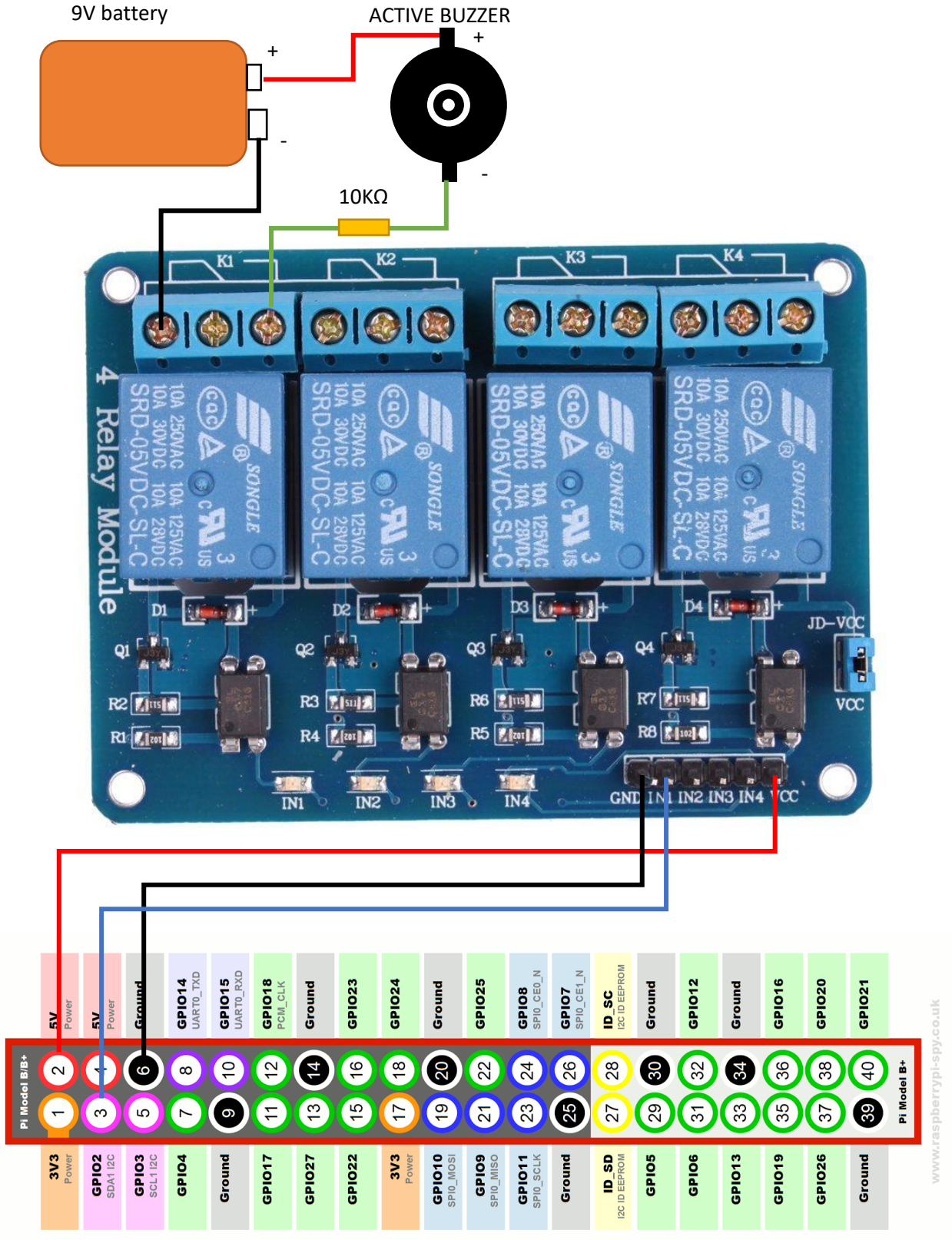

1. Step 1 – wire the relay board to the RPi as show.
2. Step 2 - Write a Python program to turn Relay 1 on an off every second. You should here it click and a diode turns on and off.
3. Step 3 – wire up the active buzzer as shown using a 9V battery and 10KΩ resistor.

4. Step 4 – Run your Python program and the buzzer should sound once each second.

Reflect – we're using a $9V_{dc}$ battery in this example (for safety). But the power supply could just as easily be $110V_{ac}$ or even $480V_{ac}$ to power a big motor or fire alarm. For Clara's project, we'll power Christmas tree lights.

Question – what would happen if you moved the green wire from the right-side pin on relay K1 to the middle pin of K1? First, think about it. Then try it. What is the difference?

Other Exercise – read for 10 minutes about "fractals". What are they? Who is responsible for discovering them? Why do they matter? Why are computers important to the research of fractals?