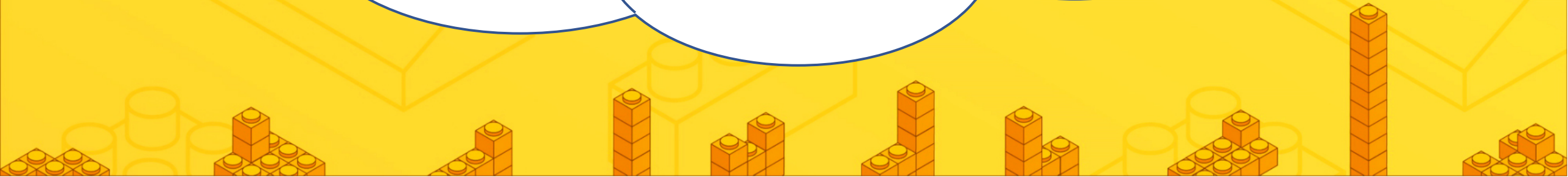




# Shortest Path



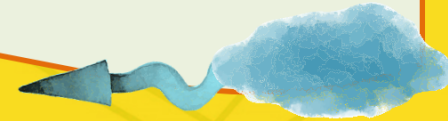
## Task

- **Learn the rules of Task 5: Shortest Path.**
- **Based on previous lessons, use functions such as line following and line counting to complete Task 5.**





