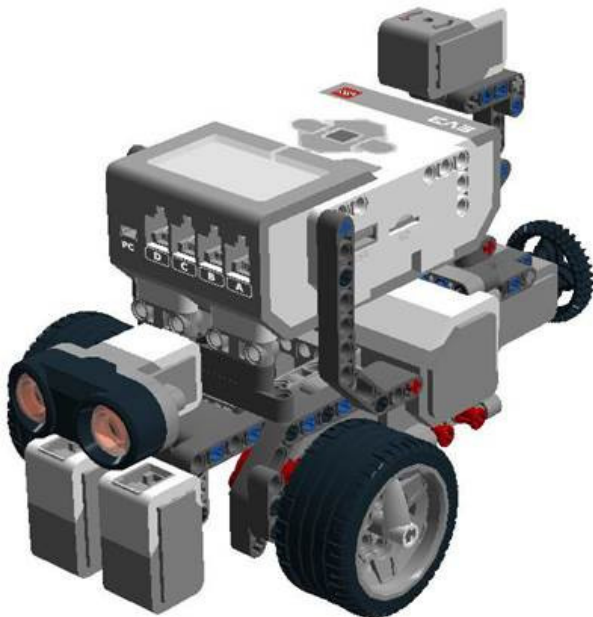




MINDSTORMS[®]
EV3

DOUBLE SENSOR LINE FOLLOWER

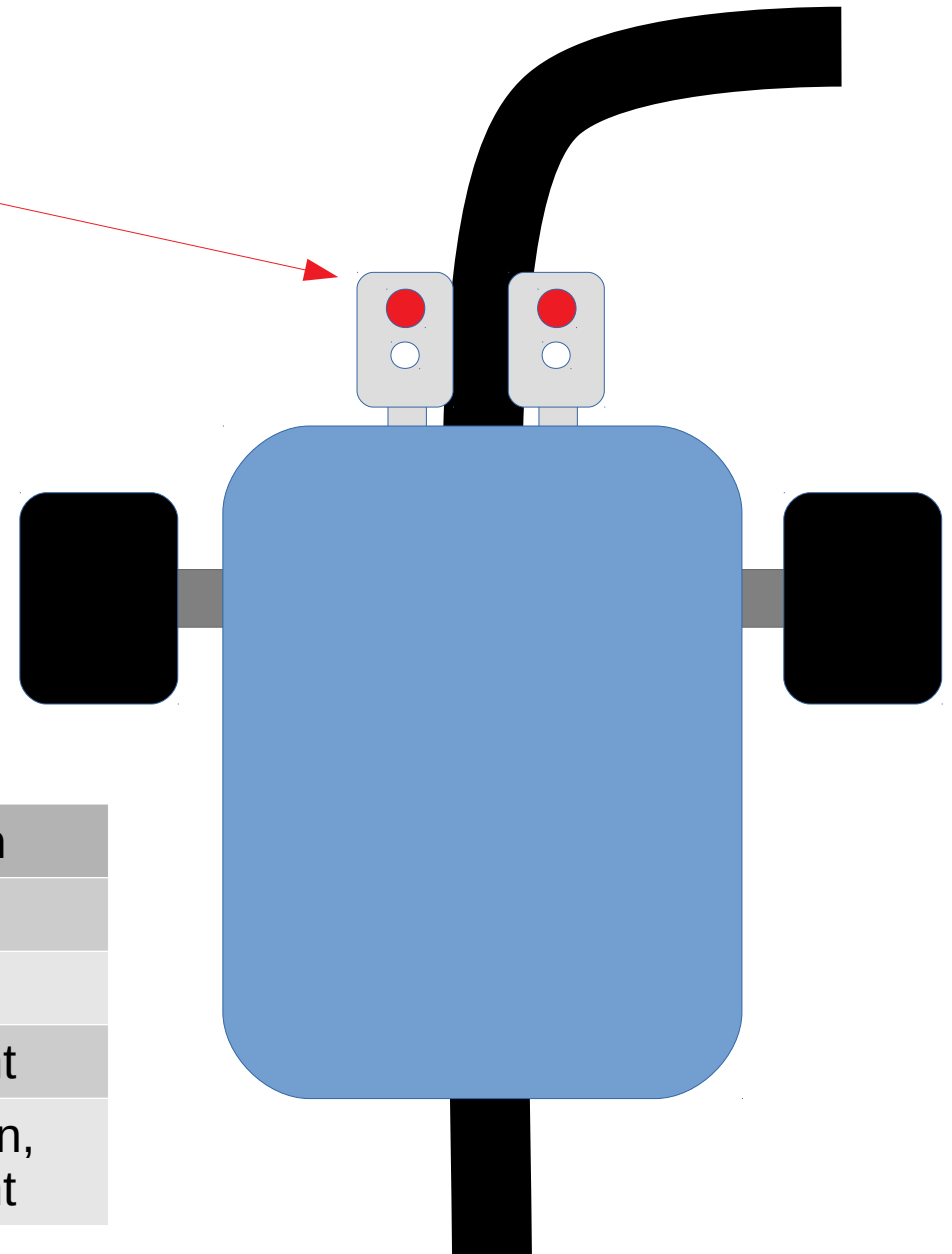


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Two Sensor Line Following

