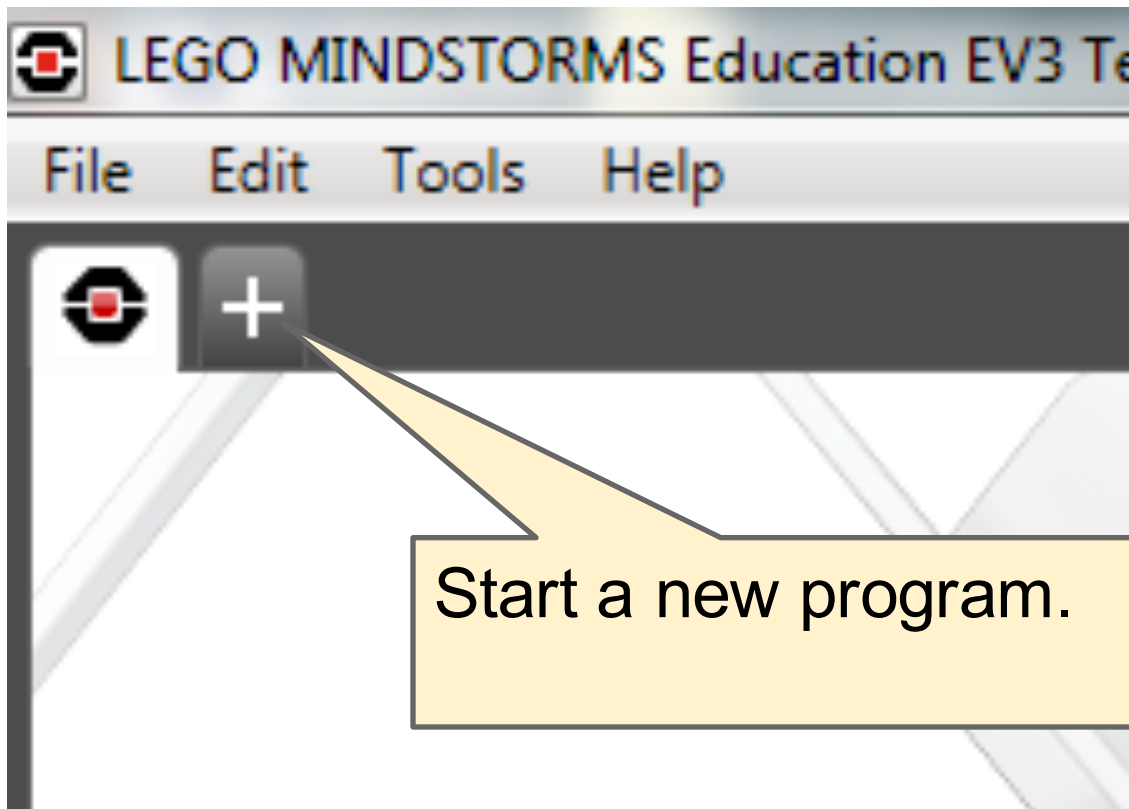
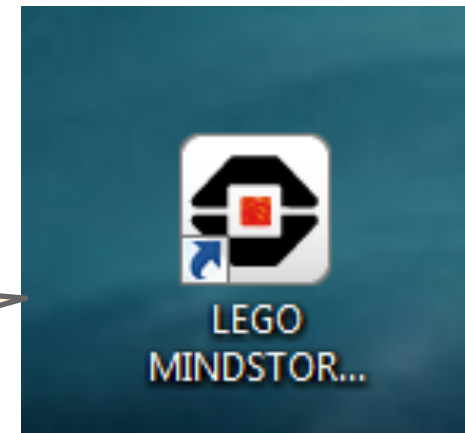
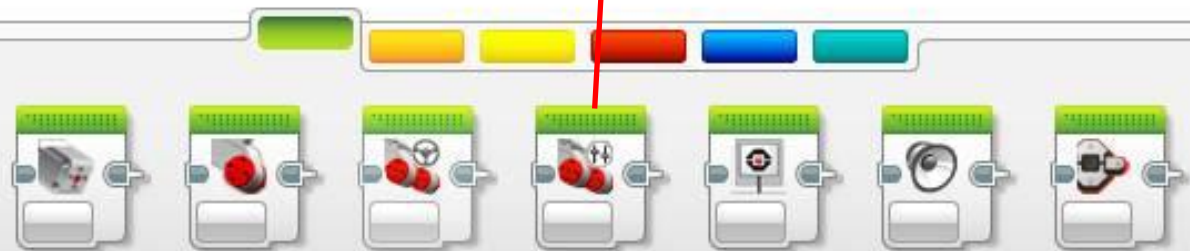


These are slides showing examples
for moving forward, turning,
Ultrasonic sensor and touch sensor.

