

Sensing

Day 2

Digital Sensing

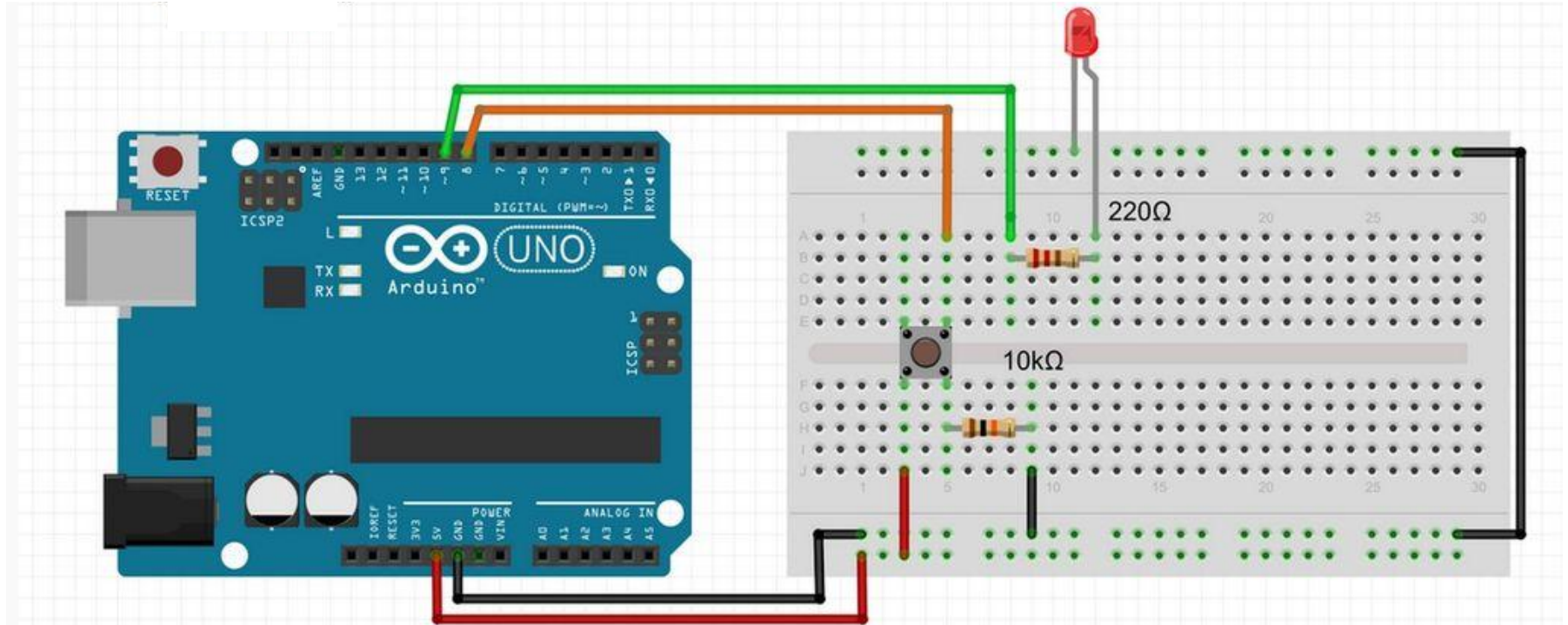
`pinMode(pinNumber, mode)`

INPUT/OUTPUT

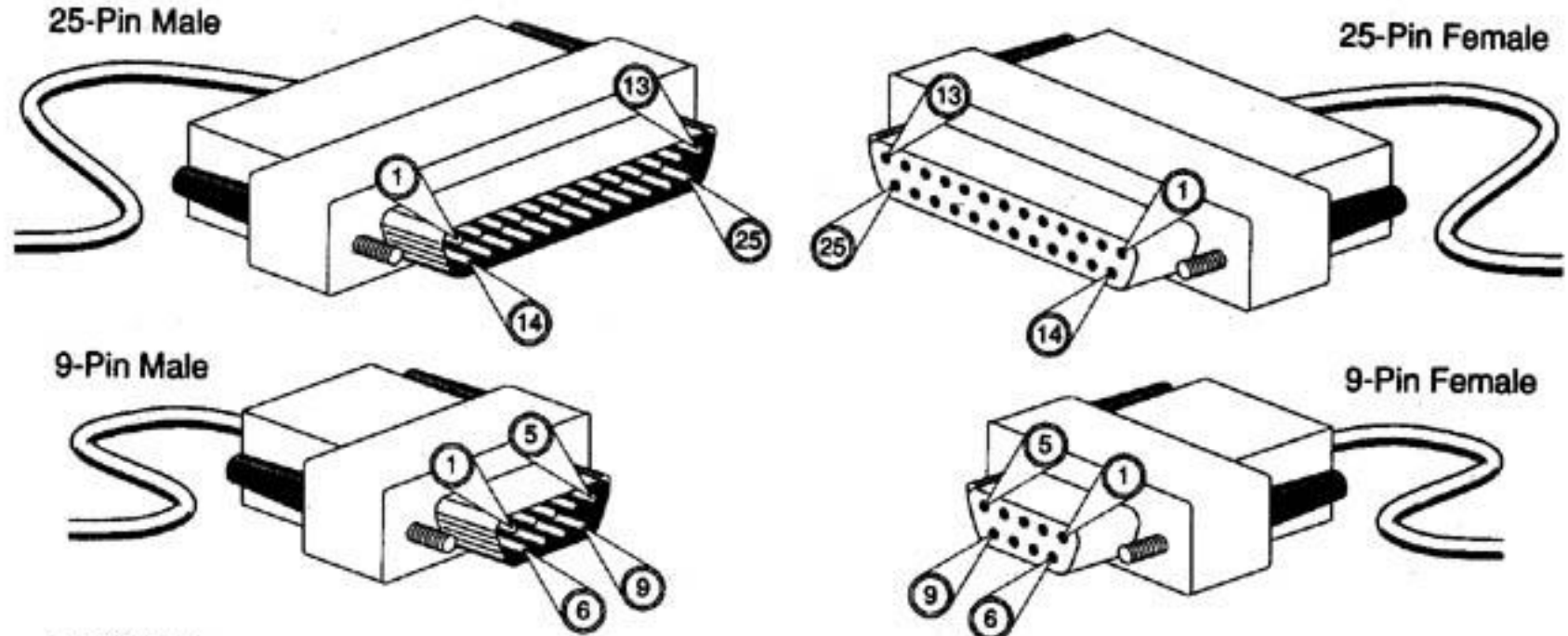
digitalRead(pinNumber)

HIGH / LOW

Pushbutton Circuit



Serial Communication



