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CAPABILITIES OF SCRATCH FOR WORKING WITH ANIMATIONS

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ANNOTATION

This article provides information on the importance of Scratch technology in education, creation of animated and interactive projects, cartoons and other multimedia products in the Scratch programming environment, ease of use, interface and capabilities of the working environment in the Scratch visual program for students of any age.

Keywords: Scratch, technology, scratch visual, interface, Scratch program.

"Programming should be at a high level, as should reading and writing literacy."

M.Reznik

Scratch is a programming environment designed for elementary school students to create their own stories, cartoons, games, presentations, and other projects. There are two ways to work in Scratch. The first method is online and can be done by registering at scratch.mit.edu. The second method is considered offline, in which the program is first installed on the computer and launched by double-clicking the left mouse button on the application.

Scratch was created by University of Massachusetts professors Mitchell Reznick and Alan Key, and is currently being studied as an educational GUI programming environment. The Scratch programming environment is based on the LEGO construction program, which is why it is considered its successor. Scratch is an English word that has several meanings, such as scratch, scratch, scratch, and start. The word "scratching" comes from the meaning of the process of combining several pieces of music used by DJs.

The Scratch program is an integrated environment, with the help of which you can create not only multiplication frames, but also various animation frames, create games, create new projects and draw in a graphic editor.

The number of programs that provide animation creation and work with multiplication is huge today. For example, using Blender, Adobe Animate, Toom Boom Harmony, Renderforest system, Easy Gif animator, FotoMorph, and other similar programs, it is possible to create various simple and complex animations. These features are also available in Scratch. In the Scratch programming environment, the code of the program is created from colored blocks. Behind each color there are blocks that perform certain actions and tasks. The simplicity of such blocks in the form of a constructor allows you to learn programming in the form of an interesting game. In this case, the blocks are implemented in such a way that they can only be combined in syntactically correct structures, allowing for in-place error correction. Different types of data have different block shapes, emphasizing whether or not objects match each other. Changes can be made to the program while it's running, allowing you to experiment with new ideas for problem solving. By executing simple commands, a complex model is created in which

many objects with different properties interact. Once a project is created in Scratch, it can be hosted on scratch.mit.edu.

The Scratch program is a program capable of processing signals from devices such as multimedia, graphic and sound equipment panels, keyboards, mice, and sensors. Media manipulation is one of the main goals of Scratch, and in an object-oriented environment, Scratch programs are created by combining various command blocks, multi-colored bricks in Lego constructors, and graphic blocks into stacks.

Scratch is a multimedia system that focuses on programming, as well as creating animations. Most operators of the language are focused on working with graphics and sound, creating animation and video effects.

One of the main advantages of this environment is that it is a free software product, so any educational institution can download the program from the Internet and start learning and working directly in the new programming environment.

This teaching technology encourages students to master the possibilities of a programming language, to learn the science of "Informatics and ICT", and emphasizes the practical and personal importance of this program to them. Analysis of work in Scratch shows that the program is very simple and easy to learn. But, despite its simplicity, Scratch provides the user with a variety of tools for working with multimedia resources, which arouses interest in students, contributes to the development of positive motivation for the subject as a whole.

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