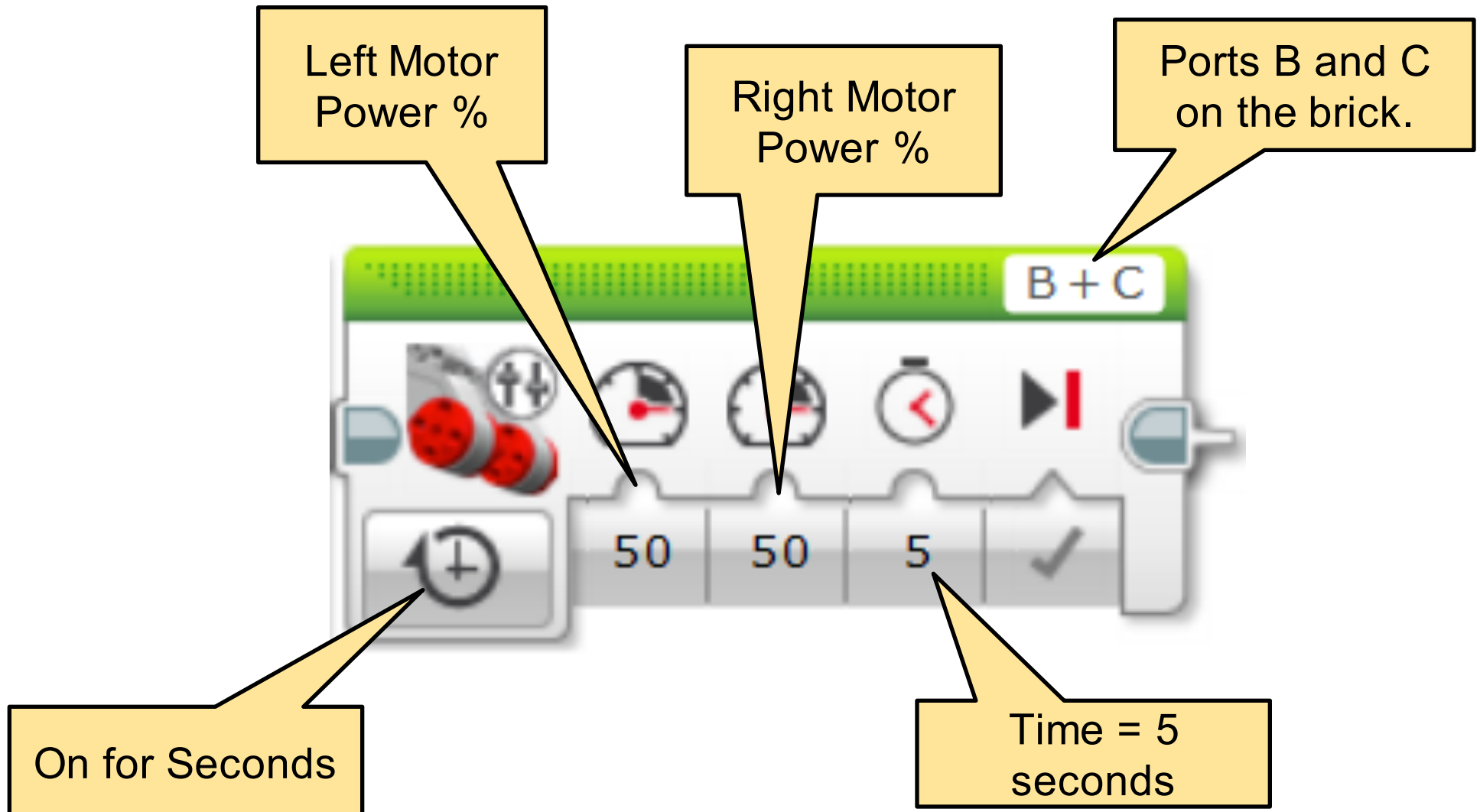
Start the Mindstorm
Program



Start your program
with a MOVE TANK
block.