<https://www.arduino.cc/reference/en/language/functions/communication/serial/println/>

Also check the code linked in the pushbutton circuit

Coding Challenge nr 2



Use the button as a switch!
<https://www.arduino.cc/en/tutorial/switch>

Analog Sensing

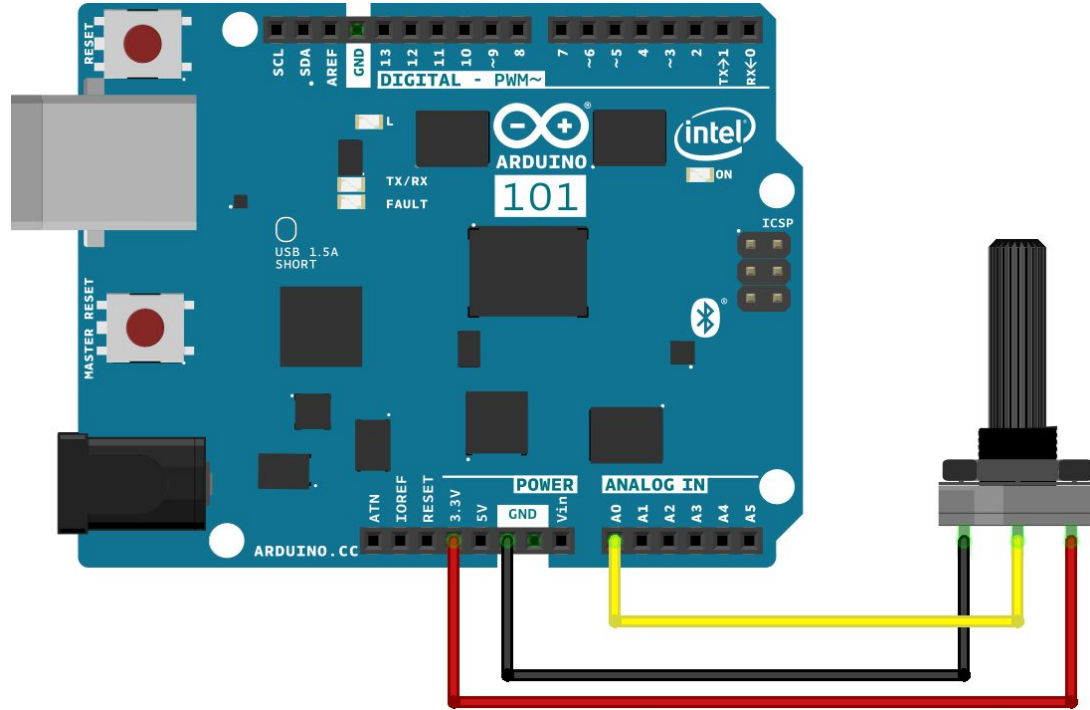
analogRead(pinNumber)

