



## Loops

By Sanjay and Arvind Seshan



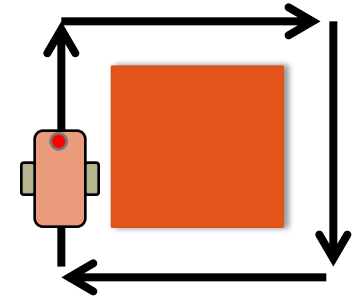
# BEGINNER PROGRAMMING LESSONS

# LESSON OBJECTIVES

1. Learn how to repeat an action
2. Learn how to use Loop Blocks

# REPEATING AN ACTION

How can we play two different tasks multiple times (even forever)



You could do this and copy the two blocks several times:



But this will not work for running the two blocks forever

Is there a way to accomplish our goal?

Hint:

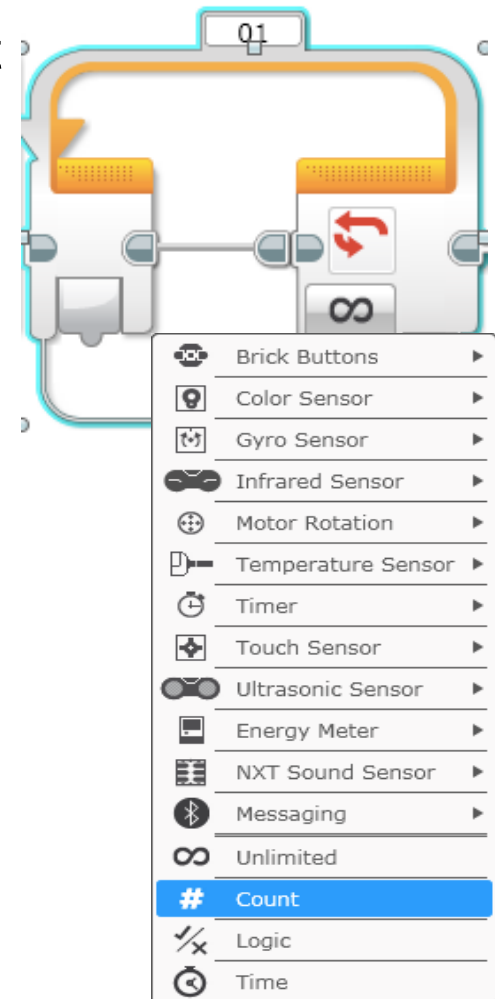


# LOOPS



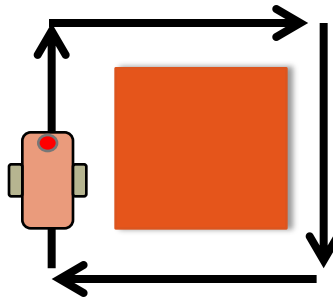
## Loops make repeating a task multiple times easy

- You can have a loop end whenever you want

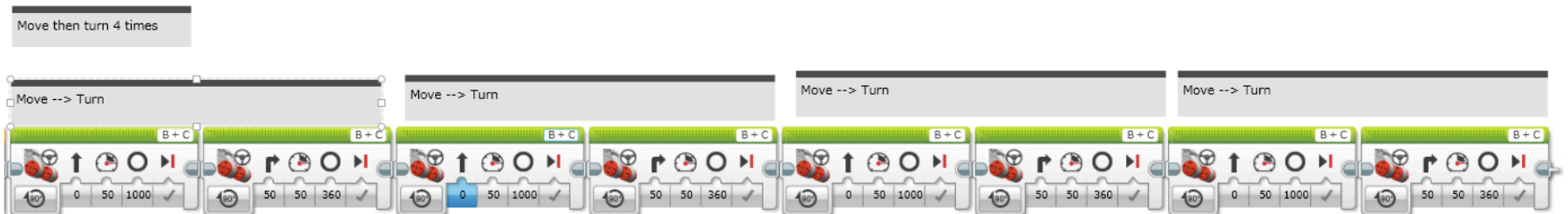


# LOOP CHALLENGE

## Challenge: Write a program to go around a box once.



**The code should be an improvement on the code below (needs to use loops):**



# LOOP CHALLENGE SOLUTION

01

Move --> Turn

Run 4 times

B + C

Steering: 0

90° 0 50 1000 ✓

90° 50 50 360 ✓

# 4

- Brick Buttons ▶
- Color Sensor ▶
- Gyro Sensor ▶
- Infrared Sensor ▶
- Motor Rotation ▶
- Temperature Sensor ▶
- Timer ▶
- Touch Sensor ▶
- Ultrasonic Sensor ▶
- Energy Meter ▶
- NXT Sound Sensor ▶
- Messaging ▶
- Unlimited ▶
- # Count**
- Logic ▶
- Time ▶

# CREDITS

- This tutorial was created by Sanjay Seshan and Arvind Seshan
- More lessons are available at [www.ev3lessons.com](http://www.ev3lessons.com)



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