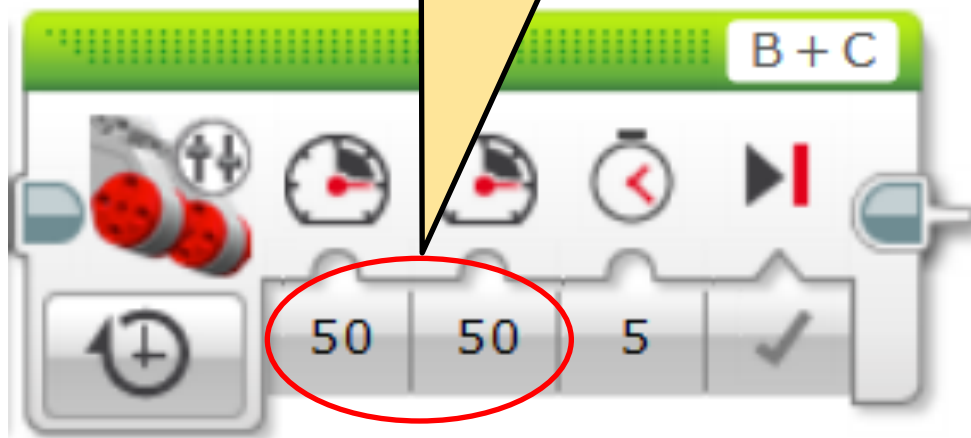


What are the inputs of a MOVE TANK block?

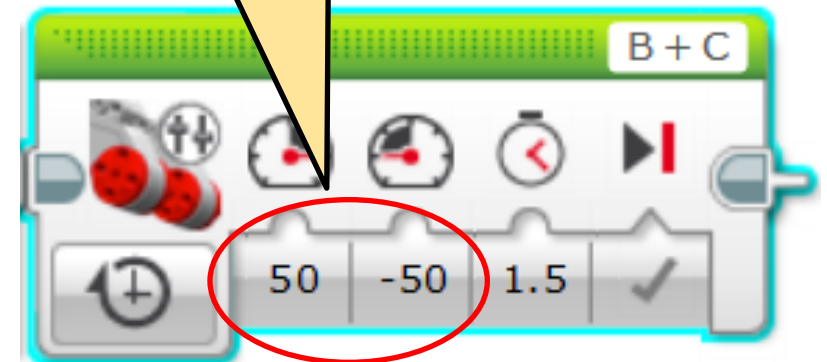


To program the Bot to move in a square we can change the inputs on the MOVE TANK block.

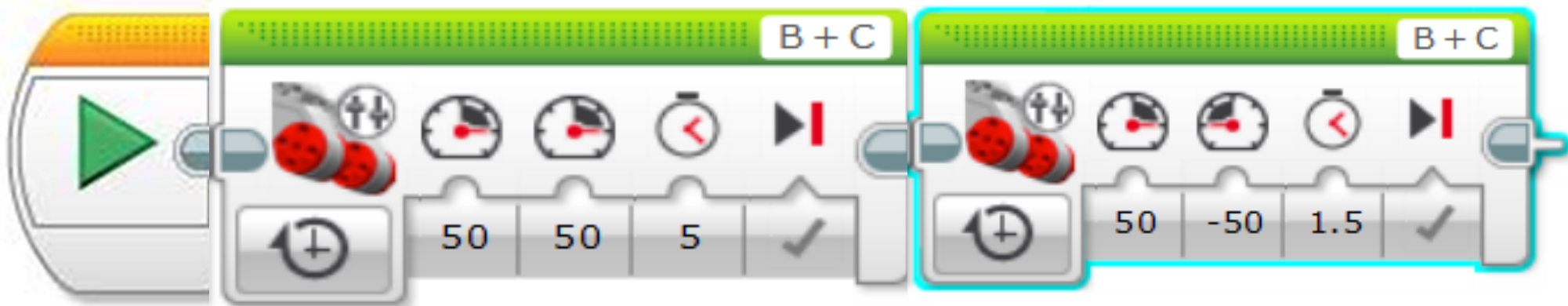
To go straight.
Both motors are at
+50% power.



To turn, one motor is at
+50% and the other at
- 50% power.



