

Just received your Invent! kit? Here's how to get started quickly:

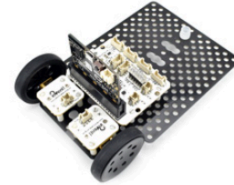
1

Insert the **3x AAA batteries** into the battery holder, underneath the controller board.



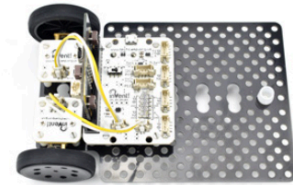
2

Push the **controller board**, and the **two motor blocks** into the baseboard like in the picture to make a simple 2 wheeled robot.



3

Use the two wire cables to connect the motors to '**M1 (left motor)**' and '**M2 (right motor)**' like in the picture. They can only go in one way around!

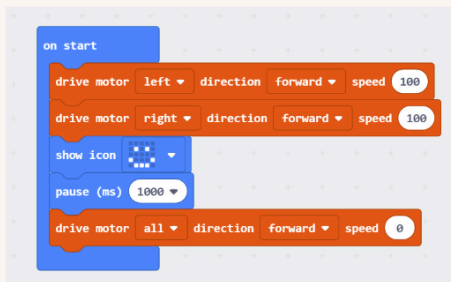


4

Now it's time to write a program! Choose how you want to code:



Blocks



- Great for younger Inventors
- Block based programming
- Web based - works on any computer with an internet connection

Launch Blocks

Python

```
drive_motor(1,100)
drive_motor(2,100)
display.show(image.HAPPY)
sleep(1000)
drive_motor(0,0)
```




- For older Inventors
- Text based programming
- Web based - works on any computer with an internet connection

Launch Python

6

If you're using Python, copy the text from [this file](#) at the top of your program. **You must use this every time!**



```
1 from microbit import *
2
3 from microbit import *
4 def drive_motor(m,s):
5     pin14.set_analog_period(s)
6     pin16.set_analog_per
7     if(m==0 or m==1):
8         pin14.write_analog(1023 if m(s)>0 else 0)
9         if(m==0 or m==1):
10            pin16.write_analog(1023 if m(s)>0 else 0)
11
12 def calibrate_line_sensors():
13     p1,p2 = pin_names_tuple(1,1023,1023,1023,1023,1023)
14     drive_motor(0,100)
15     while (running_time() < 1000):
16         [pin0.read_analog(), pin1.read_analog(), pin2.read_analog(), pin3.read_analog(), pin4.read_analog(), pin5.read_analog(), pin6.read_analog(), pin7.read_analog(), pin8.read_analog(), pin9.read_analog()]
17     def digital_read_line(s):
18         return 1 if (s==pin0.read_analog()) else 0
19     def analog_read_line(s):
20         v = pin0.read_analog() if s==0 else pin1.read_analog()
21     return v
22
23 # Invent! Code End
```

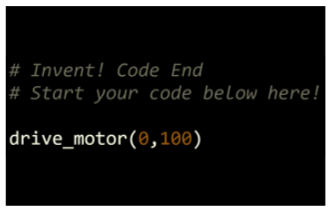
7

If you're using the **blocks editor**, build the program in the picture.



8

If you're using **Python**, write the program in the picture.

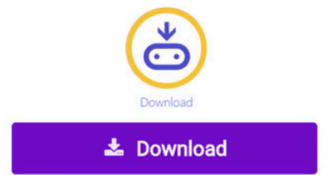


```
# Invent! Code End
# Start your code below here!

drive_motor(0,100)
```

9

Press the **Download** button to save the program to your computer.



10

Plug your micro:bit into your computer using the **USB cable** provided - it will appear as a USB drive. **Copy** the file you downloaded onto it.



11

Remove the cable, and turn on the board using the **switch**. A green light should come on and the robot should **drive forwards!**