# 01 Task



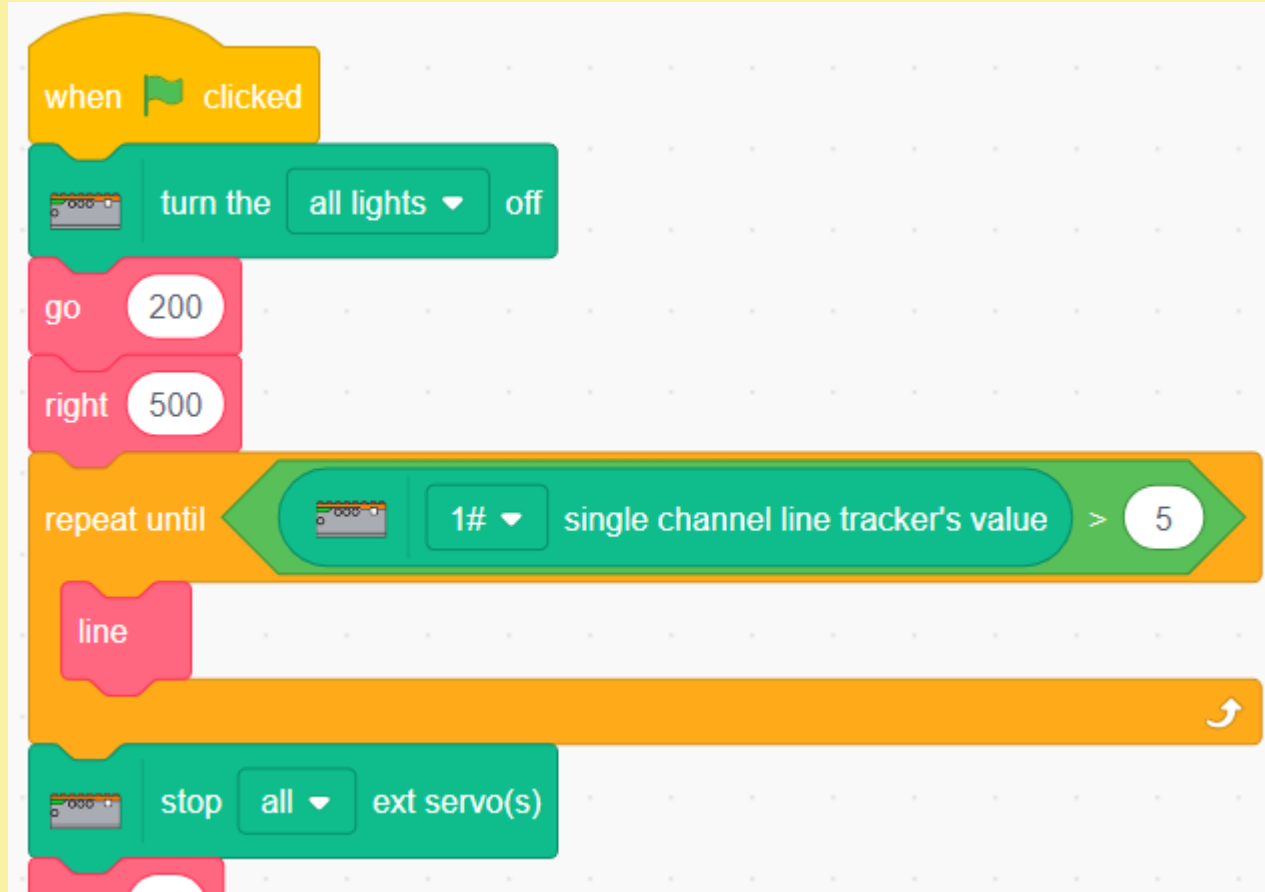




# Task Segmentation 1

- Task Flow

Red line part



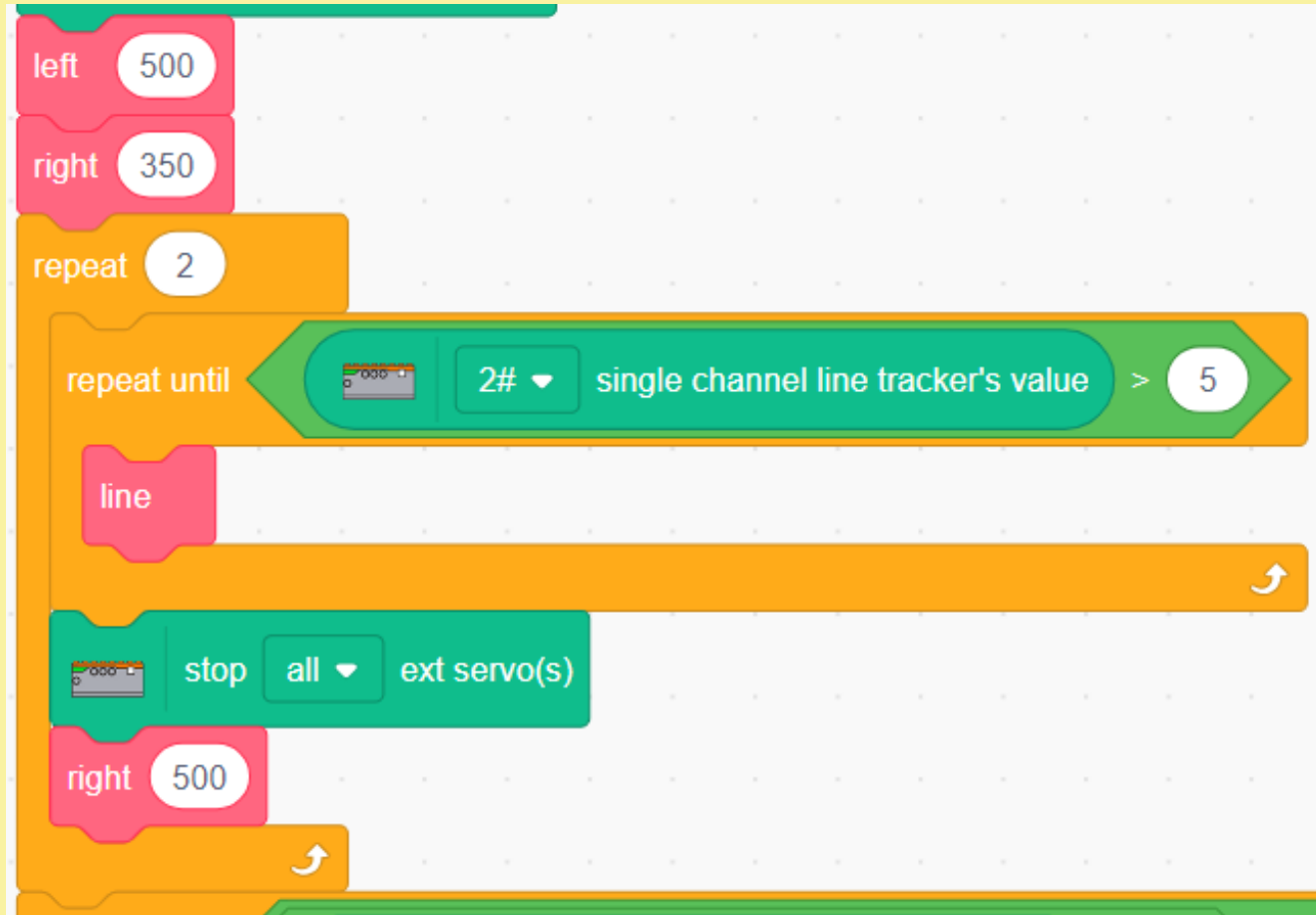
```
when clicked
  turn the all lights off
  go 200
  right 500
  repeat until (1# single channel line tracker's value > 5)
    line
  stop all ext servo(s)
```

