

# Progressor – The Programming Professor

Degree programme: BSc in Informatik | Specialisation: Web and Business Applications  
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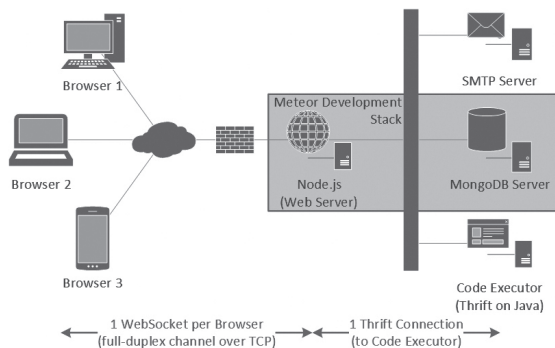
With Progressor students can practice programming skills in a variety of programming languages. It is designed to accompany university courses by enabling users to practice individually and gain experience by solving exercises. Progressor also allows professors to define examinations to be taken by their students. The BUAS is committed to maintain the project and to keep it available as an open-source software to other educational institutions.

Programming skills are hard to acquire through theoretical lessons only. And they can only partially be examined by means of simple multiple choice questions. Whatever programming language considered, experience can best be gained solving numerous short problems. Getting used to control flow statements such as choices and loops is vital. It is also inevitable to familiarise oneself to advanced concepts such as recursion in programming. Short problems can also be used to introduce future software programmers to different data types such as integer, decimal, and floating-point numbers; characters and strings; as well as Boolean values. Containers such as fixed-length arrays, ordered lists, unique sets, and key-value maps (also known as tables or dictionaries) are covered as well.

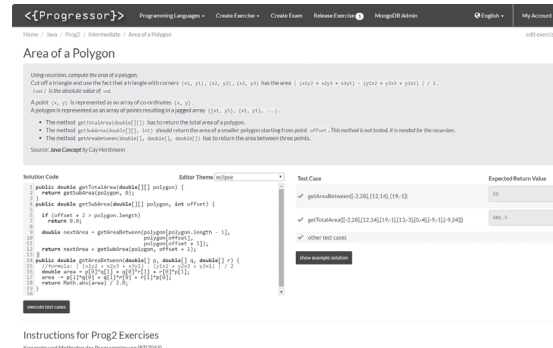
Writing and evaluating source code on paper isn't fun, neither for students nor professors. Progressor competes with the functionality of existing platforms and adds innovative new features. It is a multi-lingual platform where both students and professors can cre-

ate, share, and solve exercises in a variety of supported programming languages. It further allows the creation of secure examinations hosted in the familiar environment that can be solved by other users. The activities and the progress of the individual examinees as well as their results are monitored by the creator in real-time. Once an examination ends, the creator can export the results, evaluate and grade them by the rules applicable, and finally archive them in a persistent manner.

Progressor is fully functional as of today. The Bern University of Applied Sciences is committed to further enhance and extend the platform with already granted funds to do so. The maintainers group's vision includes not just to host a productive version of the platform in-house to be used by any department of the university. They are also committed to publish the platform's source code so any other interested educational institution can evaluate the platform for their own use and even adapt it to their specific requirements.



System architecture



Example programming exercise



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