

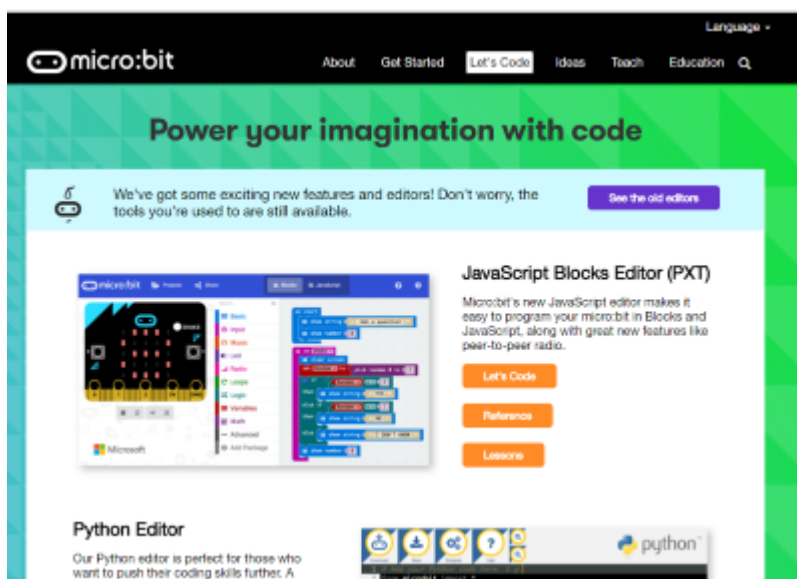
Getting the car to move using the on board L298N motor shield.

For more information about the L298N motor shield we use to power the motors on the car – see https://www.cbis.education/content/L298N_info.pdf

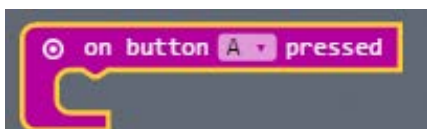
You need to plug the BBC micro:bit into a computer using a USB cable – or sync to it using Bluetooth after downloading the correct app from your app store.

This sample assumes you have already done that!!! If you need help, get in contact support@cbiseducation.com

Go to <http://microbit.org/> and select “Let’s Code” then go to Javascript Blocks Editor (PXT) and click “Let’s Code”

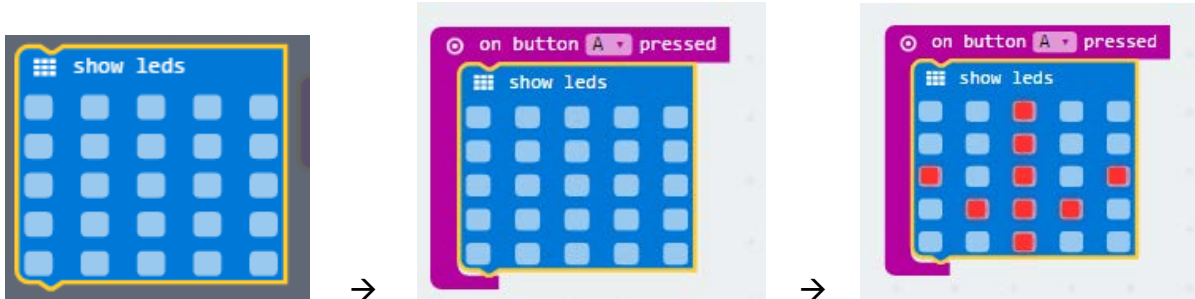


When the programming screen loads - First Click on the ‘input’ tab, select the ‘on button A pressed’ block and drag it onto the blank page

