EV3 Classroom: Daisy-chaining

By David Lechner
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.
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 no way to select the layer.
- Use variables with this formula instead:
  \[
  \text{layer } \times 100 + \text{port}
  \]
- 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
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.
The repeat loop tells the motor on each of the 4 layers to start or stop.
This tutorial was created by David Lechner

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