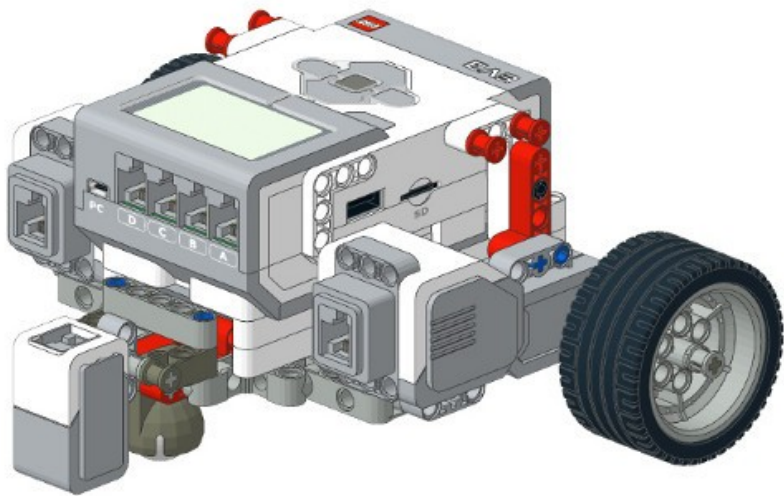


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ENDING THE LOOP
(...for line and gyro follower)



Ending the Loop

- A “while True” loop will never end; your robot will line/gyro follow forever and won't do anything else
- Need to stop at some point
- Most common is by wheel rotations

```
while True:  
    line_follow(100)
```



```
def line_follow_distance(cm, speed):  
    target_degrees = cm / circumference * 360  
    left_wheel_reset_degrees()  
    while left_wheel_degrees < target_degrees:  
        line_follow(speed)
```

Note

- (Slightly) Better to use the average of the left and right wheel
- Reset the wheel rotation to zero before starting the loop
- If the wheel is going backwards, the degrees will **decrease** and become **negative**. Adjust the code accordingly.

Ending the Loop

- The robot will not stop automatically when the loop ends, you'll need to give it a stop command

```
line_follow_distance(10, 100)  
raise_arm()
```

No stop command

Robot will continue moving while raising arm.

```
line_follow_distance(10, 100)  
stop_moving()  
raise_arm()
```

With stop command

Robot will stop moving before raising arm.

```
line_follow_distance(10, 100)  
turn_left(90)
```

No need for stop command

The “turn_left” function will set the motor speed immediately after the line follow, so no need to stop it.

Ending the Loop

- Same technique applies for both line and gyro follower
- Other options for ending the loop...
 - By ultrasonic sensor distance
 - Until left / right color sensor sees black
 - Until left / right color sensor sees white

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