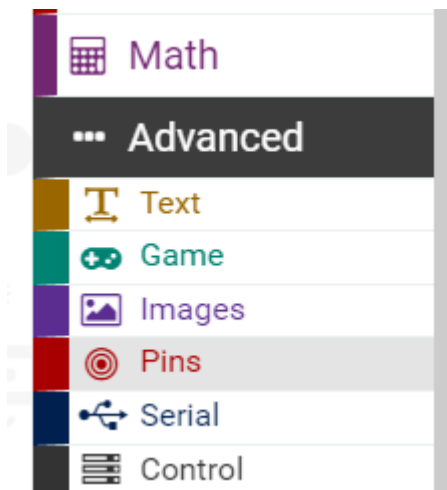


CBiSEducation™ BBC micro:bit Robot Car

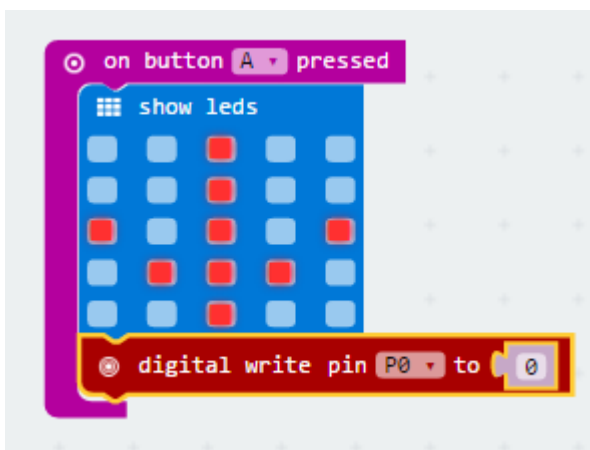
Click on the 'Basic' tab, select the 'Show LEDs' block and drag it in-between the 'on button A pressed' block. Then create a face down arrow by clicking into each individual LED square.



Next, click on the 'Advanced' tab and select the 'pins' sub tab

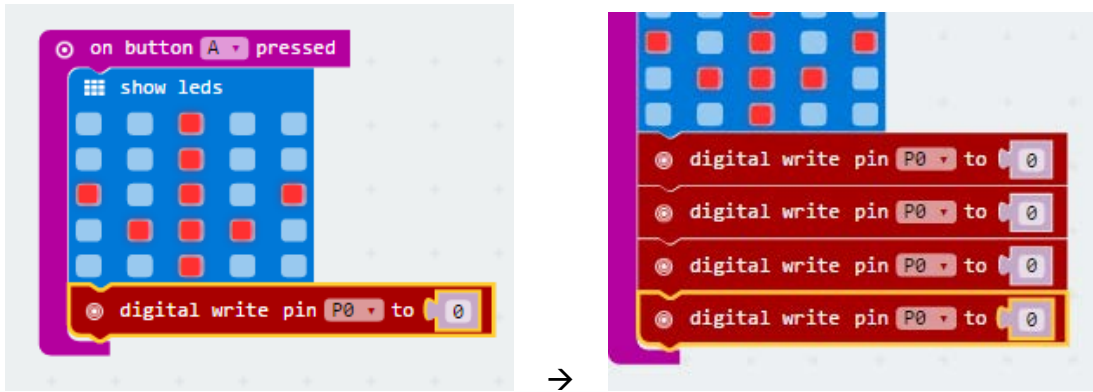


Drag and drop the 'Digital write pin P0 to 0' block underneath the 'Show LEDs' block

