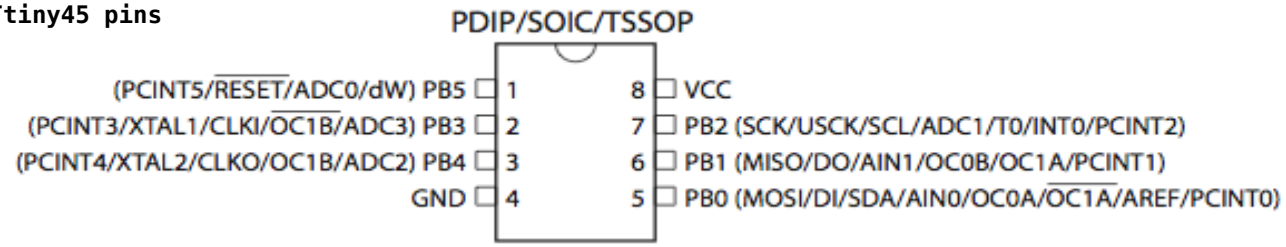
Colour Sharing Zombie Apocalypse IR Badge Details

```
git clone git://github.com/mikepea/buildbrighton-mcu-programming-workshop.git
```

ATtiny45 pins



What the heck does PB mean?

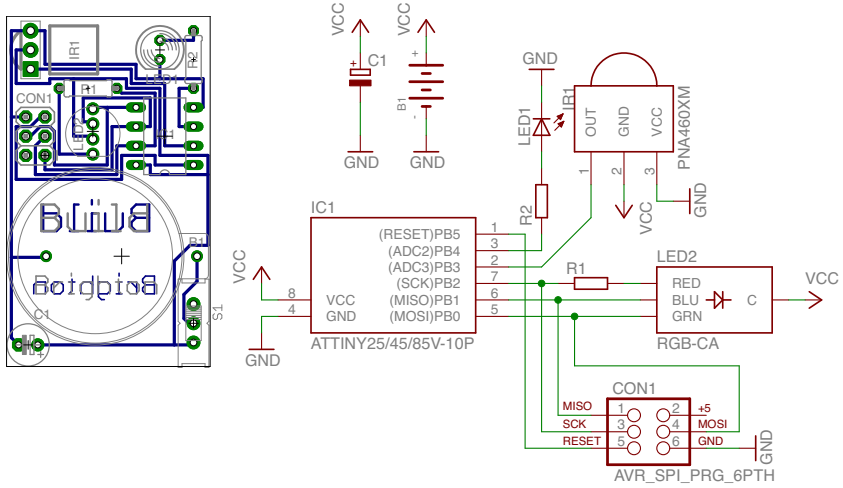
PB0..6 are the 6 data pins of the ATtiny.

They are available in the code as byte register PORTB (for setting them), and PINB (for reading them).

So, PORTB = 0b00000111 will set PB0, PB1, PB2 to HIGH, turning off our RGB LED (see Source or Sink?) for why!

Similarly, if PINB == 0b00001000, then PB3 is HIGH, which means we're our IR sensor is seeing IR signals!

The Badge Circuit and Schematic



Chip Pins to Badge Bits

1 (PB5): pin5 on header RESET
2 (PB3): IR sensor OUT
3 (PB4): IR LED (via R1)
4 (GND): pin6 on header Ground
5 (PB0): Green LED (-) pin4 on header MOSI
6 (PB1): Blue LED (-) pin1 on header MISO
7 (PB2): Red LED (-) pin3 on header SCK
8 (VCC): Battery (3V)

Sinking and Sourcing

Sinking is when setting a pin LOW (to ground) allows current to flow, and completes the circuit. Our RGB LEDS are sinked to the pins.

Sourcing is the opposite - setting a pin to HIGH allows current to flow. The IR LED is sourced from the pin.

Programming the ATtiny

Edit my_code.c in your favourite editor, save.
make install

To load an example (eg):
make install PROJECT_NAME=examples/1-1-blinky