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Creation of an Integrated Development Environment to Assist and Optimize the Learning the Languages C and C++

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Abstract : In the context of the teaching of computer programming, the choice of tool to use is very important in the initiation and continuity of learning a programming language. The literature tools do not always provide usability and pedagogical dynamism clearly and accurately for effective learning. This hypothesis implies fall in productivity and difficulty of learning a particular programming language by students. The integrated development environments (IDEs) Dev-C ++ and Code :: Blocks are widely used in introductory courses for undergraduate courses in Computer Science for learning C and C ++ languages. However, after several years of discontinuity maintaining the source code of Dev-C ++ tool, the continued use of the same in the teaching and learning process of the students of these institutions has led to difficulties, mainly due to the lack of update by the official developers, which resulted in a sequence of problems in using it on educational settings. Much of the users, dissatisfied with the IDE Dev-C ++, migrated to Code :: Blocks platform targeting the more dynamic range in the learning process of the C and C ++ languages. Nevertheless, there is still the need to create a tool that can provide the resources of most IDE's software development literature, however, more interactive, simple, accurate and efficient. This motivation led to the creation of Falcon C ++ tool, IDE that brings with features that turn it into an educational platform, which focuses primarily on increasing student learning index in the early disciplines of programming and algorithms that use the languages C and C ++ . As a working methodology, a field research to prove the truth of the proposed tool was used. The test results and interviews with entry-level students and intermediate in a postsecondary institution gave basis for the composition of this work, demonstrating a positive impact on the use of the tool in teaching programming, showing that the use of Falcon C ++ software is beneficial in the teaching process of the C and C ++ programming languages.

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