Scratch is a block-based visual programming language and website targeted primarily at children 8-16 to help learn code. Users of the site can create projects on the web using a block-like interface. The service is developed by the MIT Media Lab, has been translated into 70+ languages, and is used in most parts of the world. Scratch is taught and used in after-school centers, schools, and colleges, as well as other public knowledge institutions. As of January 2021, community statistics on the language's official website show more than 67 million projects shared by over 64 million users, and almost 38 million monthly website visits. Scratch takes its name from a technique used by disk jockeys called "scratching", where vinyl records are clipped together and manipulated on a turntable to produce different sound effects and music. Like scratching, the website lets users mix together different media (including graphics, sound, and other programs) in creative ways by creating and remixing projects, like video games, animations, and simulations.

The Scratch interface is divided into three main sections: a stage area, block palette, and a coding area to place and arrange the blocks into scripts that can be run by pressing the green flag or clicking on the code itself. Users may also create their own code blocks and they will appear in "My Blocks".

The stage area features the results (e.g., animations, turtle graphics, either in a small or normal size, with a full-screen option also available) and all sprites thumbnails being listed in the bottom area. The stage uses x and y coordinates, with 0,0 being the stage center. With a sprite selected at the bottom of the staging area, blocks of commands can be applied to it by dragging them from the block palette into the coding area. The Costumes tab allows users to change the look of the sprite in order to create various effects, including animation. The Sounds tab allows attaching sounds and music to a sprite.

The MIT Media Lab's Lifelong Kindergarten group, led by Mitchel Resnick, in partnership with the Montreal-based consulting firm, the Playful Invention Company, co-founded by Brian Silverman and Paula Bonta, together developed the first desktop-only version of Scratch in 2003. It started as a basic coding language, with no labeled categories and no green flag. Scratch was made with the intention to teach kids to code.

The philosophy of Scratch encourages the sharing, reuse, and combination of code, as indicated by the team slogan, "Imagine, Program, Share". Users can make their own projects, or they may choose to "remix" someone else's project. Projects created and remixed with Scratch are licensed under the Creative Commons Attribution-Share Alike License. Scratch automatically gives credit to the user who created the original project and program in the top part.

Scratch was developed based on ongoing interaction with youth and staff at Computer Clubhouses. The use of Scratch at Computer Clubhouses served as a model for other after-school centers demonstrating how informal learning settings can support the development of technological fluency. Scratch 2.0 was released on May 9, 2013. The update changed the look of the site and included both an online project editor and an offline editor. Custom blocks could now be defined within projects, along with several other improvements. The Scratch 2.0 Offline editor could be downloaded for Windows, Mac and Linux directly from Scratch's website, although support for Linux was later dropped. The unofficial mobile version had to be downloaded from the Scratch forums.

Scratch 3.0 was first announced by the Scratch Team in 2016. Several public alpha versions were released between then and January 2018, after which the pre-beta "Preview" versions were released. A beta version of Scratch 3.0 was released on 1 August 2018 for use on most browsers; with the notable exception of Internet Explorer. Scratch 3.0, the first 3.x release version, was released on 2 January 2019.

Scratch uses event-driven programming with multiple active objects called sprites. Sprites can be drawn, as vector or bitmap graphics, from scratch in a simple editor that is part of Scratch, or can be imported from external sources. Scratch 3 only supports one-dimensional arrays, known as "lists", and floating-point scalars and strings are supported, but with limited string manipulation ability. There is a strong contrast between the powerful multimedia functions and multi-threaded programming style and the rather limited scope of the Scratch programming language. The 2.0 version of Scratch does not treat procedures as first class structures and has limited file I/O options with Scratch 2.0 Extension Protocol, an experimental extension feature that allows interaction between Scratch 2.0 and other programs. The Extension protocol allows interfacing with hardware boards such as Lego Mindstorms or Arduino. Version 2 of Scratch was implemented in ActionScript, with an experimental JavaScript-based interpreter being developed in parallel.

Version 1.4 of Scratch was based on Squeak, which is based on Smalltalk-80. A number of Scratch derivatives called Scratch Modifications have been created using the source code of Scratch version 1.4. These programs are a variant of Scratch that normally include a few extra blocks or changes to the GUI.