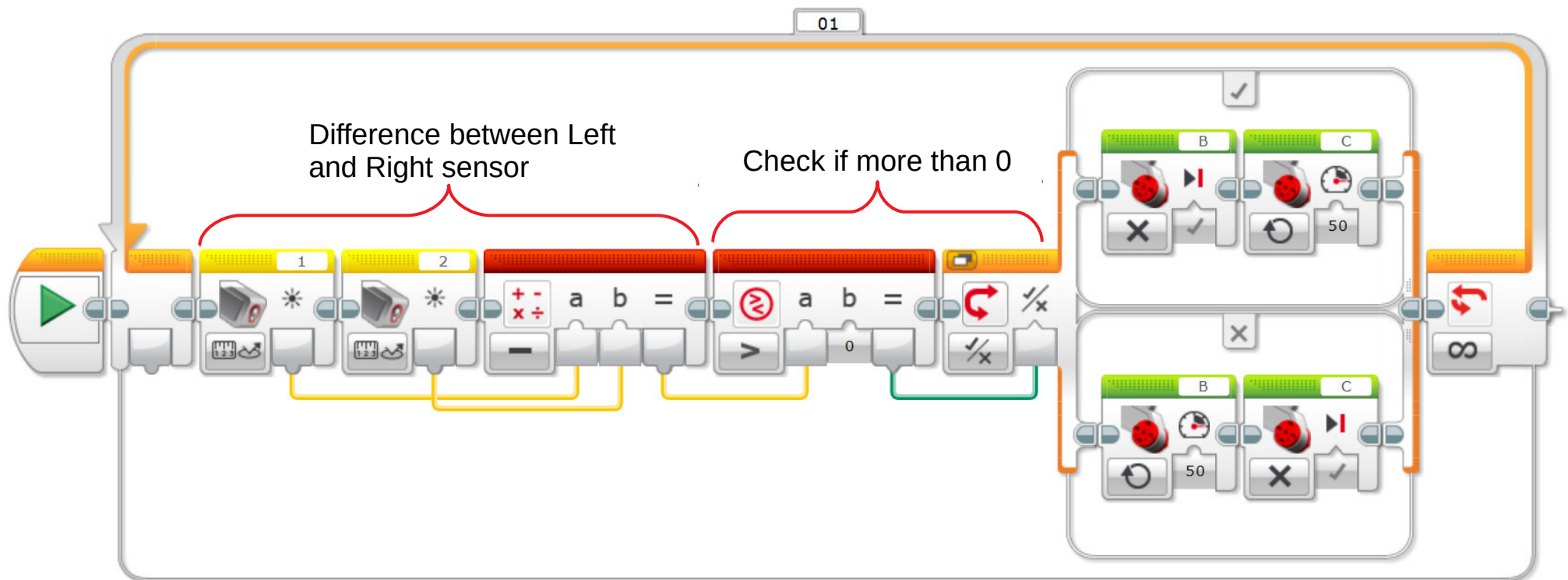
- One sensor on each side of line
- Why two sensors?
 - Detect intersections
 - Detect turn indicators
- Simple approach...