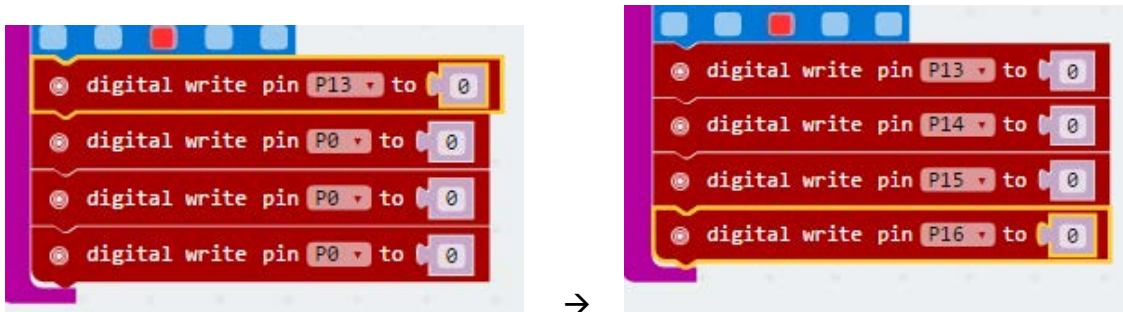


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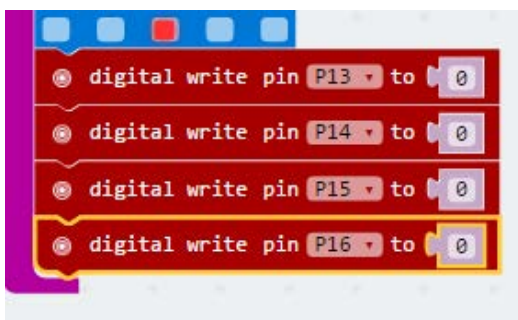
Duplicate the 'Digital write pin P0 to 0' block three times by right clicking on the block then clicking Duplicate, then place them underneath each other



Click on the 'P0' from the first 'digital write pin P0 to 0' block and change it to 'P13', repeat for the other blocks, changing the 'P0' for 'P14', 'P15', 'P16'

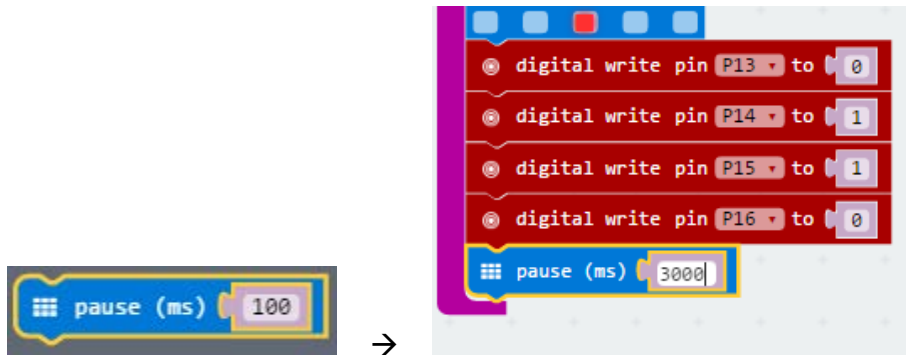


Next change the second and third 'digital write' block from '0' to '1'

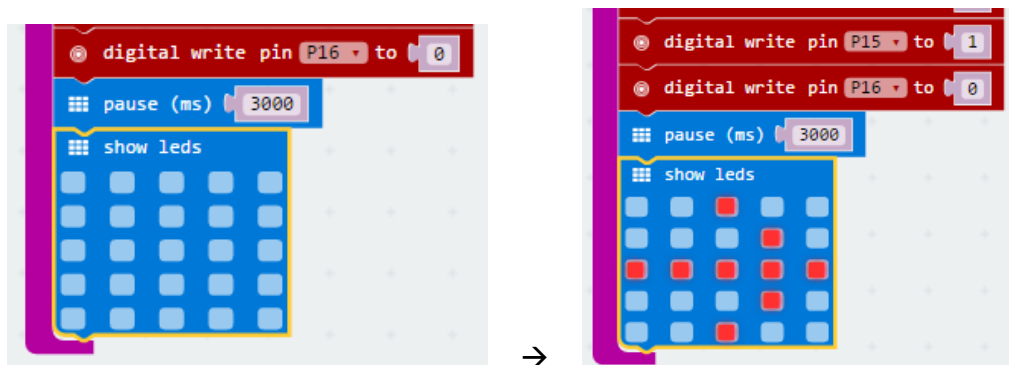


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Click on the 'Basic' tab, select the 'Pause' block drag and drop it underneath the last 'digital write' block. Then change the value from '100' to '3000'

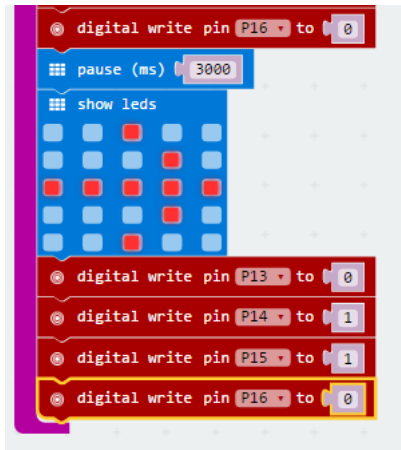


Next click on the 'Basic' tab, select the 'Show LEDs' block and drag it underneath the 'pause (ms) 3000' block. Then make an arrow pointing right by clicking in each of the LED boxes.

