

**IMPROVING THE METHODOLOGY OF TEACHING THE BASICS OF PROGRAMMING IN
A VISUALIZED ENVIRONMENT**

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Abstract: *There are several reasons why programming fundamentals teaching methodology should be presented in a visualized environment. The methodology of teaching the basics of programming in a visualized environment helps students to express their thoughts correctly in the classroom. In addition, programming fundamentals teaching methodology helps students create mental images and understand programming concepts in a visualized environment. This article provides information on issues and methods of improving the methodology of teaching the basics of programming in a Visualized environment.*

Keywords : *methodical, programming, teaching, improvement, topic, relevant, research, creativity, faster learning, practice*

INTRODUCTION

To improve the methodology of teaching the basics of programming, the following methods can be indicated:

1. Make lessons interactive: Use interactive tools to make lessons interesting and meaningful for students , such as coding and time-lapse visualizations.

2. Hands-on Activities : Designing hands-on activities based on goals to teach and develop students' coding skills.

3. Project-based learning : Focuses on students thinking about and solving programming problems to find solutions to real-world problems.

organizing projects and projects.

4. Student Collaboration: Enable students to learn to code and share common process information through layering and group work.

Learning Programming Languages : Students can develop in their field of specialization by learning different programming languages and providing them continuous education.

6. Professional development for teachers : Organize clubs, seminars and online training to guide teachers to learn new programming languages and skills.

These methods can help improve the teaching methodology of programming fundamentals.

ways and methods can be used to improve the programming methodology based on visual reasoning :

Embed Visual Programming Methodology : You can use literature, online information, and courses offered by academic institutions about the basics of visual programming. It helps explain the basics and importance of visual programming.

2. Create Visual Tutorials and Tutorials : Create tutorials, video tutorials, case studies, and tutorials on visual-based programming techniques. This program helps in teaching applicants how to explain and explain concepts.

Support of interactive methods : To improve the visual programming methodology, to increase the learning period and the level of success by the user who is familiar with the basics of interactive programming (for example, drag-and-drop, animations, interactive visualizations).

4. Refresher and refresher: Demonstrate refresher and refresher opportunities by identifying and performing programming model/lab exercises designed to address programming field activities and programming fundamentals. It is necessary to develop a methodology for making software training special, which should improve the educational process and show students the possibilities of solid knowledge and skills development in the field .

Core: Programming Fundamentals There are several reasons why teaching methodology should be presented in a visualized environment . The methodology of teaching the basics of programming in a visualized environment helps students to express their thoughts correctly in the classroom. For example, students want to practice using a model that visualizes the program code , making it easier for them to create the program and identify hidden errors.

In addition, programming fundamentals teaching methodology helps students create mental images and understand programming concepts in a visualized environment. Students feel comfortable looking at code, make clear ideas, and use it to explain themselves to approve programming.

teaching the basics of programming in a visualized environment is very important in learning the concepts of these lessons in order to learn and understand programming, and in the implementation of practical exercises. Also, this method will be useful for teachers to create specialized lesson materials and use the Internet, new technologies and mobile applications. Therefore, it is important to understand how to improve programming fundamentals teaching methodology in a visualized environment. Here are some steps you can take to improve your programming fundamentals teaching methodology in a visual environment:

1. Web Analysis: This includes the use of websites, web tutorials, and instructional videos to help identify learning methodologies, new information support, and boundaries .

2. Use of visual teaching tools: Animations, infographics, programs, experimental samples, test programs, short lessons, etc., are tools used to facilitate the learning of visual information teaching methods.

3. Creating a guide : organizing the methodology by creating a guide and reference for teachers and students, facilitating the learning process and collecting information that is used in many areas of teaching. possible

4. Interactive Learning : Use interactive programs to take lessons learned, apply information, and learn a reliable programming language.

5. Uzbek -resources: Search Uzbek-language resources for using programming basics, blogs, forums, and websites specifically for Uzbek teachers and students. This increases the opportunity to learn a lot about the local history and techniques of teaching .

With the above steps, you can go a long way towards improving and visualizing the methodology. The following steps are important in improving the methodology of teaching the basics of programming in a visualized environment :

1. Compilation of necessary guides and textbooks for teachers and students in learning visual programming . These tutorials should be illustrated with visual images, easy programming tools or animations .

Providing textbooks in a visual environment for easy use by teachers and students. For example, tutorials and learning the basics of programming through websites, video tutorials, handy apps or programs .