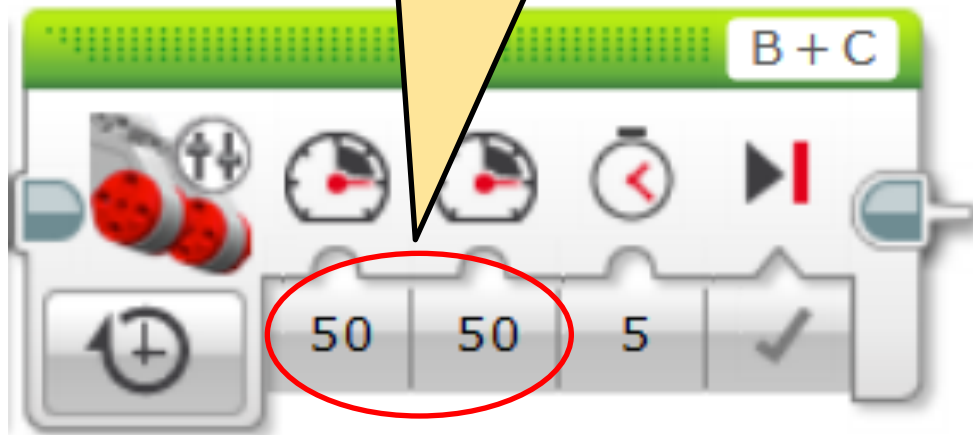
Make your Bot go 23 inches
(two pieces of paper) and then
make a right turn.



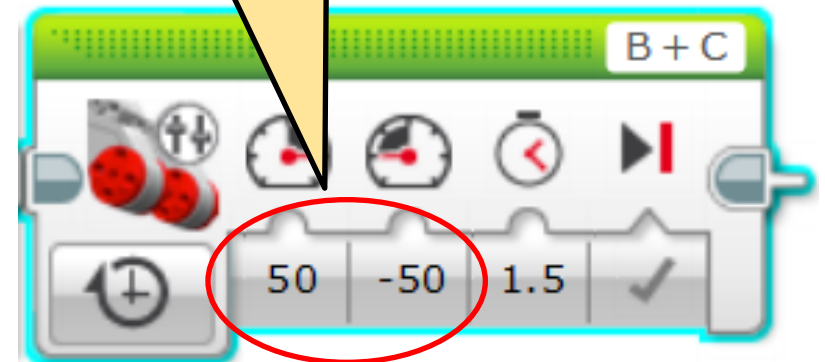
Hint: These are not the correct times.

To program your Bot to move in a square you will change the inputs on the MOVE TANK block.

Use these settings to go straight. Both motors are at +50% power.

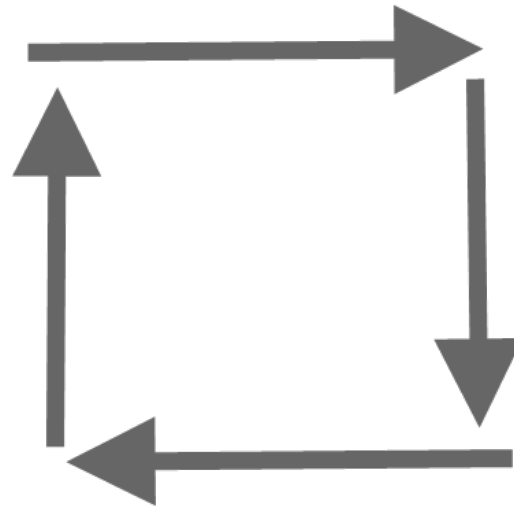
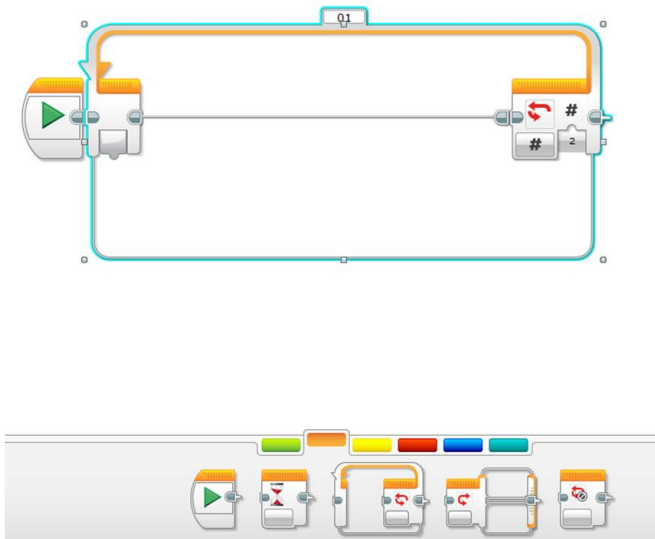


Use these settings to turn.
One motor is at 50% and the other at - 50% power.

