ADVANCED EV3 PROGRAMMING LESSON
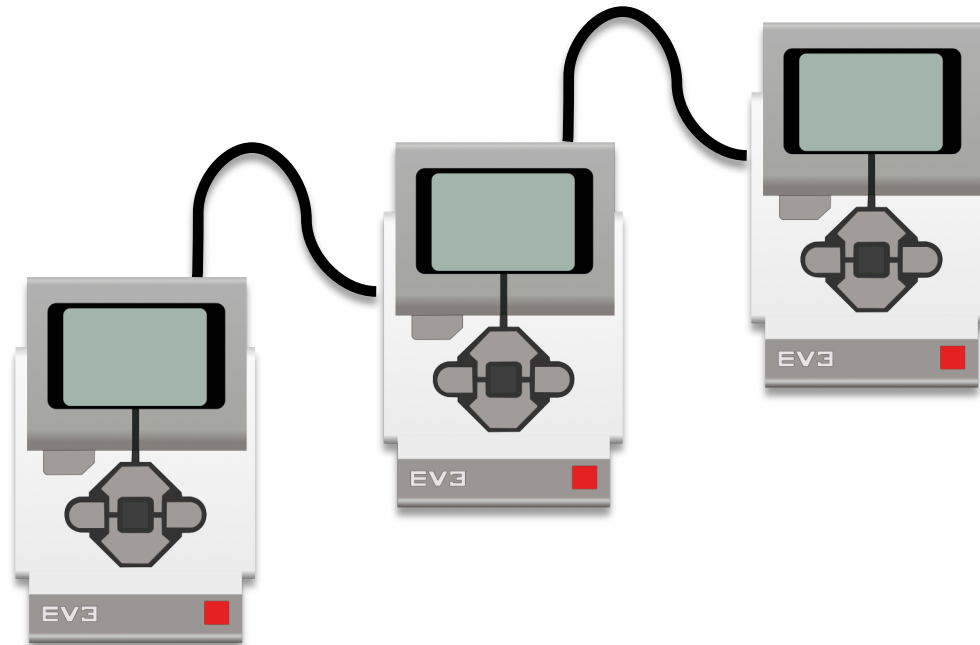
EV3 Classroom:
Daisy-chaining

