Go Hit Turn

Mission:
The robot will bump into a wall, turn 90 degrees, and go forward again. It will do this until stopped.

Equipment:
White table top or playing field.
Walls (could be 2x4's or books)

Sensors:
Touch

Directions:
Attach the bump sensor so that it faces the front of the robot.
Program the robot so that it will run to the end of the wall, bump the wall, back up, turn to either the right or the left, continue to the next wall and do the same until it has hit all four walls. Have it stop after hitting four walls.
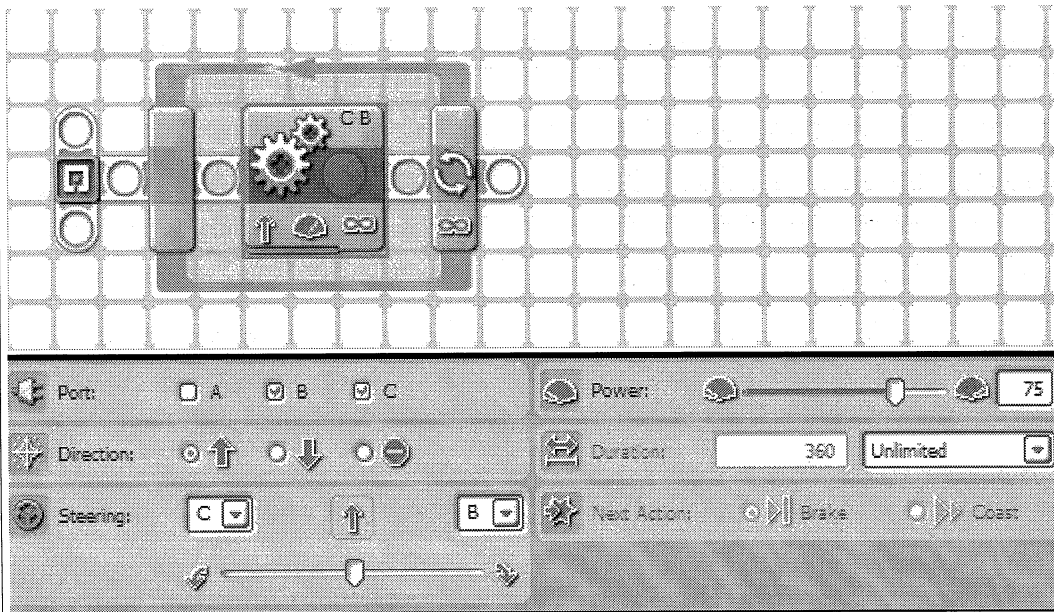Use a bump switch, move, and a loop block.

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1. Place a loop block and leave it at Forever.

Control: Forever

Show: **Counter**
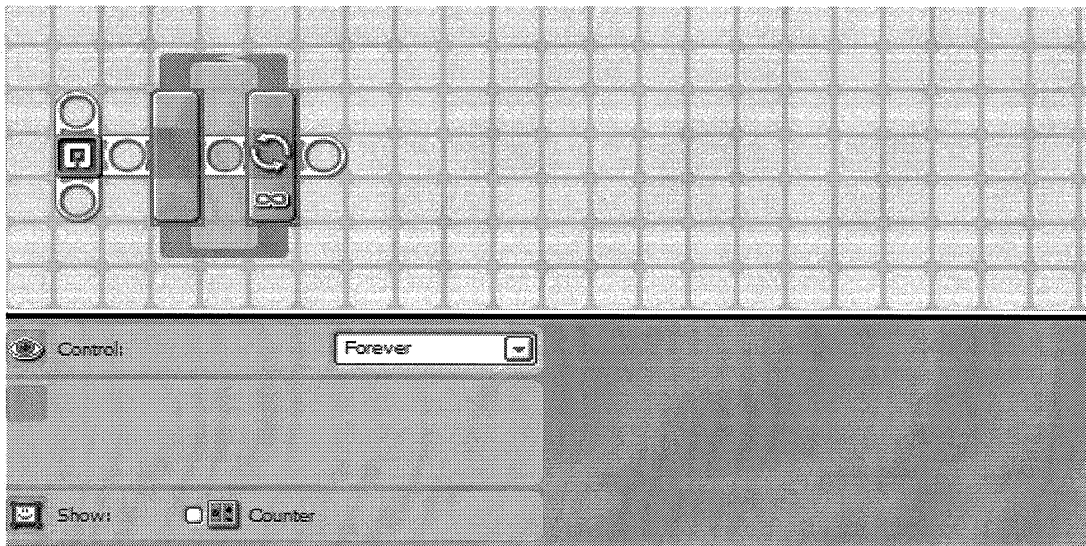
Loops are used to repeat a group of actions over and over. We want the action to be repeated over and over so we leave it at forever.
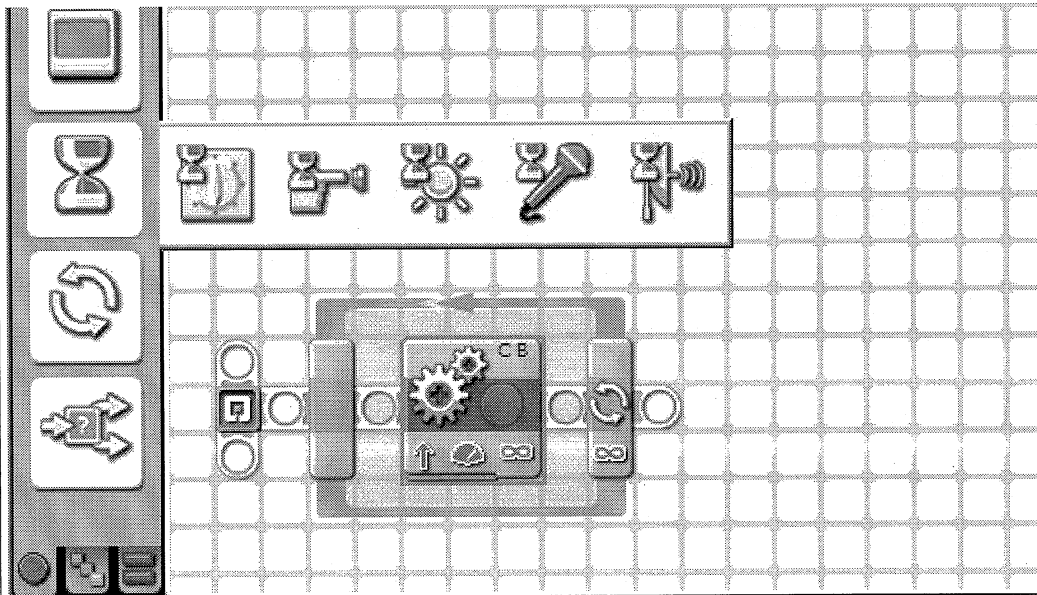
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2. Place a move block inside the loop. Set it to unlimited.