No need for pinMode

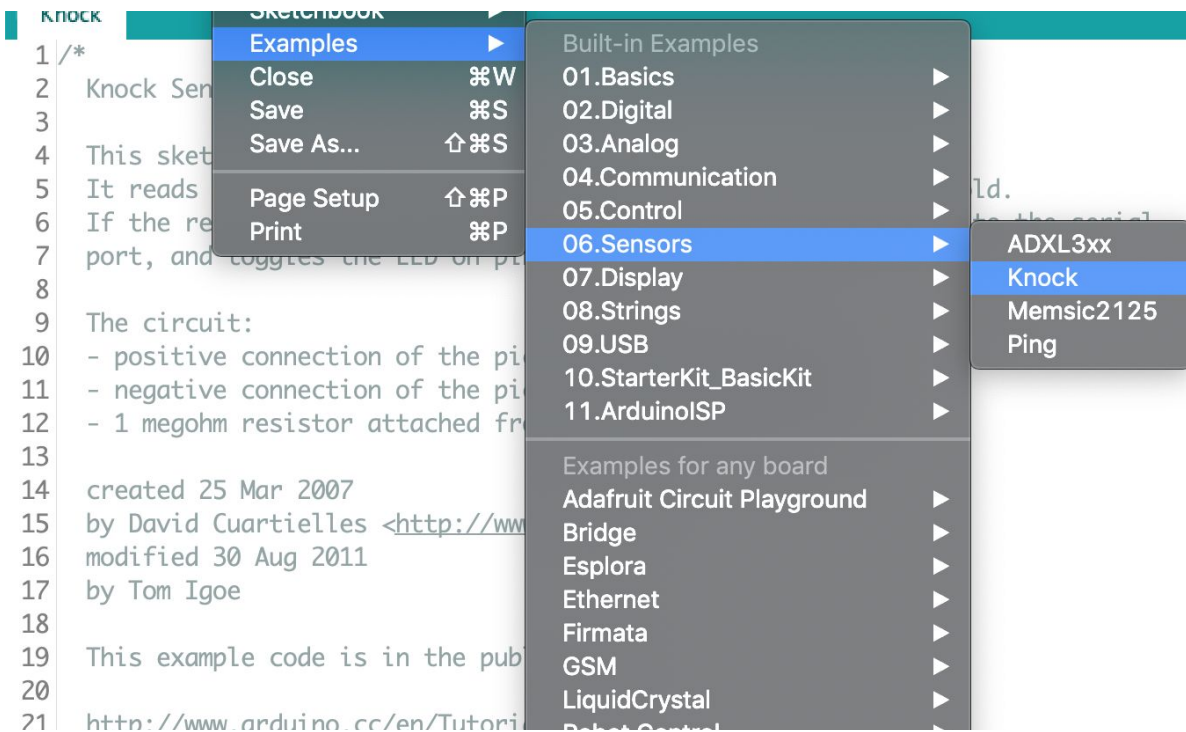
0 - 1023

Use analog pins

Potentiometer Circuit



Knock Sensor



The screenshot shows the Arduino IDE interface with the Sketch menu open. The path to the 'Knock' example is highlighted: Sketch -> Examples -> 06.Sensors -> Knock.

Sketch

- Examples
 - Built-in Examples
 - 01.Basics
 - 02.Digital
 - 03.Analog
 - 04.Communication
 - 05.Control
 - 06.Sensors**
 - ADXL3xx
 - Knock**
 - Memsic2125
 - Ping
 - 07.Display
 - 08.Strings
 - 09.USB
 - 10.StarterKit_BasicKit
 - 11.ArduinoISP
 - Examples for any board
 - Adafruit Circuit Playground
 - Bridge
 - Esplora
 - Ethernet
 - Firmata
 - GSM
 - LiquidCrystal
 - Robot Control
- Close %W
- Save %S
- Save As... ⇧%S
- Page Setup ⇧%P
- Print %P

1 /*
2 Knock Sen
3
4 This sket
5 It reads
6 If the re
7 port, and toggles the LED on pi
8
9 The circuit:
10 - positive connection of the pi
11 - negative connection of the pi
12 - 1 megohm resistor attached fr
13
14 created 25 Mar 2007
15 by David Cuartielles <<http://www>
16 modified 30 Aug 2011
17 by Tom Igoe
18
19 This example code is in the pub
20
21 <http://www.arduino.cc/en/Tutori>

Coding Challenge nr 3



Use the knock as a switch and the potentiometer as a dimmer

Coding Challenge



Choose a sensor/actuator of your choice and create the circuit and code for it!