Motor Speed Introduction

1. Copy your **motor_control_intro.py** file to **motor_control_speed_intro.py**
2. Create global speed variables.

```
 14
 15    left_speed = None
 16    right_speed = None
 17
 18    def init():
```

3. Create PWM speed variables in the init() function. These must be flagged as globals (line 19)

```
17
18    def init():
19        global left_speed, right_speed
20
21        print("Initializing the GPIO ports supporting drive ops.")
22        #Configure GPIO settings
23        GPIO.setwarnings(False)
24        GPIO.setmode(GPIO.BOARD)
25
26        #set MC pins as output
27        GPIO.setup(L_IN1, GPIO.OUT, initial = False)
28        GPIO.setup(L_IN2, GPIO.OUT, initial = False)
29        GPIO.setup(R_IN1, GPIO.OUT, initial = False)
30        GPIO.setup(R_IN2, GPIO.OUT, initial = False)
31
32        # set enable pins as output
33        GPIO.setup(L_PWM, GPIO.OUT, initial = True)
34        GPIO.setup(R_PWM, GPIO.OUT, initial = True)
35
36        left_speed = GPIO.PWM(L_PWM, 50)
37        right_speed = GPIO.PWM(R_PWM, 50)
38        left_speed.start(0)
39        right_speed.start(0)
40
```

4. Test the code by setting the speed value before calling a move.

```
92
93    #program starts here
94    init()
95    left_speed.ChangeDutyCycle(50)
96    right_speed.ChangeDutyCycle(50)
97    forward(1)
98    time.sleep(1)    #be kind to the drive -
99    backward(1)
```