By David Lechner

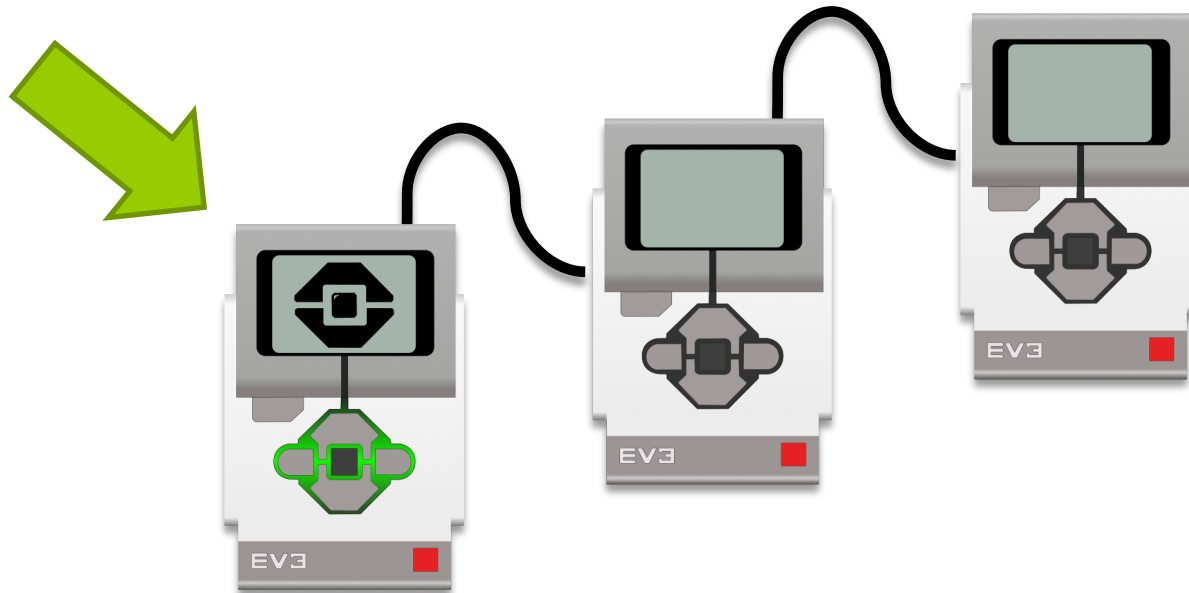EV3 CLASSROOM LESSON
BY EV3LESSONS.COM

Lesson Objectives

➚ Learn how to daisy-chain multiple EV3 bricks using USB cables

➚ Learn how to write a program using daisy-chaining
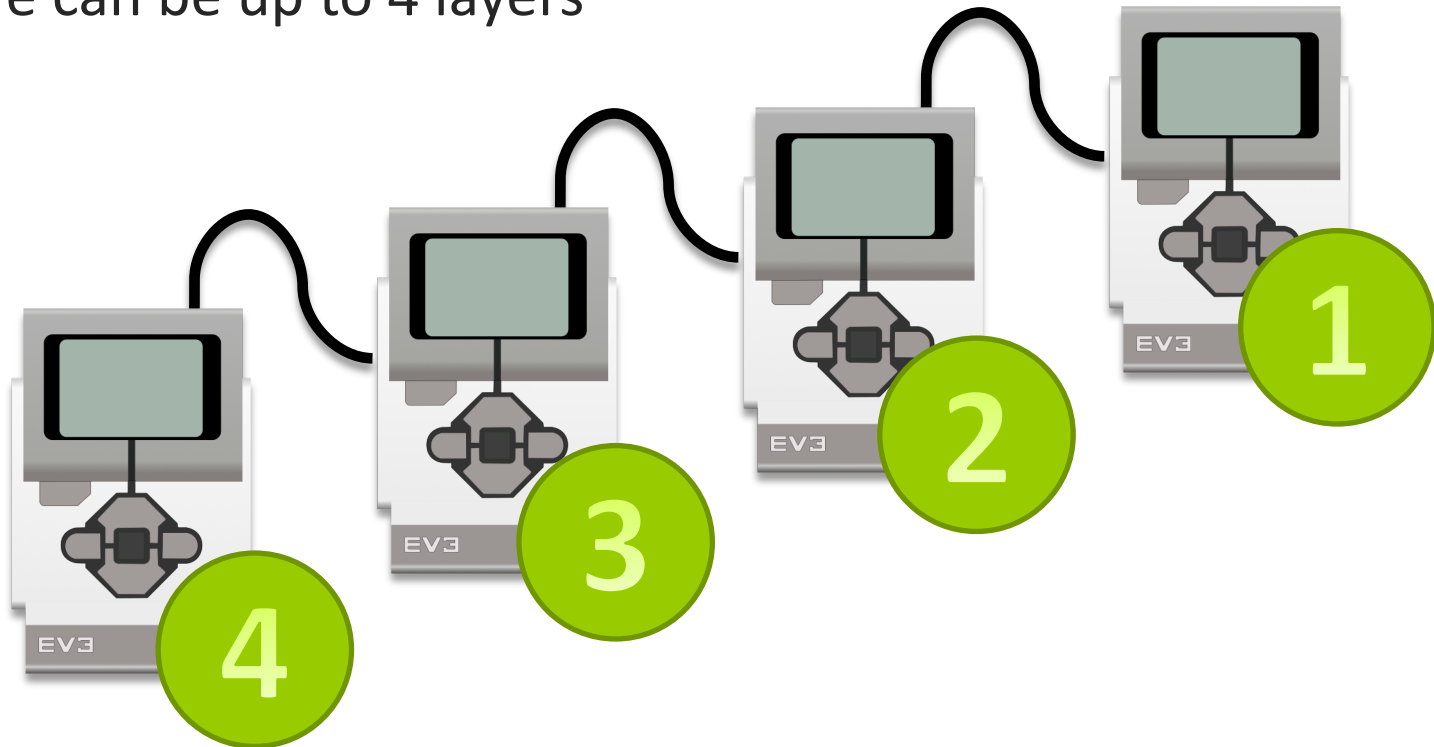
Connecting the EV3s

➚ The side USB port gets connected to the top USB port on the next EV3 in the chain

➚ Make sure to power on the last EV3 in the chain first

Layers

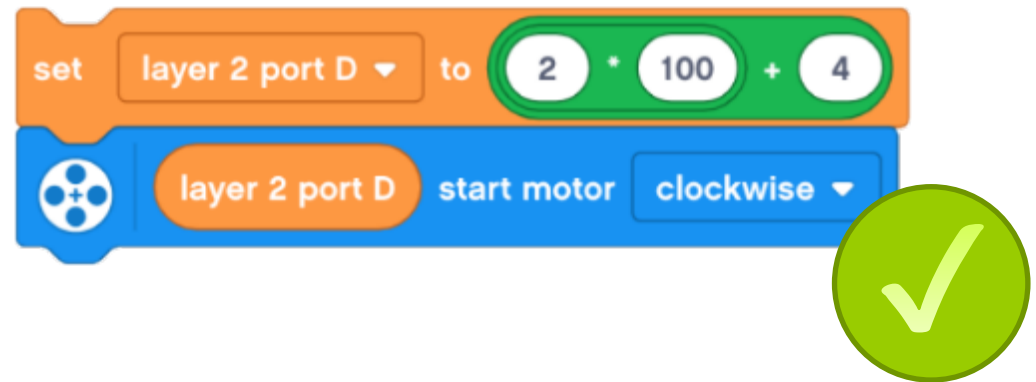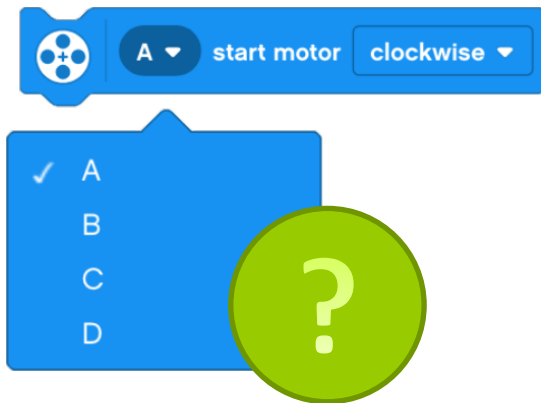↗ Each EV3 in the chain has a "layer" number

