Edge Tracker

https://makecode.microbit.org

Make a robot follow the edge of a track

Import the maqueen library

1) Open **https://makecode.microbit.org**
2) **+New Project**
3) Select +Extensions > click "maqueen" (**not** Maqueenplus)

m Maqueen
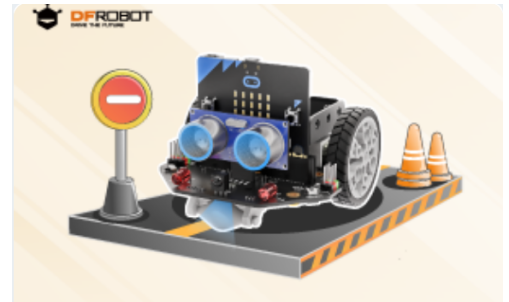
maqueen

Maqueen is an easy-to-use programming educational Robot

Hold the robot over the black track and move it left and right.
See the blue lights on each side switch off when it's held over the track.
*The robot has a pair of **infra-red reflectance** sensors you can see underneath.*

Simple edge tracker

Use the right (or left) sensor to see if the robot is on or off the line.
Run just the right motor to steer left, and just the left motor to steer right.

```
on  right ▼  line tracking sensor  low ▼
    motor  left ▼  stop
    motor  right ▼  move  Forward ▼  at speed  20

on  right ▼  line tracking sensor  high ▼
    motor  left ▼  move  Forward ▼  at speed  20
    motor  right ▼  stop
```
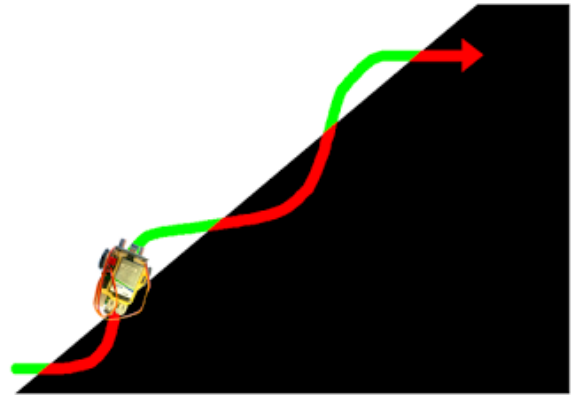
- **Low** indicates the dark track
- **High** indicates white off-track

1) Add the code (left)
2) Connect the robot and download the code
3) Switch on the robot using the switch at the 'tail'
4) Unplug the robot
5) Place it on the track

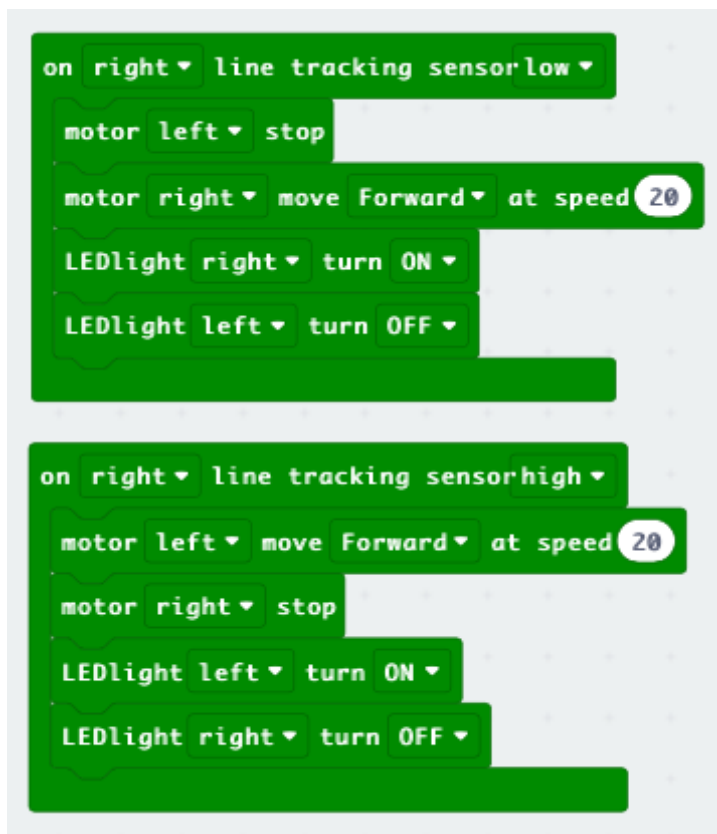*Watch it weave its way along the edge of the track*

Try changing the speed. How fast can it go without coming off the track?

LED headlights

Use the LED headlights to show which way the robot is turning.

6) Add extra **LEDlight** instructions to your code, to turn the headlights on and off.

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Save your work to a USB drive.