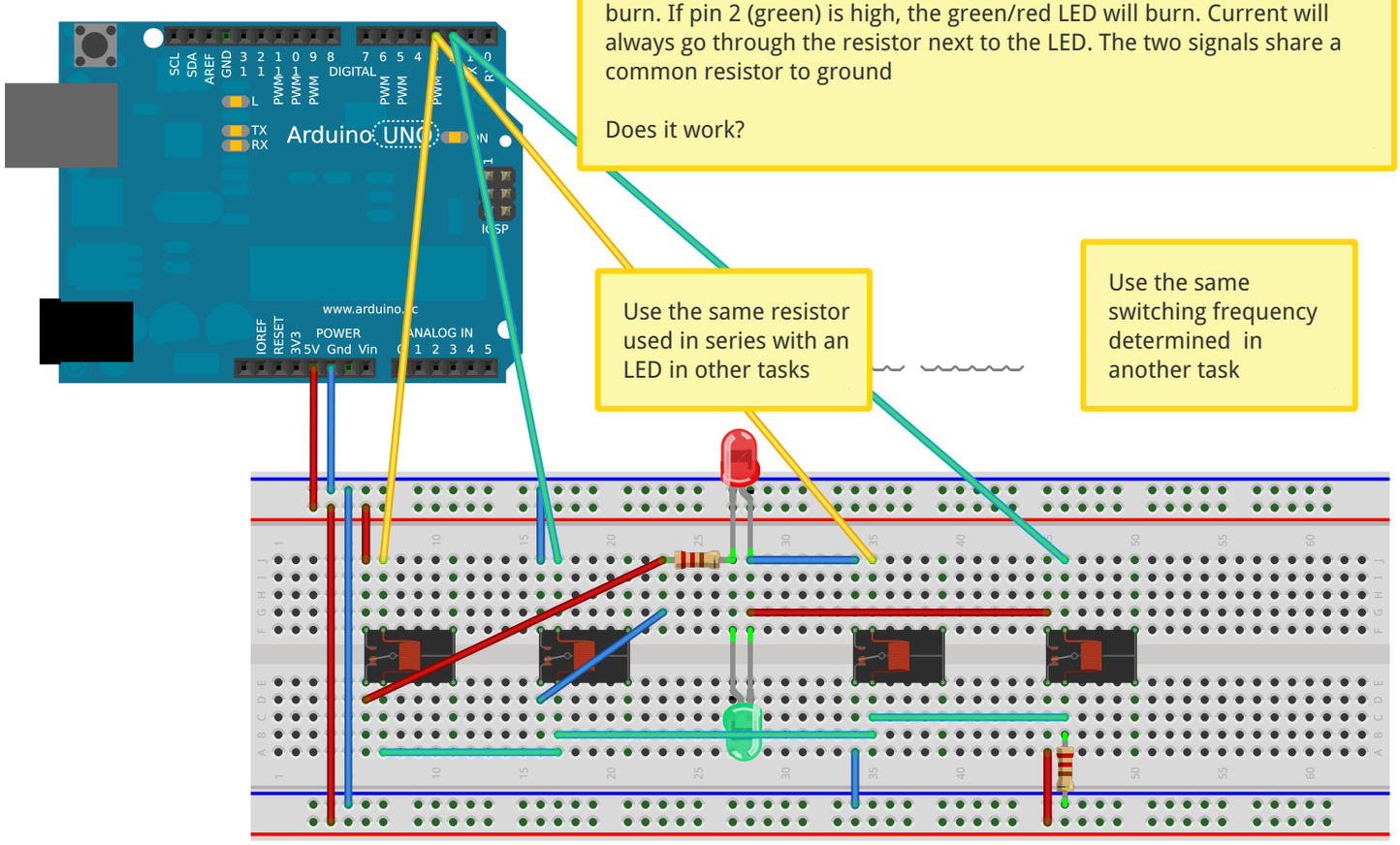
This is an H bridge. It allows to change the current direction.

There is always at most one signal: from the yellow signal cables, from the green signal wires, or none. If pin 3 (yellow) is high, the red/green LED will burn. If pin 2 (green) is high, the green/red LED will burn. Current will always go through the resistor next to the LED. The two signals share a common resistor to ground

Does it work?



Use the same resistor used in series with an LED in other tasks

Use the same switching frequency determined in another task

Use the same resistor used in series with a relay in other tasks

Write a class for the H bridge:

```
enum HbrigeState { direction_a, direction_b, no_current };

struct Hbridge
{
  Hbridge(
    const HBridgeState initial_state,
    const int pin_direction_a,
    const int pin_direction_b)
    : m_pin_direction_a(pin_direction_a),
      m_pin_direction_b(pin_direction_b),
      m_state_current(initial_state),
      m_state_next(initial_state),
  {

  }
  void ToDirectionA()
  {
    //Go via state no current
    //MAGIC
  }
  void ToDirectionB()
  {
    //Go via state no current
    //MAGIC
  }
  void ToggleDirection()
  {
    //Nothing will happen is currently state is no current
    //MAGIC
  }
  void ToNoCurrent()
  {
    digitalWrite(m_pin_direction_a,LOW);
    digitalWrite(m_pin_direction_b,LOW);
  }
  private:
  static const double m_frequency = /* determined in other task */; //Hz
  const int m_pin_direction_a;
  const int m_pin_direction_b;
  HbridgeState m_state_current;
  HbridgeState m_state_next;
};
```