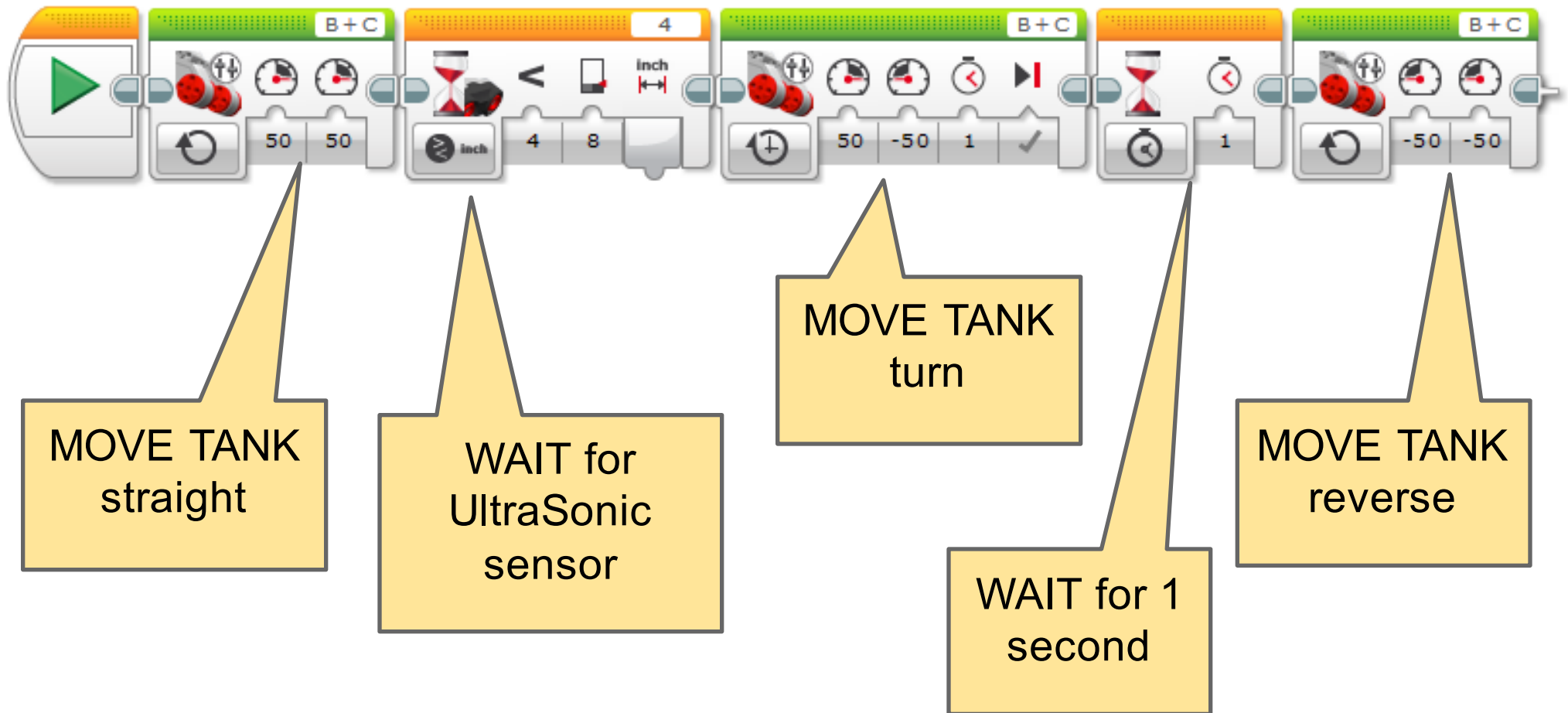


Make a program to go around the square using a LOOP block.

What are the smallest number of blocks you can use to do this?

