Abstract

Being able to correct one's mistakes immediately after making them when learning a new skill or programming language is important as there is otherwise a potential for these errors to solidify into habits, making them more difficult to get rid of and potentially distorting the knowledge acquisition process. To help counteract these processes, this paper introduces an add-on for an already existing Java based RISC-V assembly simulator that was developed in light of this project. The add-on includes error detection mechanisms, highlighting of those errors and showing tool-tips on how to get rid of those errors without spoiling the solution. The add-on was tested based on errors commonly found in student submissions. The results of the testing both showed great promise and areas of improvement, especially in the areas of caller-save register and control flow handling.