The image shows a Scratch script on a grid background. The script starts with a yellow 'when clicked' block. This is followed by a green 'turn the all lights off' block. Next are two pink blocks: 'go 200' and 'right 500'. Then comes an orange 'repeat until' block with a green arrow pointing right. Inside the repeat loop is a pink 'line' block. Below the repeat block is a green 'stop all ext servo(s)' block. The script is partially cut off at the bottom.

# Task Segmentation 1

- Task Flow

Blue line part



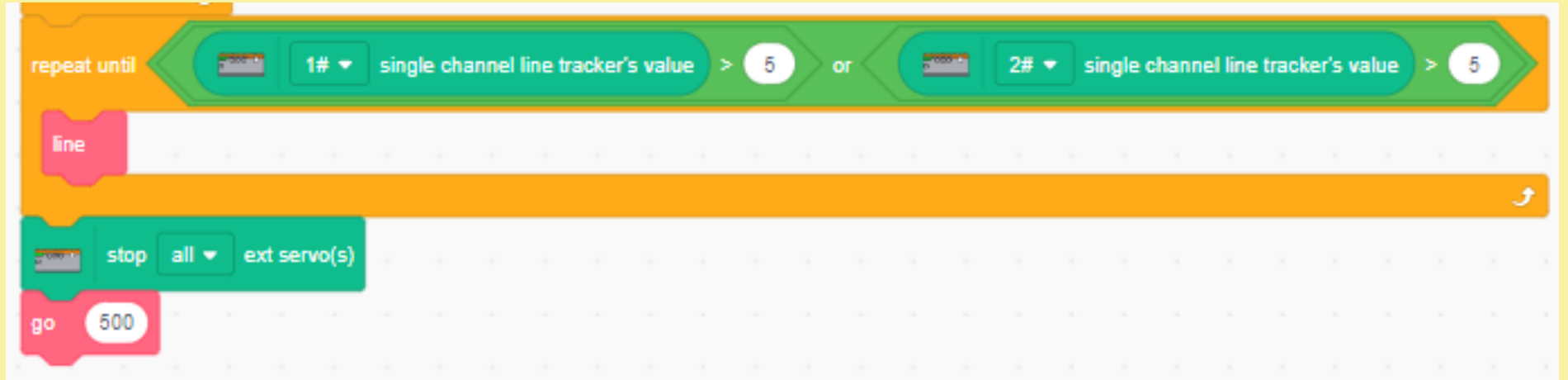
```
left 500
right 350
repeat 2
  repeat until 2# single channel line tracker's value > 5
  line
  stop all ext servo(s)
  right 500
```

The code block is a Scratch script on a grid background. It starts with two pink servo blocks: 'left 500' and 'right 350'. This is followed by an orange 'repeat 2' loop block. Inside the loop, there is a green 'repeat until' block with a servo icon, a dropdown menu set to '2#', the text 'single channel line tracker's value', a greater-than sign '>', and a white circle containing the number '5'. Below the 'repeat until' block is a pink 'line' block. This is followed by a green 'stop all ext servo(s)' block. The loop ends with a pink 'right 500' block. A blue line is drawn across the 'repeat until' block, the 'line' block, and the 'right 500' block.

# Task Segmentation 1

- Task Flow

Green line part



```
repeat until <1# single channel line tracker's value > 5 or <2# single channel line tracker's value > 5  
  line  
  stop all ext servo(s)  
  go 500
```

The image shows a Scratch code block with the following structure:

- repeat until** block with two conditions: `1# single channel line tracker's value > 5` and `2# single channel line tracker's value > 5`, connected by `or`.
- line** block (pink).
- stop all ext servo(s)** block (green).
- go 500** block (pink).