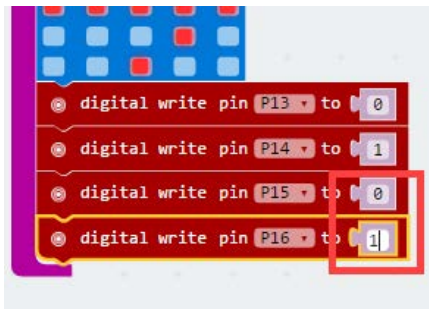


Duplicate the 'digital write pin P13, P14, P15, P16' blocks and place them in order underneath the 'show leds' block

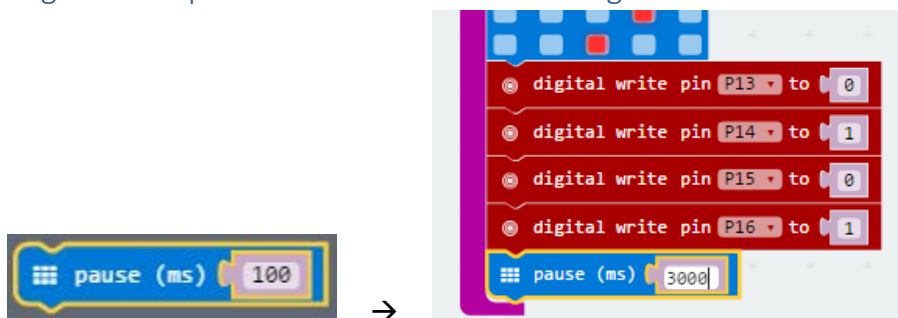
Car



Replace the '1' from the 'digital write pin P15' block with '0' and replace the '0' from the 'digital write pin P16' block with '1'

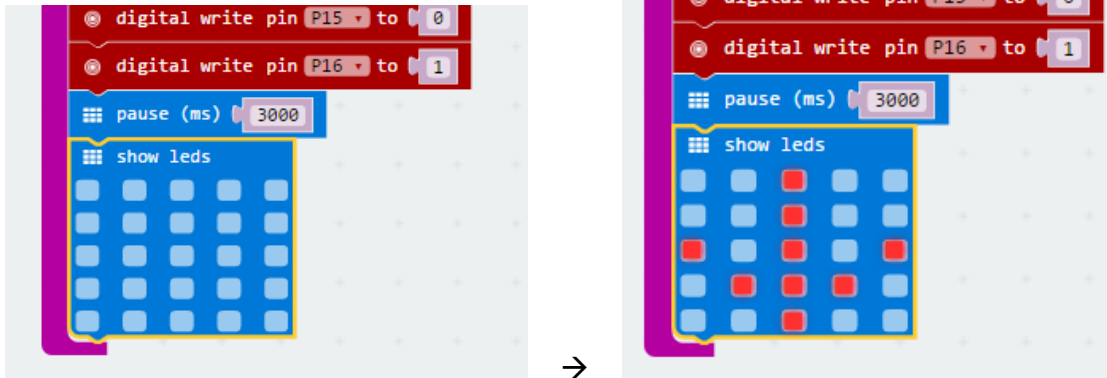


Click on the 'Basic' tab, select the 'Pause' block drag and drop it underneath the 'digital write pin P16 to 1' block. Then change the value from '100' to '3000'

