

Presentation Abstract

Three Improvements for Code Completion Problem in Java Programming Learning Assistant System

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To enhance Java programming educations, we have developed a *Java Programming Learning Assistant System (JPLAS)*, that covers different learning stages by providing various programming assignments, including the *code completion problem*. In this problem, a source code with missing elements is given to a student, who is requested to complete the source code. The answer code is marked by the exact string matching including tabs and spaces between each whole statement and the corresponding one of the original code. Unfortunately, in our previous evaluations of the code completion problem, any student could not complete some of the assigned problems correctly. In this paper, we present three improvements for the code completion problem to improve the solving performance. First, tabs and spaces in a statement are excluded at marking the answer code. Second, tabs can be inserted at the input form on the browser. Third, the answer code can be downloaded so that it can be edited by an editor and be compiled to know the syntax errors. For evaluations, we generated six code completion problems and asked ten students to solve them, where all the problems were correctly solved by any student.

This is the abstract of an unrefereed presentation, and it should not preclude subsequent publication.

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