CoderDojo Gateshead

ARDUINO

Pathway – Level 2

More Arduino:
Joysticks, servo motors, motion sensors, and reach robot!

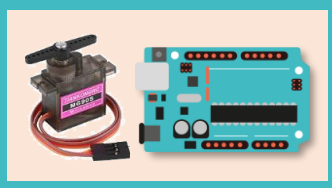
More Arduino adds experience of more peripherals leading to the final reach robot project.

Explore

Get new skills

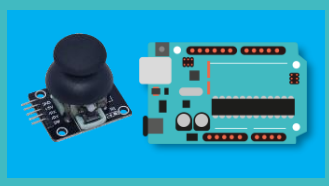
Servo Sweep

You will use code from the Servo.h library to control the position of a small servos arm. Then add code to change the servo's behaviour, as challenges.



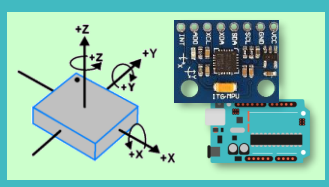
Joystick sensor

You will connect a joystick sensor to a Nano microcontrollers input pins, and display the values read from it on the serial monitor, 10 times a second.



MPU6050 motion sensor

You will connect an MPU6050 sensor to the Nano microcontroller, read data from its registers and display that data on the serial monitor.

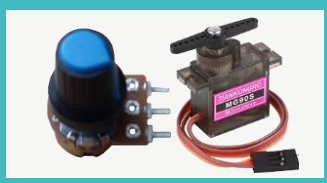


Design

Make design decisions

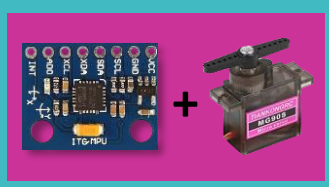
Servo Knob

Use code from the Servo.h library to position of a small servos arm using a potentiometer. Then add code to change the servos behaviour.



MPU6050 + Servo

You will connect an MPU6050 motion sensor, and servo to the Nano, read data registers over the I2C bus, and map a roll angle onto servo PWM drive values.



Invent

Create a unique solution

Reach Robot

You will research the information about the project on a web site, then use your knowledge to write code to implement functions that operate the robot.