions with the students.

Financial Report

Franziska Salary	34 867 SEK
Lars Salary	44 007 SEK
Students Compensation	11 771 SEK
OH	78 719 SEK
Sum	178 364 SEK
Funds received	178 691 SEK

Summary:

Despite of immediate positive feedback from students personally, the second edition could not lift off. The position one week before the introductory week turned is still problematic – even more as the *Programmeringsprep* was 3 days this year. Extension had not the expected positive effect. Long-term value of the *Programmeringsprep* needs to be discussed.