Left Sensor	Right Sensor	Action
Black	White	Turn Left
White	Black	Turn Right
White	White	Go Straight
Black	Black	Intersection, Go Straight



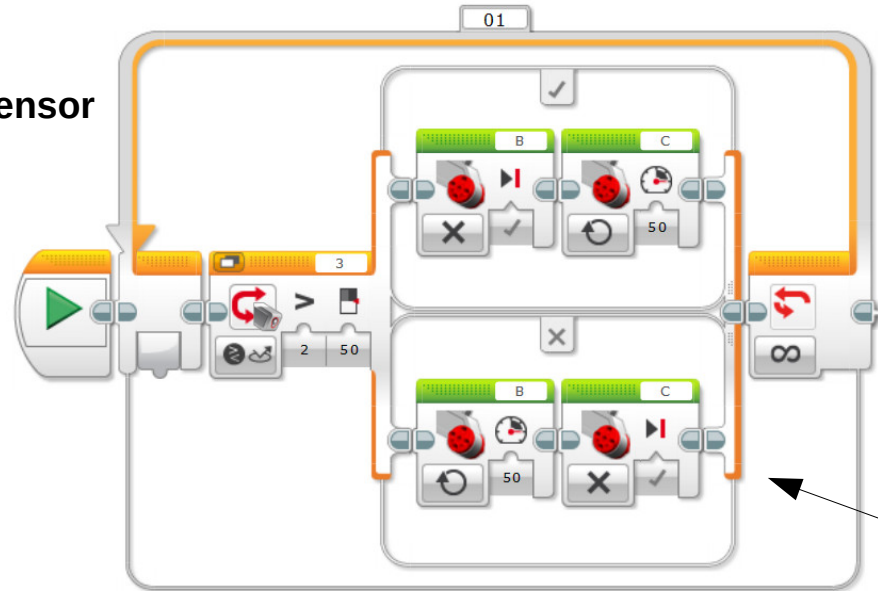
Two Sensor Line Following

- Better approach
 - Calculate difference between Left and Right sensor (use **Math** block)
 - Check result using a **Compare** block
 - Everything else is the same as a single sensor!

