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CREATION OF ALGORITHM AND SOFTWARE TOOL FOR ASSESSMENT OF PROGRAMMING COMPLEXITY

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Abstract:

In this article, "Creation of Algorithm and Software for Estimating the Complexity of Programming", the article discusses the complexities in the field of programming and the algorithms and software tools that evaluate them. The article covers topics such as news in the field of software technologies, explanation of the complexity of programming, features of algorithms and software tools. It is hoped that the article will help the readers to learn the intricacies of programming.

Keywords: algorithm and software tools, updating, Testing and Completion, Optimization.

Programming is one of the most important parts of information technology today. It includes algorithms and software tools designed to solve complex problems and tasks. In order to understand the complexity and efficiency of programming, there are several stages of algorithm design and programming.

The first stage begins with the process of analyzing and defining problems and tasks. At this stage, the most optimal algorithm is created for the necessary analysis of the problems and their solution through the program or application. Then comes the process of creating an algorithm. This includes step-by-step application design and sharing to find solutions to problems. Algorithms represent the best possible ways to solve problems.

Next comes the process of writing code based on the algorithm. This involves writing code using selected programming languages or tools. This step is very important to discuss the connection between algorithms and solutions.

After writing the program, comes the process of testing and analyzing it. This step is important for testing the program and identifying errors. Identifies errors, corrects them and leads to the full implementation of the program. Next comes the process of program optimization and change support. This is very important to increase the efficiency and effectiveness of the program.

The last step is the process of distributing and sharing the program. This is very important to ensure the average interaction of the program with the users. The distribution and updating of the software or the strengthening of communication with users is part of this process. We looked at the important stages of creating a community, an algorithm that evaluates the complexity of programming, and a software tool. This process is a key step in creating effective and meaningful programs in the field of programming.

To create a programming complexity estimation algorithm and software tool, I set the following steps:

1. Brainstorming and Analyzing: Understanding the problem or task, defining the requirements and programming languages to be used.
2. Formulating Algorithms: Formulating algorithms to solve problems. It includes step-by-step applications for troubleshooting and finding solutions.
3. Writing Code: Writing code based on algorithms. This may be due to the chosen programming language or tool.
4. Program Testing and Completion: Creating and analyzing tests to solve a problem or task through a written program. You can debug and complete the program.
5. Optimization and Change Support: Optimizing the code to be more efficient while the program is running and making changes to the program so that it works properly.
6. Distribution and Sharing: To facilitate the distribution and sharing of the Software. This includes letting users know about the app and letting them know if there are any issues with the app.

This process is specific to each programming project and helps you learn between the complexities.

Creating a Programming Complexity Estimating Algorithm and Software Programming is one of the most innovative and uncharted areas of information technology today. It includes algorithms and software tools introduced to solve highly complex problems and tasks. To understand the complexity and efficiency of programming, there are several stages of algorithm design and programming.

Currently, programming languages and the field of IT are developing rapidly in the world. The developed countries of America, China, Russia, Germany, Japan and Great Britain have a high level of programming languages and have the most mature experts in the field.

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All over the world, people prefer to use robots and robotic machines created by companies using programming languages with the help of programmers, rather than the workforce. The reason for this is that everything created by machines has a mechanism of time efficiency, fast, high-quality and accurate operation. People can earn money even at home by learning programming languages. That is why the interest in this field is increasing, especially among our young people of Uzbekistan. The initiatives of our President personally to increase the interest of our youth in programming languages and the IT sector are of great importance. A clear example of this is the declaration of "2020 - the year of development of science and digital economy". After they said that one million young Uzbek programmers should be trained in our Republic, these things are intensifying. Shavkat Mirziyoyev said in the first days of his presidency that there is a personnel problem in our country. Soon, unprecedented reforms were launched to study and solve this problem from the ground up, to train highly qualified specialists.

The school named after Muhammad al-Khorazmi, established in accordance with the decision of the President of the Republic of Uzbekistan on September 14, 2017, is another such educational institution. In addition, at the meeting held by the head of our state on 13.02.2021 on the issue of creating modern infrastructure, the establishment of IT academy, IT park, IT laboratory, Coworking center, Mobile software production center, Remote information technology centers instructions were given. Instruction on allocating 50 billion soums to the best innovative and start-up projects of young people by organizing the "Future Scientist" contest among schoolchildren and university students from 2021 given.

"Continuing our work, in the next year we will establish modern training centers that will provide in-depth information technology training in more than 100 cities and districts. Up to 50% of the costs of obtaining international IT certificates will be covered for young people. In the next two years, "One million 300,000 young people will be taught the basics of computer programming free of charge within the framework of the "programmer" project, the head of state said during his participation in the youth forum.

Based on this, we are trying hard to teach students programming. In order to develop programming languages in students, the following important factors should be considered. That is, first of all, it is necessary to arouse in them an inclination towards programming languages, then passion, and then interest. After that, skills about programming languages are formed and developed. And when students progress in programming languages, we will have achieved the goal. There he begins to work as a qualified specialist in his field. Such personnel will greatly benefit the students of our country by imparting their knowledge, and the number of such personnel is expanding day by day.

By the factors of formation of students' programming skills, we mean methods (methods), forms, tools, conditions for teaching programming languages. That is, it is necessary for them to organize classes through various new methods, conduct classes individually or in groups, use computers and projectors, and use specially equipped computer rooms.

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