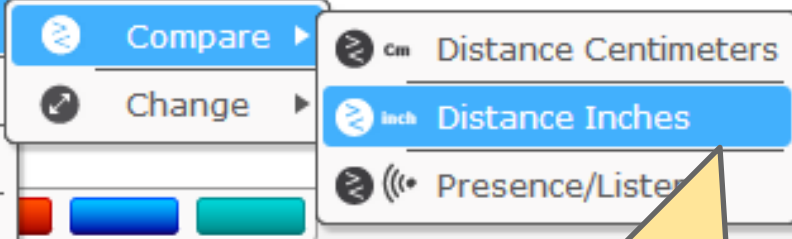
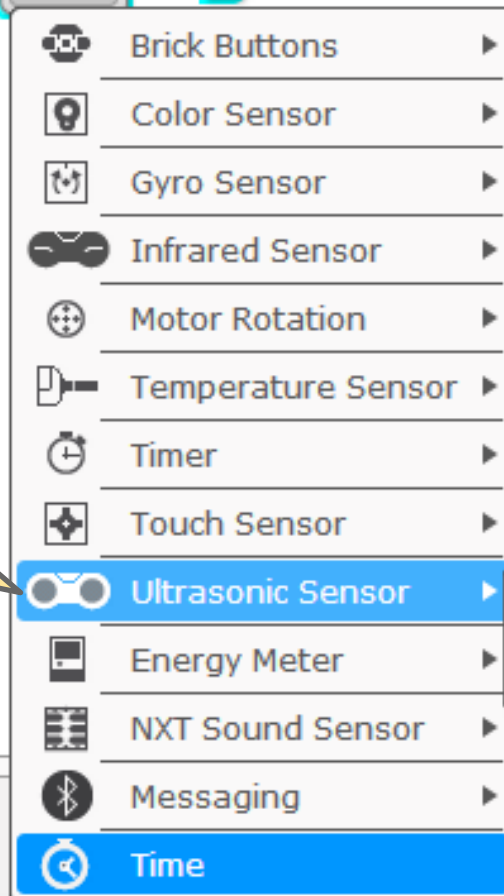


Let's review the blocks you've learned so far:



Start your program with a MOVE TANK block and a WAIT block.

Select
Ultrasonic Sensor



Select **Distance Inches**



Connect the Ultrasonic Sensor to Port #4 on the Brick.

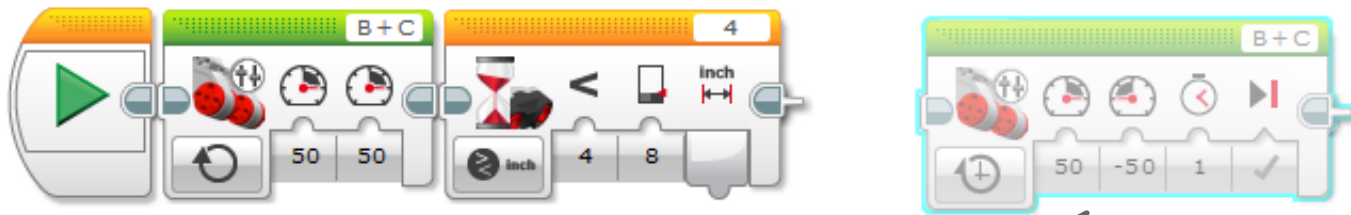
WAIT until the Ultrasonic Sensor is < (less than) 8 inches from the obstacle **THEN** go to the next block.



Change input to 8 inches

When the UltraSonic Sensor sees an object that is less than 8 inches away the program goes to the next block.

Add another block to make the Bot reverse when it sees an obstacle.

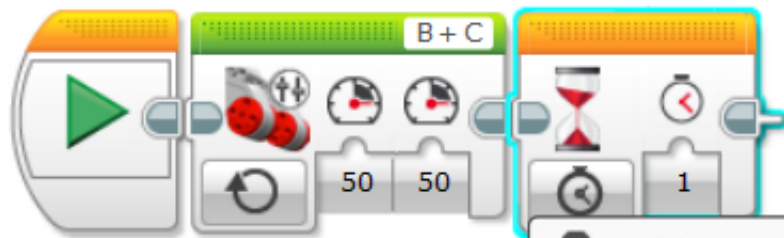


What block is this?