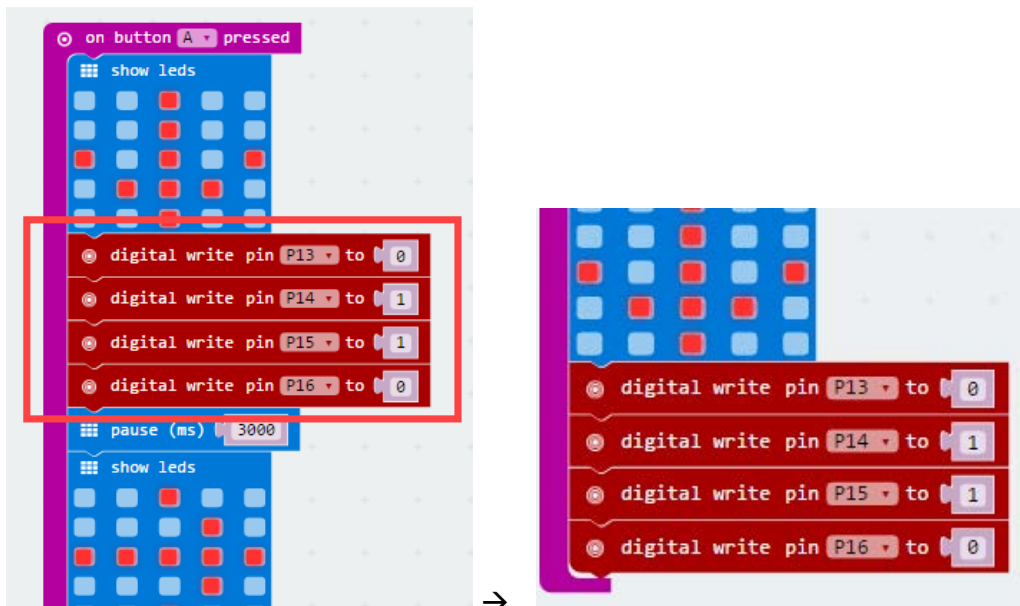


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Click on the 'Basic' tab, select the 'show leds' block and drag it underneath the 'pause (ms) 3000' block. Then make an arrow pointing down by clicking in each of the LED boxes.

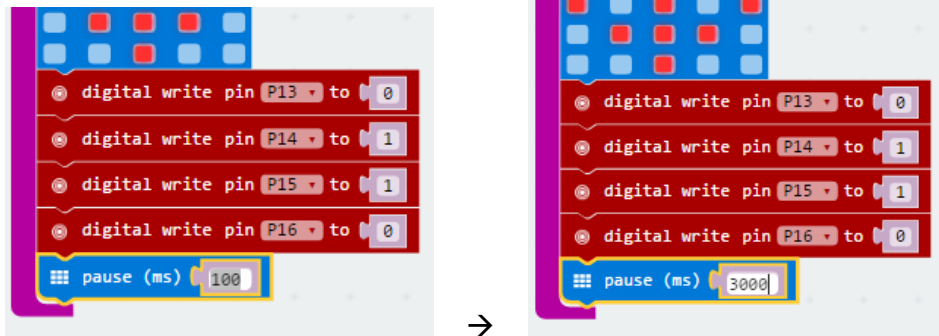


Duplicate the first set of 'digital write' blocks and place them underneath the third 'show leds' block, making sure that they are positioned in order.

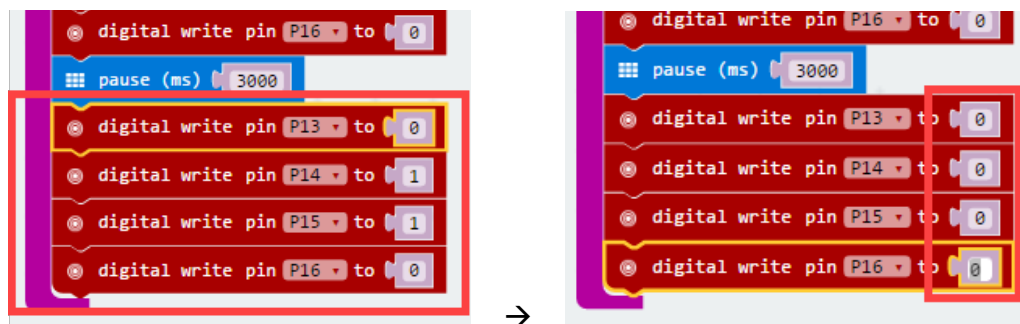


Car

Click on the 'Basic' tab, select the 'Pause' block drag and drop it underneath the previously placed 'digital write pin P16 to 1' block. Then change the value from '100' to '3000'



Finally, duplicate the four 'digital write' blocks, place them underneath the previously placed 'pause' block. Then change all the values to '0'



Click to "Download" the file to your computer – copy it across to the BBC micro:bit and then it is ready to test the car.

Car

See <https://www.cbis.education/robotic-car-kit#bitcar> for more resources!

HAVE FUN!!!