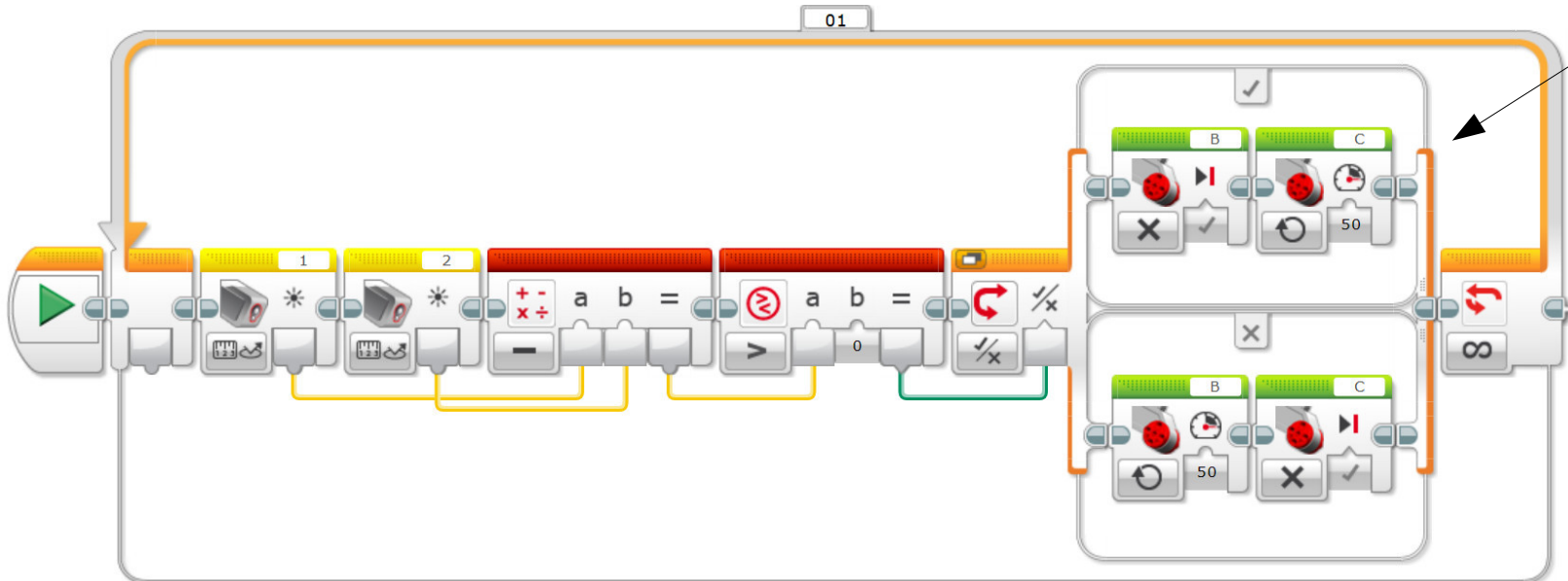


2 States Algorithm (Single vs Double Sensors)

Single Sensor



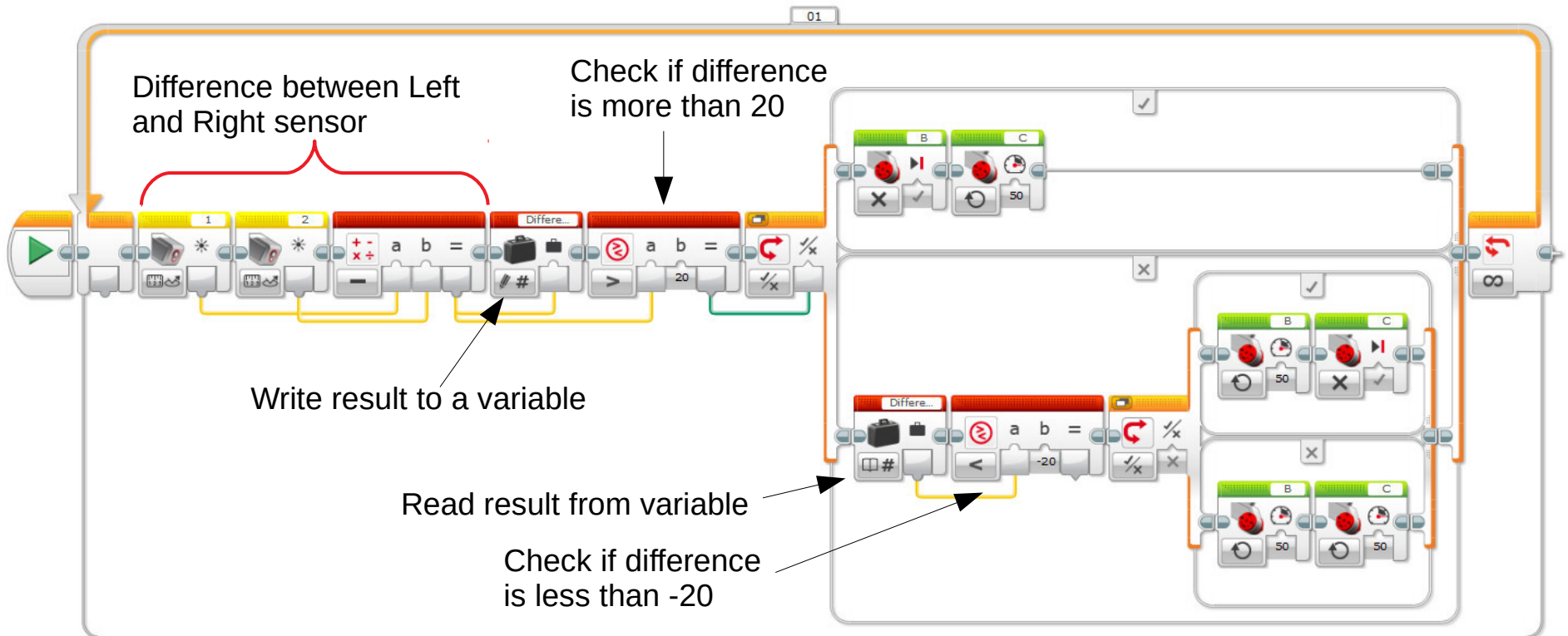
Double Sensors



These are the same

3 States Algorithm

- Store result of comparison in a variable
- Use compare blocks to check values



Tips and Challenges

- Store results in variables to avoid reading the sensors multiple times
- As your program gets larger, use My Blocks to keep it organized
- Try a **5 States Algorithm** or a **Proportional Control**

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