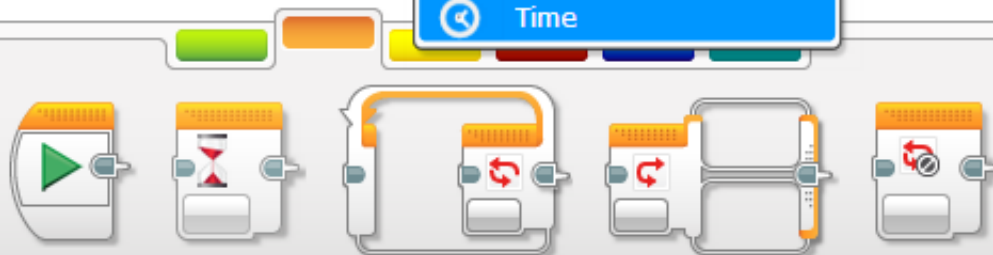
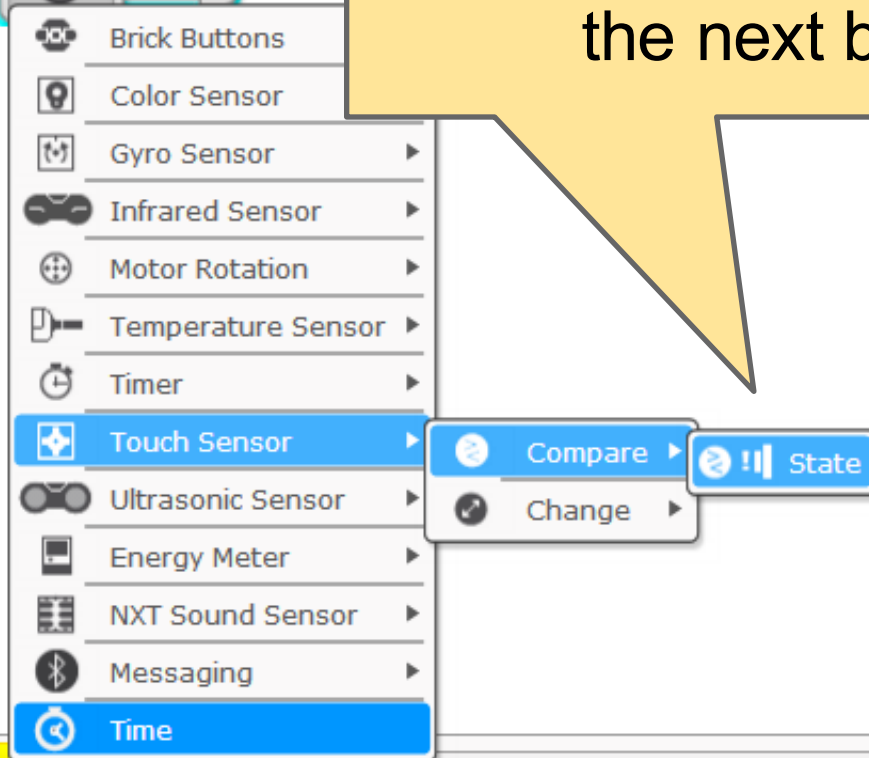
Bot travels around,
changing direction when it detects obstacles it approaches

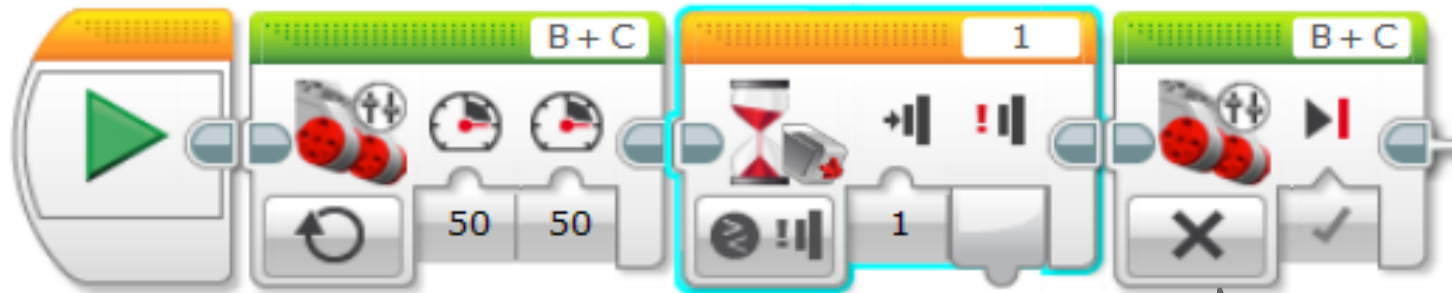


Bot will avoid all obstacles



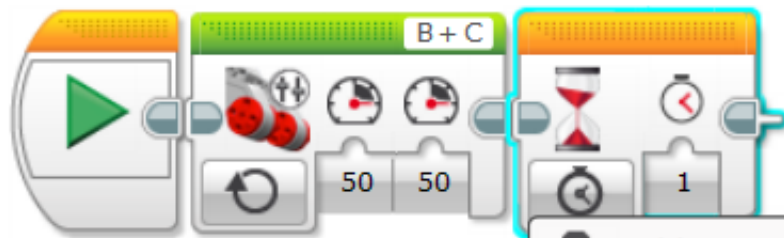
When something bumps into the touch sensor go to the next block



