

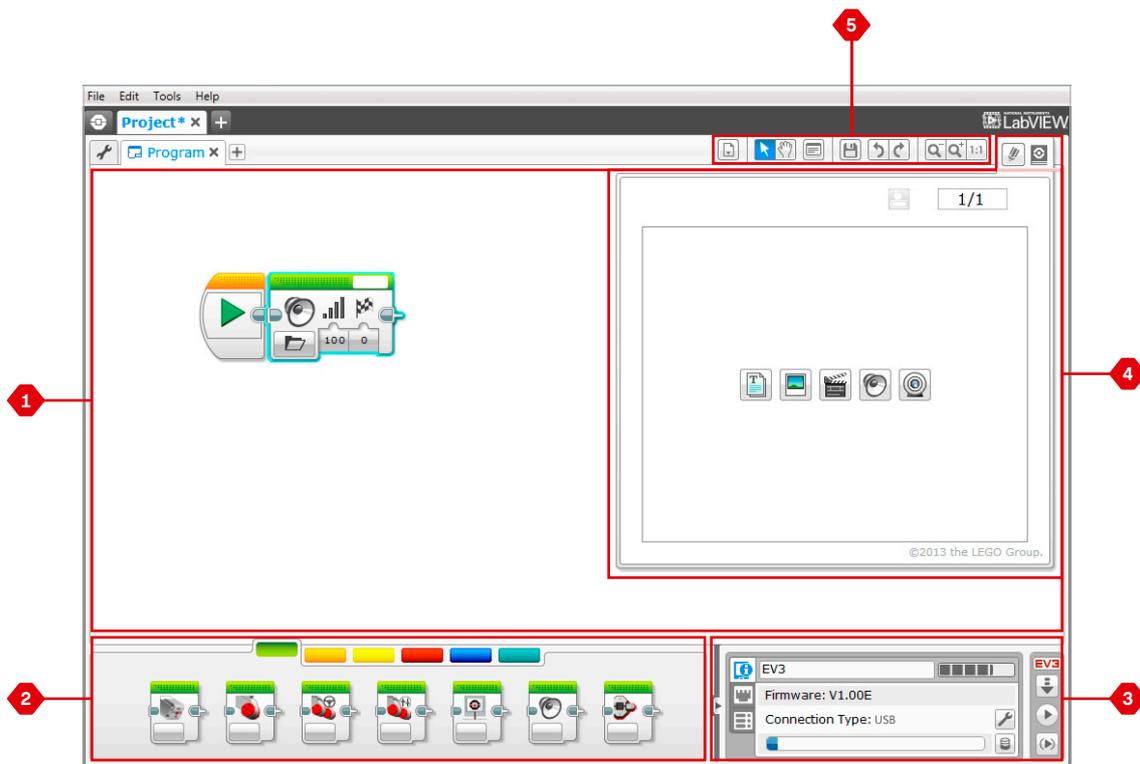
EV3 SOFTWARE

Programming

Without a program, a robot is just a statue. It may be a cool statue, but it's still a statue. When you program a robot you give it abilities—to move, to follow lines, to avoid objects, to make mathematical calculations, and much more. The EV3 Software has an intuitive, graphics-based format that users from 10 to 100 years of age can quickly learn and successfully use.

The EV3 Programming environment consists of the following main areas:

1. **Programming Canvas**—Lay out your program here.
2. **Programming Palettes**—Find the building blocks for your program here.
3. **Hardware Page**—Establish and manage your communication with the EV3 Brick here and see what motors and sensors are connected where. This is also where you download programs to the EV3 Brick.
4. **Content Editor**—A digital workbook integrated into the software. Get instructions or document your project using text, images, and videos.
5. **Programming Toolbar**—Find basic tools for working with your program here. Learn more about these tools in the **EV3 Software Help**.



Programming environment

EV3 SOFTWARE

Programming Blocks and Palettes

All the programming blocks that are used for controlling your robot are located in Programming Palettes at the bottom of the Programming environment underneath the Programming Canvas. The Programming blocks are divided into categories according to type and nature, making it easy to find the block you need.

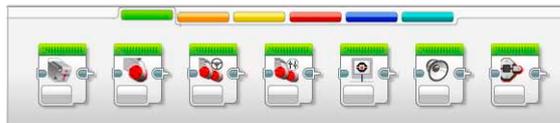
To learn more about the EV3 Programming environment and see how you can get started with your first program, see the **Programming** and **Programming Overview** videos in the Quick Start section of the Lobby.

You can also find more information about how to program in the **EV3 Software Help**.

ACTION BLOCKS

(In order from left to right)

- + Medium Motor
- + Large Motor
- + Move Steering
- + Move Tank
- + Display
- + Sound
- + Brick Status Light



FLOW BLOCKS

(In order from left to right)

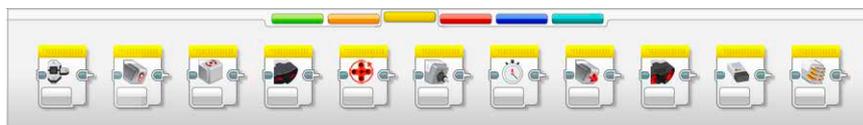
- + Start
- + Wait
- + Loop
- + Switch
- + Loop Interrupt



SENSOR BLOCKS

(In order from left to right)

- + Brick Buttons
- + Color Sensor
- + Gyro Sensor
- + Infrared Sensor
- + Motor Rotation
- + Temperature Sensor
- + Timer
- + Touch Sensor
- + Ultrasonic Sensor
- + Energy Meter
- + NXT Sound Sensor

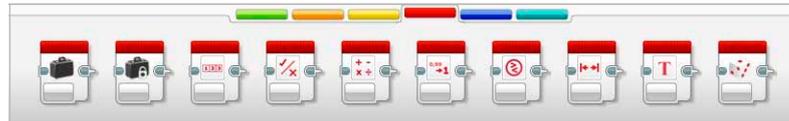


Programming Blocks and Palettes

DATA BLOCKS

(In order from left to right)

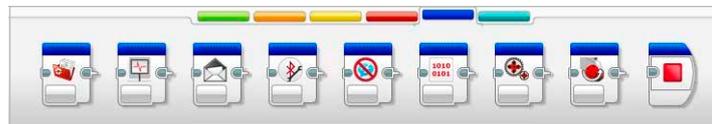
- + Variable
- + Constant
- + Array Operations
- + Logic Operations
- + Math
- + Round
- + Compare
- + Range
- + Text
- + Random



ADVANCED BLOCKS

(In order from left to right)

- + File Access
- + Data Logging
- + Messaging
- + Bluetooth Connection
- + Keep Awake
- + Raw Sensor Value
- + Unregulated Motor
- + Invert Motor
- + Stop Program



MY BLOCKS

When you are repeatedly using the same segment of a program in many programs, that is a good time to create a My Block. Once your My Block is created, you can simply insert that single block into future programs within the same project.