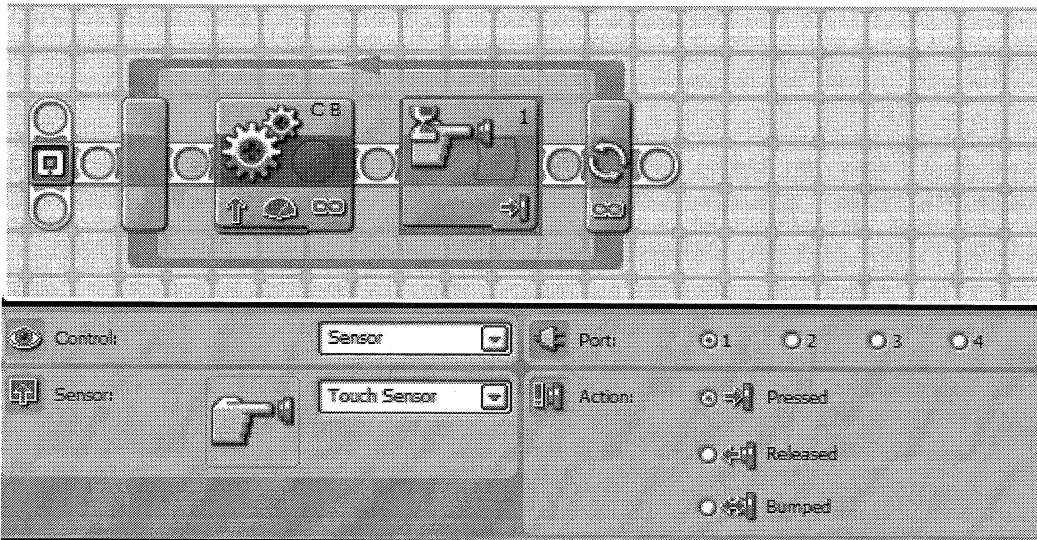| Port: | ☐ A ☑ B ☑ C | | Power: | 75 |
| Direction: | ◉ ⬆ ○ ⬇ ○ ⊖ | | Duration: | 360 | Unlimited |
| Steering: | C ▼ | ⬆ | B ▼ | Next Action: | ○ Brake | ○ Coast |

Setting the move to unlimited will make the robot keep moving until it is told to move to the next thing by some type of wait block. That is the next step.

