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## New methods of minimizing the errors in the software

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One of the qualitative ways to minimize software errors is to check the code by as many users as possible (the "many eyes" principle). We propose a new approach which goes well with this technique. This is the minimization of human participation in writing program codes. The implementation of this approach has been made in such a way that the machine itself creates the program code according to the description provided by the user. Due to the re-assignment of writing the program code to the machine the process of its generation is simplified simultaneously and the number of program errors is reduced. The latter happens due to the reduction of the human factor influence. By simplifying the writing of the program code, the number of people capable of generating it increases and the period of training in programming and the time spent on writing a separate program are reduced. Our methods do not completely eliminate software errors, because they can be both in the user's own description and in the interpreter. But, nevertheless, it is very important to maximally minimize the number of software errors, because already now the software determines many aspects of our life and the number of its applications is increasing. Even now, for example, such important areas of our life as health and finance may depend from the quality of software and the number of errors in it.

### Summary

In English

There were written several programs which implement some ways to minimize errors in the "Perl" language. The author's certificates were received.

Each of these programs includes a method to minimize errors. In total, these programs are three:

- Dialog method. It is implemented so that the program itself asks questions to the user and selects the desired code according to his answers. This method has a significant drawback is to describe and predict all the options of the dialogue is impossible, because their number tends to infinity.
- Method for determining the appropriate condition by the specified values. It is implemented with the help of "Gnuplot" charting program. It consists in the fact the program chooses which chart to build based on the given data.
- A method for interpreting a condition using special words. It consists in the fact that a special simplified language or a set of words is invented, with the help of which more complex conditions are written. This simplifies the process of writing code.

In Russian

Написано несколько программ, в которых реализованы некоторые способы минимизации ошибок на языке "Perl". По ним были получены авторские свидетельства.

Каждая из этих программ включает в себя метод минимизации ошибок. Всего этих программ 3:

Диалоговый метод. Реализован так, что программа сама задаёт вопросы пользователю и по его ответам выбирает нужный код. Имеет существенный недостаток, все варианты диалога описать и предугадать нереально, потому что их число стремится к бесконечности.

Метод определения подходящего условия по заданным значениям. Реализован с помощью программы для построения графиков “Gnuplot”. Заключается в том, что программа по заданным данным сама выбирает какой график нужно строить.

Метод интерпретации условия с помощью специальных слов. Заключается в том, что придумывается специальный упрощённый язык или набор слов, с помощью которого записываются более сложные условия. Это упрощает процедуру написания кода.

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