↗ There can be up to 4 layers

Selecting the layer and the port

- ⬈ In EV3 Classroom there is not a way to select the layer
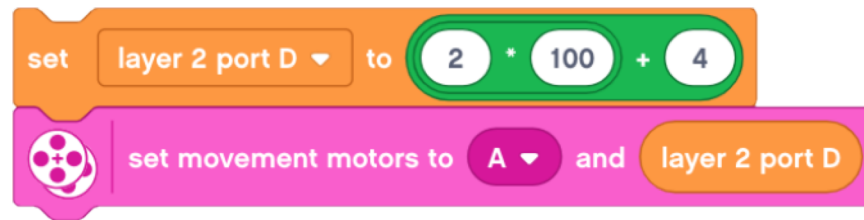- ⬈ Use variables with this formula instead

$$layer \times 100 + port$$

- ⬈ The layer and port are both numbers between 1 and 4
- ⬈ For output ports A = 1, B = 2, C = 3, and D = 4
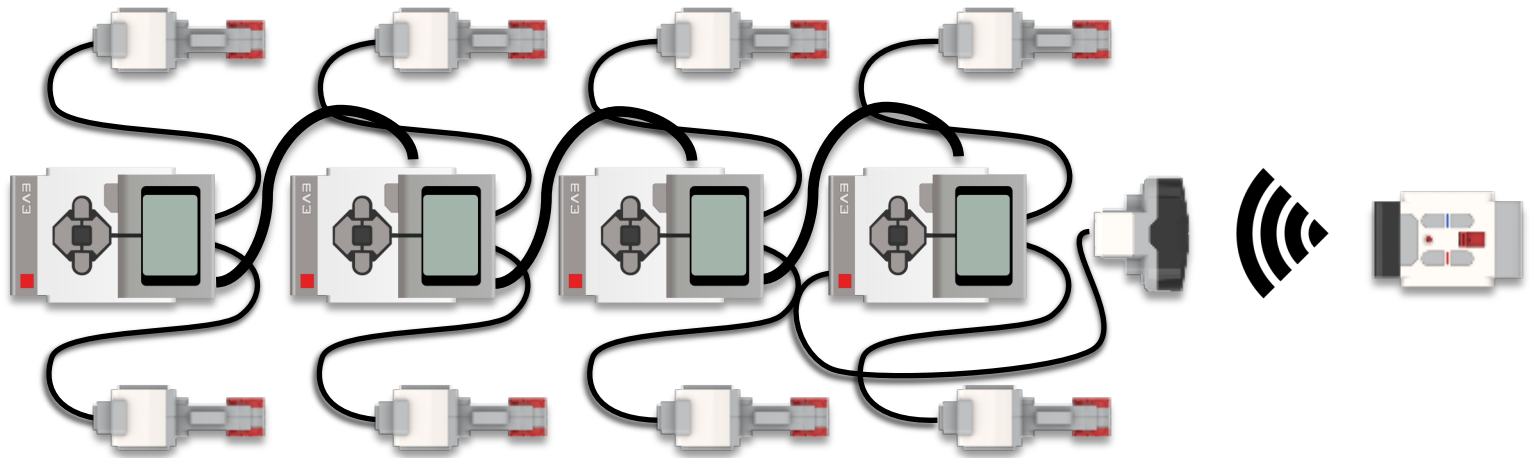
Movement blocks

↗ For movement blocks only add the layer to the right motor port

↗ Only one pair of motors can be used with the movement blocks per layer

Super-tank example

↗ Super-tank has 4 EV3 bricks, 8 motors and 1 infrared sensor

↗ All port B motors drive the left tank tread and all port C motors drive the right tank tread

Super-tank example

↗ The left buttons on the remote control the left motors connected to port B on each EV3 and the right buttons control the right motors connected to port C on each EV3

Super-tank example

↗ The repeat loop tells the motor on each of the 4 layers to start or stop

Credits

↗ This tutorial was created by David Lechner

↗ More lessons at www.ev3lessons.com