3. Place your cursor over the wait block and it will show several choices. Pick the touch wait block. It looks like a finger touching a button.
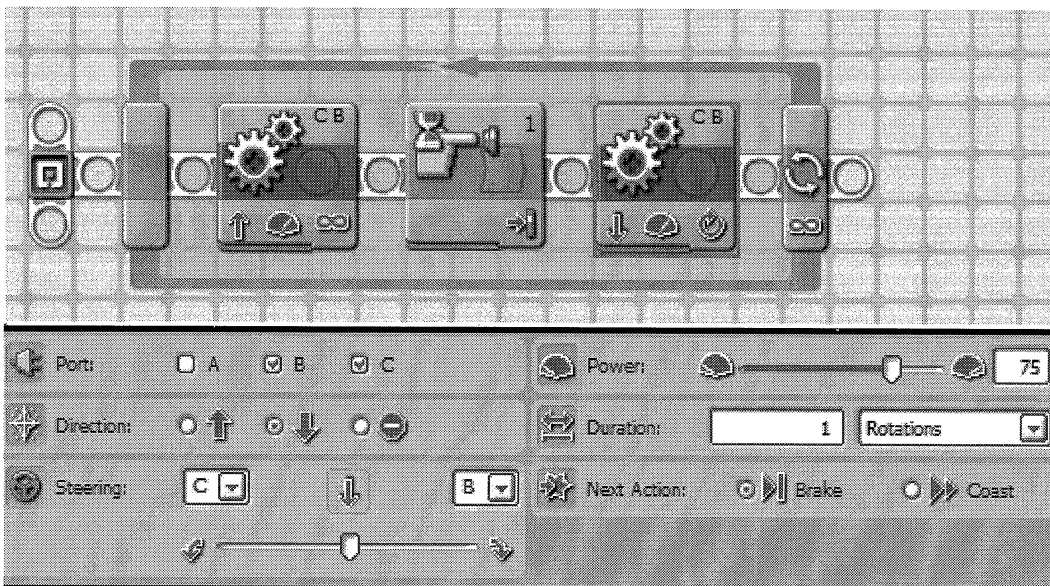
4. Place the touch wait block after the move block.

Control:	Sensor	Port:	⊙ 1	○ 2	○ 3	○ 4
Sensor:	Touch Sensor	Action:	⊙ Pressed			
			○ Released			
			○ Bumped			

The touch wait block will stop the unlimited move once something presses the button on the touch sensor for longer than a second.

5. Place a move block after the light wait block and set it to reverse by clicking the arrow that points down in the left middle area.

Port:	☐ A	☑ B	☑ C	Power:	75
Direction:	○ ⬆	⊙ ⬇	○ ⊖	Duration:	1 Rotations
Steering:	C	⬇	B	Next Action:	⊙ Brake ○ Coast

The move block set to reverse makes the robot go backwards for one rotation of the wheels.

6. Place a move block after the last move block and slide the steering bar all the way to one side. This will cause the robot to spin in place when it turns. You can adjust the turn to be as narrow or as wide as you like. Maybe set it at a 90 degree turn and see if you can program it to touch near the four corners of the practice table.
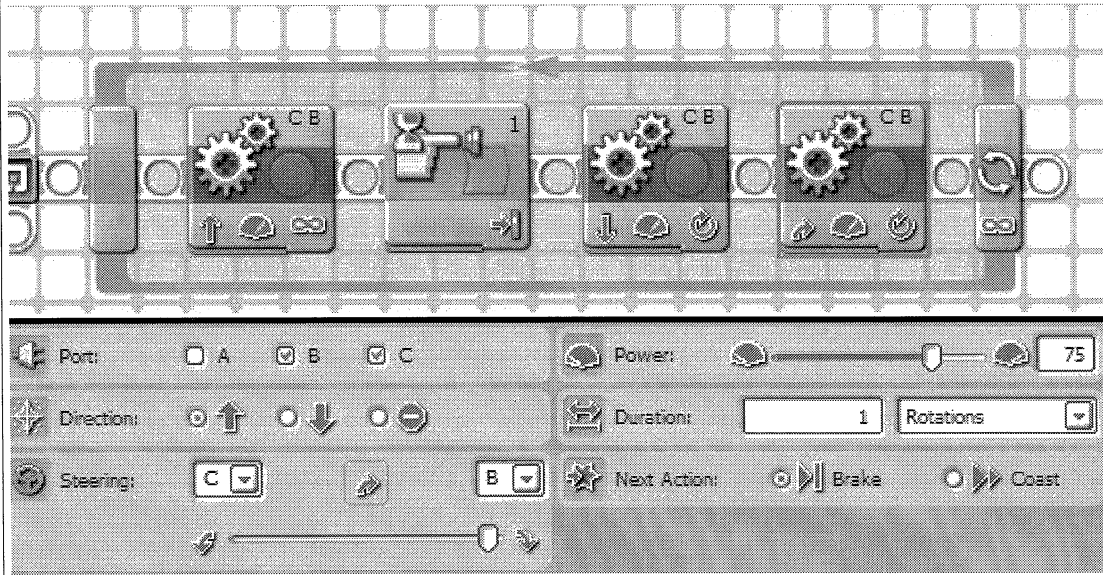
This move block makes the robot turn by spinning in place. You can control the amount of turn by setting the rotations more or less until you get the turn you want.