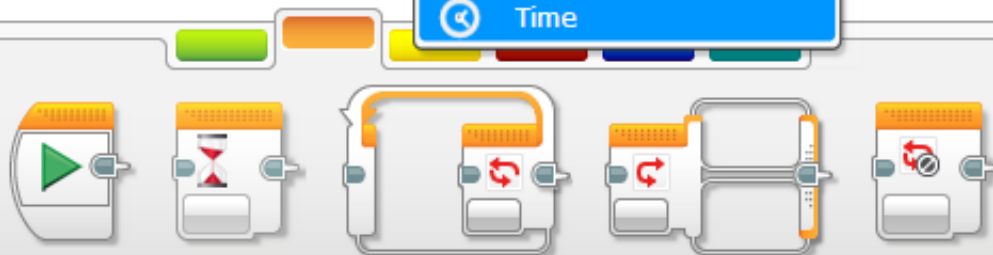
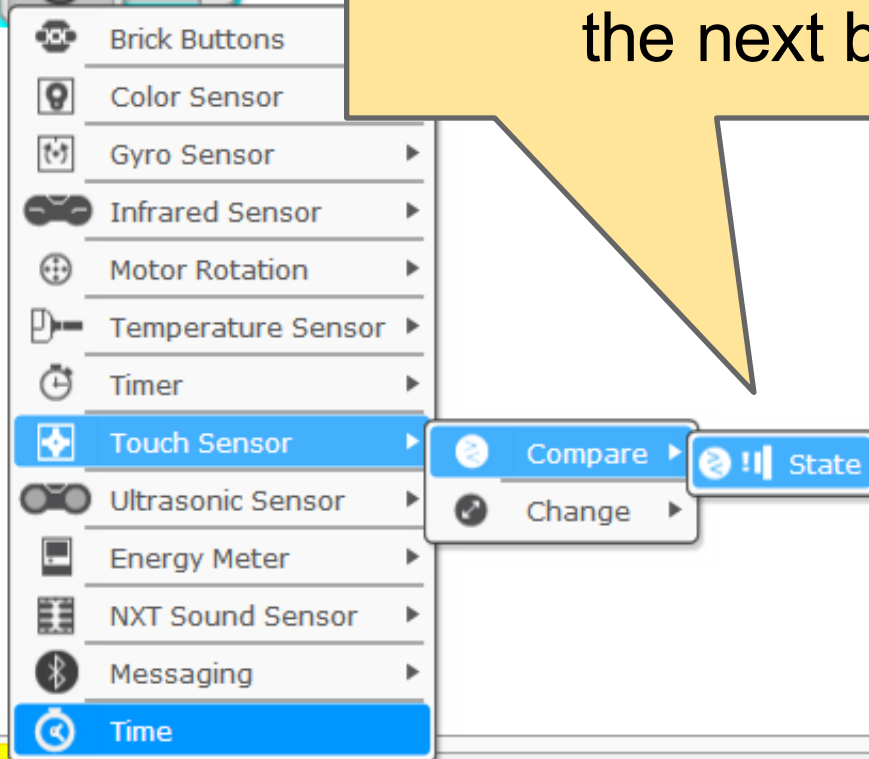


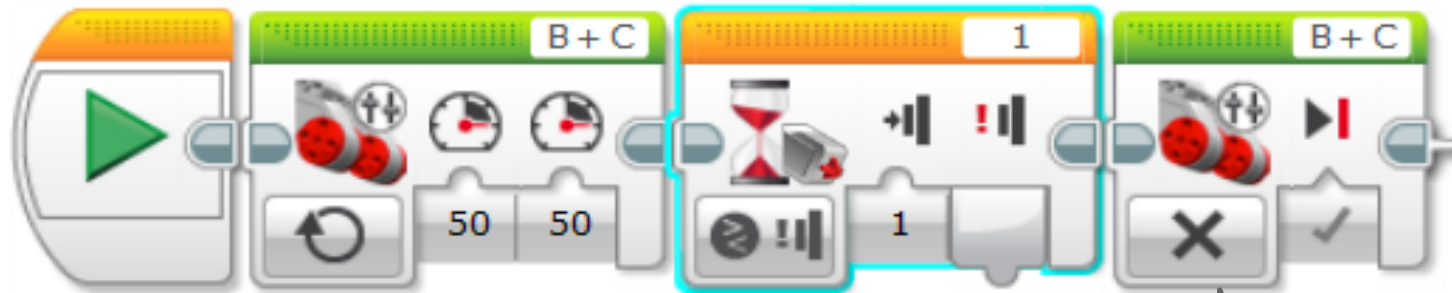
When the touch sensor is pushed go to the next block.

Turn off the motor when the touch sensor is pushed.



When something bumps into the touch sensor go to the next block





When the touch sensor is pushed go to the next block.

Turn off the motor when the touch sensor is pushed.