Some Statistical Aspects of Programming Contests Managed by ProgCont

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Abstract

During the past few years, we have developed the application named ProgCont at the University of Debrecen. Initially, it was intended to manage programming contests, but today, it can also be used to set up test exercises or even organize assessments for courses launched by our faculty that require programming skills. Since the first programming contest managed by ProgCont, more than 150 problems in nearly two dozens of contests have been made accessible and testable. More than 10000 solutions have been submitted to these problems, which were evaluated by the automatic testing system. Based on the collected data, we would like to offer help not only for automatic submission evaluation but also to select problems for users. In other words, our aim is that during practicing and preparation for the next contest, the application can make suggestions to users for further problems that are suitable for their knowledge and abilities. In our paper, we briefly introduce the ProgCont application and the problem sets evaluated with it as well as how our system supports the development of the users' programming skills.

Keywords: Smart campus, ProgCont, automatic evaluation