Servos

Servos are types of accurate motors that use angles to measure speed and position.

There are two types of servos: standard and continuous.

Standard servos have a fixed set of angles they can rotate through (e.g. 0-180 degrees).

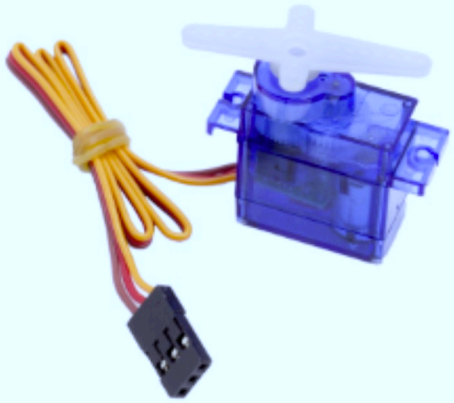
Continuous servos use the angle sent to them to control their speed (forwards and backwards).

The servos we will be using (to start with anyway) are continuous.

It's important to understand the angles which we will be using:

- 0 - servo is stopped
- 1 - servo is full speed backwards (clockwise)
- 180 - servo is full speed forwards (anti-clockwise)

From my testing, the servos stopped to change direction around the 70-75 degree mark. The servos you use may be calibrated slightly differently.



Grab a Move buggy and have a go at making it drive using this code (which will only control one wheel) as a starting point. We will look at how to control the LED strip across the top of the buggy later.

```
from microbit import *

pin1.set_analog_period(20) # servo on A button side
pin2.set_analog_period(20) # servo on B button side

while True:
    if button_a.was_pressed():
        pin1.write_analog(180)
        sleep(500)
        pin1.write_analog(0)
    if button_b.was_pressed():
        pin1.write_analog(1)
        sleep(500)
        pin1.write_analog(0)
```

Experiment with different speeds, and try to write a simple program that makes your buggy drive in a square pattern.