3. To strengthen the communication between teachers and students in the process of teaching the basics of programming. Students should be given the opportunity to address and address issues through forums, online meetings or Q&A sessions .

4. Creating practical exercises that are easy for teachers and students to master . Such exercises ensure that students learn the basics of programming and implement programs in practice.

5. Assessment of learning outcomes before and after teaching the basics of programming in a visualized environment. This will help to identify successes and failures .

6. Support communication between teachers and students during the curriculum . This is important to increase the interest of students and to receive their calls.

allows you to learn programming through visual games . These integration steps help programmers learn and practice the fundamentals of visual programming. To improve the methodology of teaching the basics of programming, the following several actions can be included:

1. Look at training materials: Training materials for programming fundamentals can be found in several resources such as textbooks, demonstrations and video tutorials. Find these materials in your library and refer to them at your convenience.

2. Engagement Strategies: Look for good ways to engage students in the environment and provide them with engaging and engaging tutorials on the basics of programming . For

example, students can be engaged through interactive tutorials, hands-on activities , and disease problem areas.

3. Real-world Applications: Before teaching the basics of programming , look for ways to give students real-world vacation programs and tools to organize practical problems and see how they learn those basics in a development environment.

4. Feedback and Assessment: After conducting the tutorials , it is necessary to analyze the students' learning and provide them with possible additional help, a cash calendar and assessments. This greatness helps the students to learn new things and increase their abrasiveness.

5. Professional Development: Studying new content for teachers , paying attention to international experiences in foreign languages, participating in conferences and international receptions using new methods and technologies related to the topic of programming basics.

These activities are important to enhance students' learning of programming fundamentals and help them successfully complete programming tasks.

Discussion: Teaching the fundamentals of programming in a visualized environment involves building web applications based on the principles of a visualization environment. The following grounds are important for adopting this methodology :

1. Web Design and Interface: In the lessons, you should learn important features such as web design principles, user interaction, light and plastic shapes, colors and typography . It will help you to understand the progress of visualization, intuitive interface and comfortable user experience .

is a very powerful tool for visualization and is very important in teaching the basics of programming. In the lessons, you should learn to strengthen the interaction with other users, explain the program settings and create animations .

, require learning about how the design works in any size , on any device, in the necessary modes. These fundamentals play an important role in the methodology of designing web pages and creating web applications .

4. Cross-Browser and Cross-Platform Environment: Programming fundamentals lessons require users to learn how to use web applications on any platform and browser, explaining their features and limitations. This is of great importance in tests and practical exercises in classes.

teaching methodology of visualization, web programming basics and programming basics . Using these principles in lesson planning and application development with the necessary knowledge and skills makes visualization easy and understandable for learners .

SUMMARY

Introduction to the conclusion of the topic of improving the methodology of teaching the basics of programming in a visualized environment . This topic requires specific attention to teaching programs in a visual environment based on innovations and technologies in the field of programming . This methodology is aimed at teaching students

by improving program structure, code visualization, interface and graphic design, animation and multimedia, and developing their skills and abilities in the process of creating a program. Concrete problems are analyzed and compounds in the product are determined. Based on the topic, educational-methodical methods, methodical activities, professional skills and their practical significance are noted. This method systematically creates a sense of the structure of the program, proves the states to the students, creates confidence among the students, and demonstrates "program completion".

SUGGESTIONS

The following steps can be considered to improve the methodology for teaching the basics of programming in a visualized environment :

1. Create a plan by topic : Determine your requirements for teaching the program and connect each topic with visual methods. This outline helps to explain each topic in a comprehensive and easy-to-understand manner.

2. Creating a display system: For the visualization teaching methodology, it is necessary to prepare tools that have a system to display information in a practical way. This includes interactive devices, e-textbooks, and other visual aids used in teaching programming languages.

3. Preparation of practical exercises: If the teachers of programming in a visualized environment try to prepare practical exercises for students, it will help them to learn the program and increase the teaching process.

4. Evaluation of the quality of education: Evaluation of the quality of education is necessary to visualize how the students master programming fundamentals and theoretical knowledge . It is assessment, students' skills and understanding that are more important.

5. Increase interactivity: Increasing interactivity is very important when learning the basics of programming in a visualized environment. Through interactive programming or tutorials, students' acquisition skills and programming practices are nurtured.

6. Provide relevant instructions: It is necessary to provide relevant instructions when learning programs in a visual environment during the teaching process . It helps students to open up their concepts and understand programming fundamentals and issues .

can be used to improve the teaching methodology of programming fundamentals learners in a visualized environment .

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